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Location Intelligence

Spectrum™ Technology Platform

Version 12.0

Global Geocoding Module Guide

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1 - Getting Started

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Global Geocoding Module Workflow 4

Introduction

This guide provides information on using the Global Geocoding Module. The Global Geocoding Module integrates geocoding support for over 120 countries and includes the following stages:

- **Global Geocode** - This stage performs forward geocoding using input addresses and returning location data and other information.
- **Global Reverse Geocode** - This stage performs reverse geocoding using input coordinates and returning address information that is the best match for that point.

Both of these stages provide options that allow control of the geocoding dataset resources, searching and matching criteria, and other preferences in a graphical interface.

To help you get started, the following section outlines a general workflow that will give you an overview of the steps required to set up and implement the Global Geocoding Module in your geocoding dataflow. You use two client tools to set up and implement the Global Geocoding Module. You use Management Console to add and configure datasets and to create default settings and overrides that are used in the global geocoding dataflows. You use Enterprise Designer to create and edit the actual dataflows.

Global Geocoding Module Workflow

The following procedure gives a general high-level workflow for installing, setting up and implementing the Global Geocoding Module in the Spectrum™ Technology Platform.

Make sure that you have reviewed the release notes provided with your installation.

1. You should have already installed the Spectrum™ Technology Platform and the Global Geocoding Module. For instructions, refer to the *Spectrum™ Technology Platform Installation Guide* for your platform.
2. To access Management Console, in a web browser go to:

   http://*server*:*port*/managementconsole

   Where *server* is the server name or IP address of your Spectrum™ Technology Platform server and *port* is the HTTP port used by Spectrum™ Technology Platform. By default, the HTTP port is 8080.

3. Enter a valid user name and password.

   The administrative user name is "admin" and it has a default password of "admin".

Important: You should change the admin password immediately after installing Spectrum™ Technology Platform to prevent unauthorized administrative access to your system.

4. Install the Enterprise Designer client tool. This is a Windows application.
   a) To download Enterprise Designer, in your browser, enter your Spectrum server and port number, and then login. For example: `myserver:8080`.
   The Spectrum™ Technology Platform home page opens.
   b) For the Enterprise Designer installer, select **Platform Client Tools** > **Desktop**. Follow the instructions provided on this page to download and install the tool.

   There are also optional command line tools, such as the Job Executor, Process Executor and Administration Utility that are useful for creating scripts and automating tasks. To download the command line tools, from the Spectrum™ Technology Platform home page, select **Platform Client Tools** > **Command Line**.
5. Download and install your geocoding datasets. For instructions, refer to the *Spectrum™ Technology Platform Installation Guide* for your platform.
6. Add your geocoding datasets as a database resource using the Spectrum Databases resource in Management Console. For the procedure, see **Adding a Global Geocoding Module Database Resource** on page 8.
7. Enter your global default values and any overrides for either Global Geocoding or Global Reverse Geocoding in Management Console. For more information and procedures on setting values and overrides, see **Global Default Values in Geocoding** on page 17 and **Setting Country Overrides** on page 18 or **Global Default Values in Reverse Geocoding** on page 49 and **Setting Country Overrides** on page 50. These settings and overrides apply to all global geocoding dataflows you create in Enterprise Designer.

   Among the options you can set are dataset configuration options. The dataset configuration options allow you to choose which datasets to include or exclude when matching as well as setting the preferred dataset search order. For more information, see **Dataset Configuration for Geocoding** on page 43 or **Dataset Configuration for Reverse Geocoding** on page 63
8. Create your geocoding or reverse geocoding input record. To understand the input fields and input record formatting requirements, see the sections on **Global Geocode Input Fields** on page 12, **Global Reverse Geocode Input Fields** on page 14 and **Input Record Format** on page 14.
9. Create your geocoding dataflow in Enterprise Designer. A dataflow is a series of operations that takes data from a source, processes that data, then writes the output to a destination. Detailed information on using the Enterprise Designer and setting up dataflows can be located in the *Spectrum™ Technology Platform Dataflow Designer's Guide*.
10. Depending on which Global Geocoding Module stage you added to your dataflow, you can select geocoding or reverse geocoding options for searching, matching and geocoding, and for setting return values that will supercede the default settings and overrides you created in Management Console. For detailed descriptions of each stage's options, see the chapters **Global Geocode Options** on page 17 and **Global Reverse Geocode Options** on page 49. The various topics in each chapter have information specific to Enterprise Designer.

11. You can override the geocoding dataset configuration you set up in Management Console by using the configuration options in Enterprise Designer. The dataset configuration options allow you to choose which datasets to include or exclude when matching as well as setting the preferred dataset search order. For more information, see **Configuring Datasets in Enterprise Designer** on page 44.
12. Save and run your dataflow.
    - For information on the returned output fields, see **Default Return Fields** on page 40 in the Global Geocode Options and **Default Return Fields** on page 60 in the Global Reverse Geocode Options chapters.
    - The country-specific output field information can be found in each country's section in **Appendix A - Country-Specific Information**.

2 - Adding the Geocoding Datasets

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Adding a Global Geocoding Module Database Resource

Whenever you install a new database resource or modify an existing database resource you must define it in the Management Console in order for it to become available on your system. This procedure describes how to add or modify a Global Geocoding Module database resource.

Important: You can only define a single Global Geocoding Module database resource that contains all of the country datasets.

1. If you haven't already done so, install the dataset files on your system. For instructions on installing databases, see the *Spectrum™ Technology Platform Installation Guide*.
2. In Management Console, under **Resources**, choose **Spectrum Databases**.
3. To create a new database resource, click the Add button. To make changes to an existing database resource, select it, then click the Edit button. To delete a database resource, select it, then click the Delete button.

   Note: You can copy a Global Geocoding database resource to use for another installed module; however, a copy of a database resource cannot be made for the Global Geocoding Module since it can only have one database resource.

4. If you are creating a new database resource, on the **Add Database** page, enter a name for the database resource in the **Name** field.
5. In the **Pool size** field, specify the maximum number of concurrent requests you want this database to handle.

   The optimal pool size varies by module. You will generally see the best results by setting the pool size between one-half to twice the number of CPUs on the server, with the optimal pool size for most modules being the same as the number of CPUs. For example, if your server has four CPUs you may want to experiment with a pool size between 2 (one-half the number of CPUs) and 8 (twice the number of CPUs) with the optimal size possibly being 4 (the number of CPUs).

   Tip: You should conduct performance tests with various settings to identify the optimal pool size and runtime instance settings for your environment.

6. In the **Module** field, select `GlobalGeocode`. The **Type** field, `Global Geocode Dataset`, is selected by default.
7. To add a dataset, under **Data Source**, click the Add button. In the **Path** field, specify the folder that contains the dataset files.You can type in a path or click the Browse button to locate the dataset you need, then click **Ok**.
8. If you have additional datasets to add, click the Add button. To edit a dataset path, select the dataset, then click the Edit button. To remove a dataset, select the dataset, then click the Delete button.

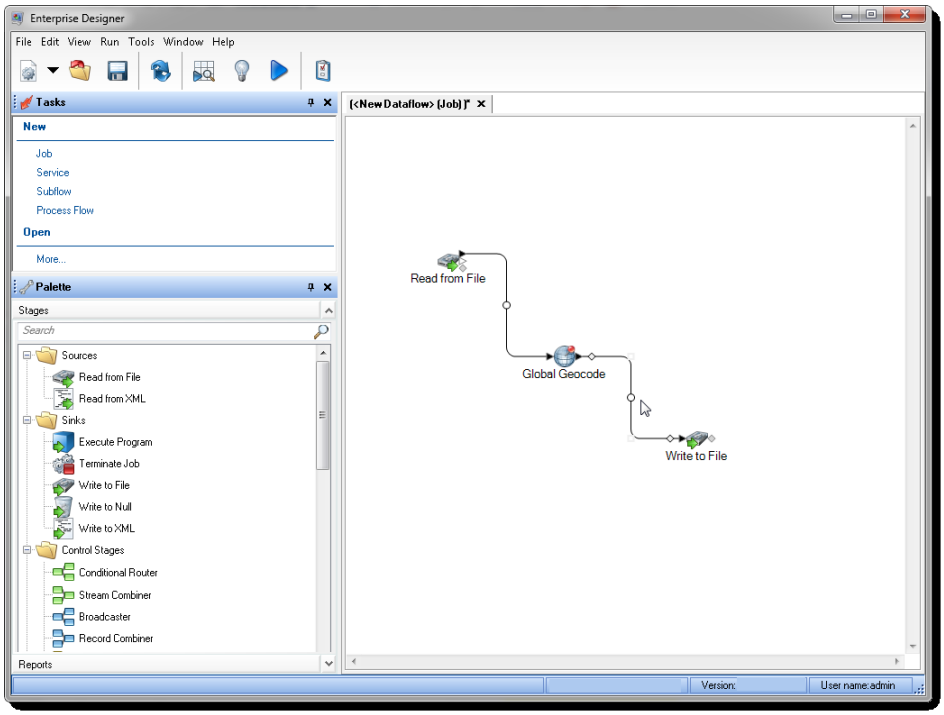
9. When you are done with your changes, click **Save**.

   Note: If the database fails to configure due to insufficient resources, you may need to increase the Java Virtual Machine (JVM) initial heap size (`Xms`) and/or add the max heap size (`Xmx`) in the `java.vmargs` file. This file is located in the *`SpectrumDirectory`*`\server\modules\GlobalGeocode` folder, where *SpectrumDirectory* is your Spectrum installation directory.

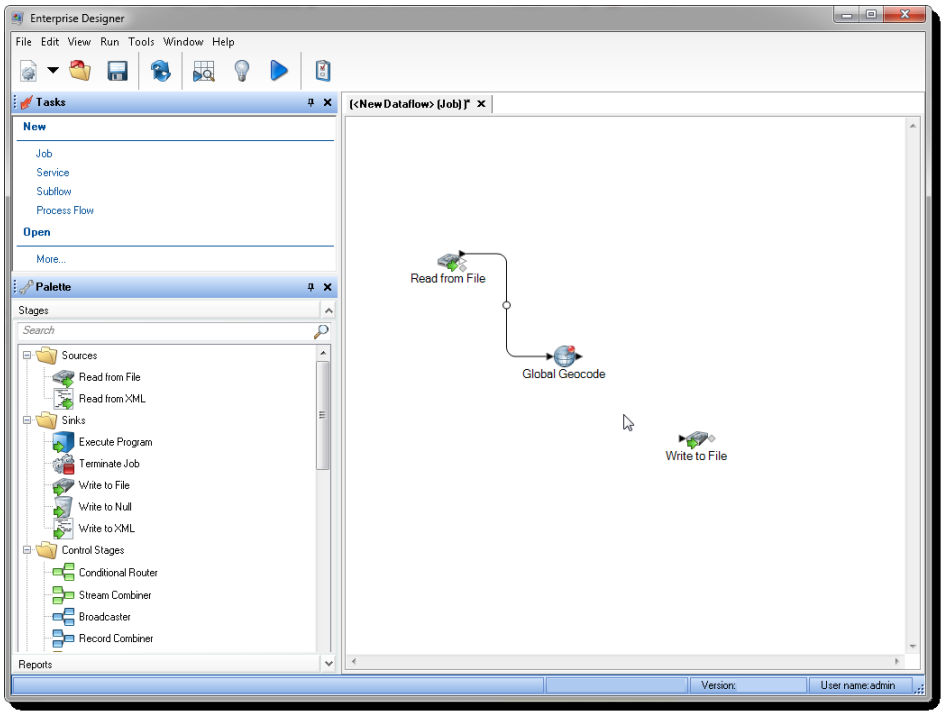
Resetting the Geocoding Dataflow after Modifying a Database Resource

If you have an established dataflow, and subsequently you modify your database resource by adding or deleting geocoding datasets, you must either exit, then re-start the Enterprise Designer or execute the following procedure to reset your dataflow.

1. In Enterprise Designer, in your geocoding dataflow, select the output port channel between the Global Geocode or Global Reverse Geocode stage and the output stage. In the following example, this is the **Write to File** stage.



2. Delete the channel.



3. Reconnect the output port on the Global Geocode or Global Reverse Geocode stage to the output stage.
4. Save your dataflow.
   The dataflow is reset and is ready to be configured and run.

3 - Creating your Input Records

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Input Address Guidelines

Follow these address guidelines for best performance:

- Ensure that your input addresses are as complete and accurate as possible. If there are errors in your input addresses, the Global Geocoding Module may still be able to geocode those addresses, but there may be more than one possible match.
- Include postal codes in your input addresses if you have them. This is not required, but it allows the Global Geocoding Module to perform postal geocoding. This may give you more accurate results for some addresses, depending on the country and on the completeness and accuracy of other address components.
- Format your input addresses consistently. The Global Geocoding Module can handle input addresses in a wide variety of input formats, or can handle unformatted (single line) input. But you can get more accurate and faster results if your input addresses are consistently formatted and conform to country-specific address conventions. Even if your input address are single line (unformatted), you may get better results and performance if the address components are ordered consistently.
- Check your country's section in the **Appendix A - Country-Specific Information** for more detailed country-specific address guidelines.

Global Geocode Input Fields

The following table defines the Geocoding input fields.

Field Name	Type	Description
		Note: The meaning, valid values and support of the following address elements vary by country: • placeName • mainAddress • lastLine • areaName1 • areaName2 • areaName3 • areaName4 • postCode1 • postCode2 • country It is important to review the information specific to your country/countries. To locate your country's information, refer to the **Country-Specific Information** sections in the appendix.
placeName	String	Building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional. For example: **Pitney Bowes** 4750 Walnut St. Boulder, CO 80301
mainAddress	String	**Single Line input**—If no other field is populated, then the `mainAddress` entry will be treated as a single line input and can be a collection of address field elements. The input order of the address fields should reflect the normal address formatting for your country. Optional. For example: **4750 Walnut St., Boulder CO, 80301** **Street Address**—If the address fields (placeName, lastLine, postalCode, etc.) are provided separately, then the content of this field will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional.
areaName1	String	Specifies the largest geographic area, typically a state or province. Optional.
areaName2	String	Specifies the secondary geographic area, typically a county or district. Optional.

Field Name	Type	Description
areaName3	String	Specifies a city or town name. Optional.
areaName4	String	Specifies a city subdivision or locality. Optional.
postalCode	String	The postal code in the appropriate format for the country. Optional.
country	String	ISO 3166-1 alpha-3 country code. Required. For country codes, see **Country Reference Listing and ISO 3166-1 Country Codes** on page 68.

Global Reverse Geocode Input Fields

The following table defines the Reverse Geocoding input fields.

Field Name	Type	Description
x	Double	Longitude in degrees. Required. For example: -79.391165
y	Double	Latitude in degrees. Required. For example: 43.643469
country	String	Three-letter ISO country code, for example: CAN. Optional. For a list of ISO codes, see **Country Reference Listing and ISO 3166-1 Country Codes** on page 68.

Input Record Format

The Enterprise Designer specifies the allowable input file formats for the type of dataflow in use. Typically, the dataflow would read the input record as either a text, database or XML file. Each of these input file types have specific format requirements which are covered in detail in the *Spectrum™ Technology Platform Dataflow Designer's Guide*. For instance, for an input text file, the guide covers the permitted record types, character encoding, field separators, etc.

The following are a couple of example input record text files. These example input records contain an optional header line, as well as optional input fields.

Example Geocoding Input Record

The following is an example text input record file with USA addresses.

```
mainAddress;areaName3;areaName1;postalCode;country
26 EDISON DR;NISKAYUNA;NY;12309;USA
92 MCCRACKEN RD;MILLBURY;MA;01527;USA
22 CARRIAGE LN;NEWARK;DE;19711;USA
8 HARBOR VIEW RD; S BURLINGTON;VT;05403;USA
124 VERNON RD;GREENVILLE;PA;16125;USA
31 FORD ST;MAUMEE;OH;43537;USA
155 WINTER ST;S WALPOLE;MA;02071;USA
```

Example Reverse Geocoding Input Record

The following is an example text input record file with input coordinates.

```
X|Y|Country
-72.672229|42.076406|USA
-82.436915|34.870463|USA
-95.7849|42.1603|USA
-113.532|53.5421|CAN
-71.2577|46.8461|CAN
-115.423|32.6561|MEX
```

4 - Global Geocode

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Global Geocode Options

Global Geocoding Module takes an input address and returns location data and other information. Options are available that allow control of matching and geocoding criteria, return values and other preferences.

Global Default Values in Geocoding

You can set global default values in both Management Console and Enterprise Designer. When you set the options in Management Console, the settings you save are applied to all dataflows that use the Global Geocode stage. If you set the options in Enterprise Designer, the settings are applied to that specific instance of the Global Geocode stage.

Setting Global Defaults in Management Console

The following instructions explain how to enter global default values in Management Console. In many cases, entering the global default values is a matter of accepting the existing default values.

Entering global default values

1. In the **Services** tab, select **Global GeoCoding Module**.
2. In the Global Geocoding module, select the **Global Geocode** stage from the list.
3. In the **Country Filter** dropdown, select **Global Defaults**.
4. Click the tab in which you want to enter a global default.

   Depending on the tab you choose, there are several settings you can select and enable. You can select the multiple choice options in the dropdown controls and you can enable other options by using the checkboxes. There are also some fields for which you can manually enter a value. You can also create country-specific overrides for a number of options. For more information, see **Setting Country Overrides** on page 18.

5. Click **Save**.

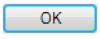
Setting Global Defaults in Enterprise Designer

The following instructions explain how to enter global default values in Enterprise Designer. In many cases, entering the global default values is a matter of accepting the existing default values. Remember that any options you set in Enterprise Designer are specific to that one instance of the Global Geocoding stage and override the settings made in Management Console.

Entering global default values

1. Start Enterprise Designer.
2. In the **Tasks** panel, select the new type of dataflow you want to create. You can also open an existing dataflow to make changes.
3. From the **Stages** listing in the **Palette** panel, select the **Global Geocode** stage icon and drag it into the New Dataflow panel.
4. Double click the stage icon to open the **Global Geocode Options** window.
5. In the **Filters** panel, click **Global Defaults**.
6. Click the arrow to open the category in which you want to enter a global default.

   Depending on the category you choose, there are several settings you can select and enable. You can select the multiple choice options in the dropdown controls and you can enable other options by using the checkboxes. There are also some fields for which you can manually enter a value.

7. When you are finished making your choices, click the **OK** 

button and then click the **Save**  button to save your dataflow.

Setting Country Overrides

When you set the values for global geocoding, you can override several of the global default values on a per-country basis. Any overrides made through the Management Console are base settings that apply to all data flows that use Global Geocoding stages in Enterprise Designer.

> **Note:** This override functionality is available only through the Management Console. It is not supported in Enterprise Designer.

Setting Country Overrides in Management Console

The following instructions explain how to enter, view, and remove country-specific overrides.

Entering country overrides

1. In the **Services** tab, select **Global Geocode**.
2. In the **Global Geocode** module, select the **Global Geocode** stage from the list.
3. In the **Country Filter** dropdown, select **Global Defaults**.
4. Click the tab in which you want to create a country override.
5. Click the **Add** + icon next to the option for which you want to create the override.

   The **Override Value** popup appears.

6. In the popup, click the **Add** + icon to add the override.

   The dropdown appears and the **Add** + icon in the **Country** column for the option changes to a highlighted number 1 icon. This indicates that there is one override for that option. You can create an override for any country that is available in your datasets. The number icon increments as you add more overrides.

7. In the dropdown, select the country for which you want to create the override.
8. Click the checkbox to enable the override.
9. To close the popup, click the gray **Close** ✖ icon.
10. Click **Save**.

Viewing all country overrides

1. In the **Country Filter** dropdown, select **Overrides**.
2. Click the tab for which you want to view the overrides.

   All of the overrides for the options in that tab appear in addition to the initial global setting. The initial global setting has a value of **ALL** in the **Country** column and a highlighted number 1 icon showing the number of overrides associated with that option. Each override is listed below the default global setting with its corresponding country code in the **Country** column. A red **Delete** ✖ icon also appears next to the **Country** column. The checkbox for each override appears in the **Setting** column, showing whether the override is enabled.

Viewing country overrides by country

1. In the **Country Filter** dropdown, select the country for which you want to view the overrides.
2. Click the tab for which you want to view the overrides.

   In addition to the initial global setting, any overrides specific to the country chosen appear. The initial global setting has a value of **ALL** in the **Country** column and a highlighted number 2 icon showing the total number of overrides associated with that option. The country-specific override is listed below the default global setting with its corresponding country code in the **Country** column. A red **Delete** ✖ icon also appears next to the **Country** column. The checkbox for each override appears in the **Setting** column, showing whether the override is enabled.

Removing country overrides

1. In the **Country Filter** dropdown, select the country for which you want to remove an override.
2. Click the tab in which you want to remove an override.

   The country-specific overrides appear with a red **Delete** ✖ icon next to it.
3. Click the delete icon for the override you want to remove.

   The override disappears from the list and the highlighted number decrements.
4. Click **Save**.

Filters

Filters control the display of options and settings.

Filters in Management Console

The options in the **Country Filter** dropdown filter the display of options and settings in the tabs.

Global Defaults

When you select **Global Defaults** in the **Country Filter** dropdown, the tabs display the common set of options for all countries. If you modify a global defaults option, then that selection is applied to all countries unless you enter an override for a specific country.

You can set up overrides for specific countries that have geocoding datasets installed and have custom options and return values. Most countries are covered by the global defaults.

Overrides

When you select **Overrides** in the **Country Filter** dropdown, you can see all of the overrides you have entered.

Country listings

This is the list of the countries that have geocoding datasets installed and that have additional country-specific matching options and return values. When you select a country, the tabs display any country-specific options and return values for the selected country. Most countries are covered by the global defaults.

Filters in Enterprise Designer

The options in the **Filters** panel filter the display of options and settings in the right-side panel.

Global Defaults

When you click on **Global Defaults** in the **Filters** panel, the right-side panel displays the common set of options for all countries.

If you modify a global defaults option, then that selection is applied to all countries and cannot be changed on a per-country basis. Subsequently, if you select a country and view its options, the modified global defaults option will be inactive in the GUI.

The exception to this case is for the **Match Mode** setting for USA. You can set a match mode as the global default which will be applied to all countries. Then, for USA, the global default match mode can be either used or there are two additional match mode options for USA that can be selected - **CASS** and **Interactive** match modes. For more information on these match modes, see **USA-only Match Modes: Interactive and CASS Modes** on page 27.

Country listing

Lists the countries that have geocoding datasets installed and have custom options and return values. When you click on a country, the right-side panel displays the custom options and return values for the selected country. Most countries are covered by the global defaults.

Matching

You can use the options in the Matching category to set match criteria and restrictions so that the matching can be as strict or relaxed as you need. The following sections cover the matching **global defaults** options, which are available for all countries, and the **country-specific matching options**, which apply to a subset of countries.

For instructions on setting global default values in Management Console, see **Setting Global Defaults in Management Console** on page 17.

For instructions on setting global default values in Enterprise Designer, see **Setting Global Defaults in Enterprise Designer** on page 18.

In Management Console, you can add overrides to global defaults for matching on a country-specific basis. Once the overrides are set and enabled, they apply to all data flows that use the Global Geocoding stage. This functionality is not supported in Enterprise Designer. For more information see **Setting Country Overrides** on page 18.

Matching Options

Option Name	Country Support	Description
Match Mode	All	Match modes determine the leniency used to make a match between the input address and the reference data. Select a match mode based on the quality of your input and your desired output. The following match modes are available: **Standard** Requires a close match and generates a moderate number of match candidates. Default. **Exact** Requires a very tight match. This restrictive mode generates the fewest match candidates, which decreases the processing time. When using this mode, ensure that your input is very clean; free of misspellings and incomplete addresses. **Relaxed** Allows a loose match and generates the most match candidates, which increases the processing time and results in more multiple matches. Use this mode if you are not confident that your input is clean; free of misspellings and incomplete addresses. **Custom** Allows you to define the matching criteria by setting **Custom Mode Must Match Fields**.
	USA	The USA has the following additional match modes. These are available as options even when the global defaults option is set to one of the match modes listed above. **Interactive** Available in single-line address matching only. This mode is designed to better handle the specific matching challenges presented by interactive matching. Interactive mode permits for more flexible matching patterns and may, in some cases, return additional possible matches than relaxed match mode. For more information, see **Interactive Match Mode** below. **CASS** Imposes additional rules to ensure compliance with the USPS CASS regulations. The purpose of this match mode is to create mailable addresses for USPS mailing discounts. Use this mode to standardize your input for mailing. This mode generates a large number of match candidates. For more information, see the section **CASS Match Mode** below.

Option Name	Country Support	Description
Custom Mode Must Match Fields	All	These options set the match criteria for determining match candidates. To enable these options, you must set the **Match Mode** to `Custom`. By default, these options are disabled. **Note:** For USA, the Custom Mode Must Match fields are not supported in single-line processing. In Management Console, you can create country-specific overrides for these options only for those countries that have Match Mode overrides that are set to Custom. **Address Number** — A match must be made to the input address number. **Street** — A match must be made to the input street name, type and directional fields. **Postcode** — A match must be made to the input address postcode. **City/Town Subdivision** — A match must be made to the input address city/town subdivision. **Note:** This option is not supported by USA. **City/Town** — A match must be made to the input address city/town. **State/Province Subdivision** — A match must be made to the input address state/province subdivision. **Note:** This option is not supported by USA. **State/Province** — A match must be made to the input address state/province.

Country-Specific Matching Options

There are additional matching options for specific countries that can be enabled. These are not overrides, but simply additional options.

Option Name	Country Support	Description
Force postal match	AUS	Results in a match when the postal code matches even though the city/suburb does not match. Default = disabled.

Option Name	Country Support	Description
Force LDU match	CAN	When enabled, does not return any matches that do not have the full FSA LDU postal code. Default = disabled.
Search Criteria	USA	These options set the search constraints to use when matching. These can assist in finding a match when the input address contains limited or inaccurate city or ZIP Code information. **Search Area** **Note:** The following Search Area options are ignored in CASS match mode; the default value is used. **Finance Area** Searches the entire Finance Area for possible streets. Default. **Note:** This option has no effect when performing a ZIP centroid match or a geographic geocode. **City** Searches the specified city. **Search Radius** Allows the setting of the search radius distance to use when matching. **Search Radius - limit to state** Allows for limiting the search to the state. **Search Radius Distance** When the **Search Radius** option is selected, this field allows you to enter the search radius distance to use when matching. You can select either miles or kilometers. The max. radius setting is 99 miles/159 kilometers. The default radius distance is 25 meters. **Note:** Ignored in CASS match mode. **Search on first letter of Street Name** Specifies whether to look for the correct first letter of a street name if the first letter is missing or incorrect. If selected, the Global Geocoding Module searches through the alphabet looking for the correct first letter to complete the street address. Default = disabled. **Note:** Ignored in Exact match mode. **Check for first letter Missing/Wrong** Enables extra processing for bad first letter (missing, wrong, etc.). Default = disabled. **Note:** Ignored in Exact match mode.

Option Name	Country Support	Description	
Conflicting Input	USA	**Prefer Zip over City**	Prefers candidates matching the input ZIP Code over matches to input city. Default = disabled. **Note:** Ignored for CASS and Interactive match modes. Interactive match mode attempts to return the best address regardless of this setting.
		Prefer PO box over Street Address	If both a street address and a PO Box are provided in the input address, the PO Box is used for matching. Default = disabled. **Note:** Ignored in CASS match mode.
		Firm name lookup	Determines whether the preferred lookup is to look for only a street match, the streets first or the firms first. **Disabled** — Do not use firm name matching. Default. **Match street only** — Matches to the address line. **Attempt street match first** — Matches to the address line, if a match is not made, then matches to the `Place Name` line. **Attempt firm match first** — Matches to the `Place Name` line, if a match is not made, then matches to the address line. **Note:** Ignored in CASS match mode.

Option Name	Country Support	Description	
Find Options	USA	**Building Search on Address Line**	Attempts to obtain a street address when the input address contains a building name with no suite or unit number. When this option is disabled, Global Geocoding is able to match to building names only if there is a unit number in the input. Default = disabled. **Note:** Ignored in CASS match mode.
		Allow Ranged Address Numbers	Some business locations are identified by address ranges. For example, a shopping plaza could be addressed as 10-12 Front St. This is how business mail is typically addressed to such a business location. These address ranges can be geocoded to the interpolated mid-point of the range. Default = disabled. **Note:** Ignored in Exact or CASS match modes (an address range is not an actual, mailable USPS® address).
		Street Locator	Specifies whether to return a street segment geocode as an automatic geocoding fallback. Default = disabled. **Note:** Ignored in CASS match mode.

USA-only Match Modes: Interactive and CASS Modes

The following sections provide more in-depth information about the two additional USA match modes, Interactive and CASS.

Interactive Match Mode (USA only)

Interactive mode is designed for interactive mobile/web applications. In this use case, it is expected that users may enter single-line addresses that contain misspelled, inaccurate, and/or missing information, so this input is processed utilizing a looser set of criteria for matching than the other match modes. As a result, the matching output could include multiple match candidates. The list of matches would be presented to the user who could then select the desired match candidate. If an exact match is found, then that single match candidate is returned; a mix of accurate and inaccurate results are not presented.

The capabilities and restrictions of Interactive match mode are as follows:

- Interactive match mode is only available in single-line address processing. If an attempt is made to run a non-single-line address when the match mode is set to **Interactive**, the match mode is

temporarily changed to **Relaxed** and the address is processed in relaxed mode. When the matching process completes, the match mode is automatically reverted back to **Interactive**.

- Interactive match mode allows users to break the cardinal rule: If the user enters 123 S Main and there is only 123 N Main, a match is made with a match code that reflects the modified directional.
- Interactive match mode handles cases where users transpose pre-directionals with postdirectionals without penalty.
- Interactive match mode ignores the **Prefer Zip over City** setting. When the city and ZIP Code don't match correctly, the best geocoding result will be returned based on an analysis of all the input address elements.
- When operating in interactive mode, in cases where a point address or interpolated street address result cannot be determined, the most accurate level of ZIP-9, ZIP-7 or ZIP-5 centroid available may be returned.

CASS Match Mode (USA only)

The CASS match mode imposes additional rules to ensure compliance with the USPS CASS regulations. The purpose of this match mode is to create mailable addresses for USPS mailing discounts. Use this mode to standardize your input for mailing. This mode generates a large number of match candidates.

The CASS match mode deviates from the other modes in its processing. This mode does not perform intersection, building name, or spatial alias (TIGER, TomTom, NAVTEQ street name alias or Centrus alias) or matches to User Dictionaries. It does not match to candidates from data sources that do not have USPS equivalent records. This mode recognizes and parses two unit numbers on the same address line, for example a building and unit number.

Geocoding

The options in the **Geocoding** category enable you to control how a location's coordinates are determined. The following sections cover the geocoding **global defaults** options, which are available for all countries, and the **country-specific geocoding options**, which apply to a subset of countries.

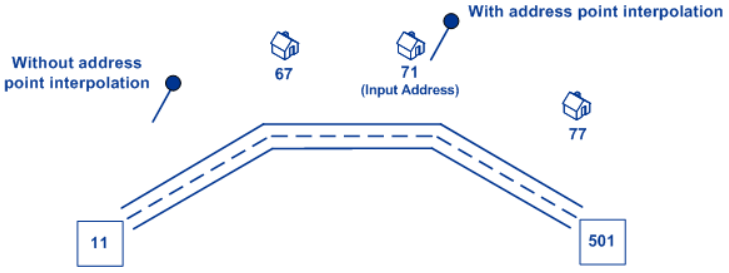
Global Defaults in Management Console

You can create overrides for some of the global default options on a per-country basis. These options have a ✚ next to the Country column value. For more information about how to create overrides, see **Setting Country Overrides** on page 18.

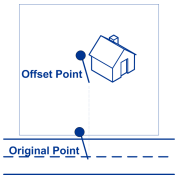
Global Defaults in Enterprise Designer

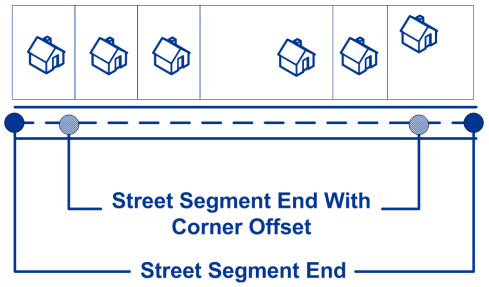
If you modify a global defaults option, then that selection is applied to all countries and cannot be changed on a per-country basis. Subsequently, if you select a country and view its options, the modified global defaults option will be inactive in the GUI.

Options

Option Name	Country Support	Description
Type of Geocode	All	There are different ways that an address can be geocoded. The following lists the geocoding types from the most accurate to least accurate. The support for these geocode types depends on the type of data available in your configured geocoding dataset(s). Refer to your country's section to locate geocoding level support information. **Address** — The geocode is the street address. Depending on data and match quality, it can be a street centroid, interpolated house address, or a point address. Default. **Postal** — The geocode is the centroid of a postal code area. **Geographic** — The geocode is the centroid of a geographic area; for example, a city, suburb or village.
Use Address Point Interpolation	All	Address point interpolation is a patented process that results in a more accurate interpolated point. It improves upon regular street segment interpolation by using point data in the interpolation process, as opposed to using street segments alone. Default = disabled. **Note:** Address point interpolation requires both a street-level and a point-level geocoding dataset. **Note:** For USA - This feature is not supported with point addresses in Auxiliary files. The following illustration shows how address point interpolation works. In the example, the input house number is 71. The geocoding database contains address points for 67 and 77. The street segment has a range of 11 to 501. With address point interpolation, the input house number 71 is interpolated using the points of 67 and 77. Without address point interpolation, the interpolation is performed with the street segment end points of 11 and 501, resulting in a far less accurate result. 

Option Name	Country Support	Description
Fallback to postal centroid	All	When an address-level geocode cannot be determined, attempt to return a ZIP Code centroid. Default = enabled. **Note:** For USA - This option is ignored if you set **Match Mode** to CASS.
Fallback to geographic centroid	All	When an address-level geocode cannot be determined, attempt to return a centroid of a geographic area. The geocoder returns the most precise geographic centroid that it can based on the input. For example, if the input contains a valid city and state, a city centroid would be returned. Default = enabled.
Fallback to world geocoder	All	When an address-level geocode for a country-specific geocoder cannot be determined, the search falls back to the world geocoder if world geocoding data is configured. Typically used for countries that do not have geocoders or if that country's data is not present. Default = disabled.

Option Name	Country Support	Description
Point Positioning	All	**Street Offset** Specifies the offset distance from the street segments to use in street-level geocoding. The offset distance is used in street-level geocoding to prevent the geocode from being in the middle of a street. It compensates for the fact that street-level geocoding returns a latitude and longitude point in the center of the street where the address is located. Since the building represented by an address is not on the street itself, you do not want the geocode for an address to be a point on the street. Instead, you want the geocode to represent the location of the building which sits next to the street. For example, an offset of 50 feet means that the geocode will represent a point 50 feet back from the center of the street. The distance is calculated perpendicular to the portion of the street segment for the address. Offset is also used to prevent addresses across the street from each other from being given the same point. Default value = 7 meters. The following diagram shows an offset point in relation to the original point.  You can select either Feet or Meters for your unit of measurement.
	All	

Option Name	Country Support	Description
		Corner Offset Specifies the distance to offset the street end points in street-level matching. This value is used to prevent addresses at street corners from being given the same geocode as the intersection. Defines the offset position of the geocoded point with respect to the corner. Default value = 7 meters. The following diagram compares the end points of a street to offset end points.  You can select either Feet or Meters for your unit of measurement.

Country-Specific Geocoding Options

You cannot set overrides for these options.

Option Name	Country Support	Description
Calculate Centerline Projection of Point	AUS CAN PRT USA	Computes the closest point on the street from the parcel point. Default = disabled. **Note:** This feature requires that a point-level geocoding dataset is installed.

Option Name	Country Support	Description
Point Positioning	AUS CAN PRT USA	**Centerline Offset** Centerline matching is used with point-level matching to tie a point-level geocode with its parent street segment. This functionality is useful for routing applications. The centerline offset specifies the distance to move the point from the street centerline toward the parcel point. Default = 0 meters. You can select either Feet or Meters for your unit of measurement. **Note:** Centerline matching requires that a point-level geocoding dataset is installed.
ZIP Code Centroid Level	USA	A ZIP Code centroid match returns the center point of an area defined by one of the following types of ZIP Codes: **Any** Returns the most accurate ZIP Code centroid match found. Default. **9-Digit ZIP** Returns the center point of a ZIP + 4 Code area. **7-Digit ZIP** Returns the center point of a ZIP + 2 Code area. **5-Digit ZIP** Returns the center point of a ZIP Code area. This is the least accurate of the ZIP Code centroids.

Dataset Options

In Enterprise Designer, the option is called **Datasets** and is listed as a **Category**. In Management Console it is a tab called **Dataset Options**. In both cases you can set searching and dataset matching preferences when both custom user datasets and standard address datasets are installed.

Option Name	Country Support	Description
Address/User dataset restriction	All	For countries that support both custom user datasets and standard address datasets, you can specify which datasets to use for matching. **Search all datasets** — Search all installed user and standard address datasets. Default. **Search address datasets only** — If both custom user and standard datasets are installed, only search in the standard address datasets. If there are no standard address datasets installed, this setting is ignored. **Search user datasets only** — If both custom user and standard datasets are installed, only search in the custom user datasets. If there are no custom user datasets installed, this setting is ignored.
Dataset match preference	All	When equivalent candidates are found in both types of datasets, you can specify which dataset should be given higher preference for candidate match results. **No preference** — Return the best quality match from any type of dataset match. Default. **Prefer address dataset match** — When equivalent candidates are found in both user and standard datasets, prefer the candidates from the standard address datasets. Note that the best quality match candidate will be returned, even if the match is from a non-preferred dataset. **Prefer user dataset match** — When equivalent candidates are found in both user and standard datasets, prefer the candidates from the user datasets. Note that the best quality match candidate will be returned, even if the match is from a non-preferred dataset.

Return Values

In the Return Values category, you can select the fields you would like returned with your match. The following sections cover the **global defaults** return values, which are available for all countries, and the **country-specific return values**, which apply to a subset of countries.

In Management Console, you can set up country-specific overrides for some of the global defaults. See **Setting Country Overrides** on page 18 for details about setting up these overrides.

Global Defaults

Option Name	Country Support	Description
Return all available information	All	When enabled, returns all available return fields and all available options, including any country-specific options are enabled. When disabled, allows you to selectively choose the return fields listed below. Default = disabled. **Quality Descriptors** — Returns the result codes. The result codes indicate how well the input address matched to a known address and assigned a location. They also describe the overall status of a match attempt. For all countries, see **Global Result Codes**. The USA has additional result codes. For details, see **Match and Location Codes for USA**. **Parsed Address** — Returns the separate address fields, such as mainAddressLine, areaName<1-4>, postcodes and country. The meaning of some of these fields may vary by country. For a list of the returned parsed address fields and their definitions, refer to your country's section in **Appendix A - Country-Specific Information**. **Point** — Returns the latitude/longitude coordinates of the input address.

Country-Specific Return Values

Option Name	Country Support	Description
	AUS	Australia has the following additional return field options: **Use abbreviated types** — Returns the abbreviated street types instead of the default of fully spelled-out type. **Street frontage** — Coordinates returned from the GNAF geocoding dataset can be returned as standard points or as street frontage points. The standard points are the most precise (rooftop) points available and are returned by default. This option returns points that have been relocated to the frontage of the candidate location. This is generally preferable for routing applications. **Original Point** — Returns the GNAF original latitude/longitude coordinates, or if applicable, the original latitude/longitude coordinates from a User Dictionary. **Level and Lot** — Returns the address level type and number and address lot identifier. **GNAF Identifiers** — Returns the following GNAF identifier fields - `GNAF PID`, `Principal PID`, `Meshblock ID`, `Geocontainment`, `Geofeature`, `Address class`, `SA1`, and `Parcel ID` - from a match to the GNAF National Address File geocoding dataset. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **Australia (AUS)** on page 96.
	CAN	Canada has the following additional return field options: **Formatted range** — Returns the formatted range for the address. **Note:** This field is only returned for postal centroid candidates. **Census** — Returns the following Census fields for the matched address location: `Centrus Tract (CT)`, `Census Metropolitan Area (CMA)`, `Census Division (CD)`, `Census Subdivision (CSD)`, and `Census Dissemination Area (DA)`. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **Canada (CAN)**.

Option Name	Country Support	Description
	IND	India has the following additional return field options: **Rural status** — Indicates when the candidate's address is located in a rural region (village). **POI category** — Point of interest category. This return field describes the type of POI, such as a bank, ATM, or restaurant. **Block** — Returns block information. **Sublocality** — Returns the municipal division below locality (areaName4) level. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **India (IND)**.
	ITA	Italy has the following additional return field options: **Historical post code** — Where applicable, returns the previous postal code for the address.
	JPN	Japan has the following additional return field options: **Jusho code** — Returns a point ID that represents a unique address. **Address Data** — Returns the `chooaza, chomoku, go,` and `banchi` address fields. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **Japan (JPN)**.

Option Name	Country Support	Description
	NZL	New Zealand has the following additional return field options: **UFI** — Returns the New Zealand UFI. The Unique Identifier (UFI) identifies the street segment that the geocoded address belongs to. UFIs are up to 7-digit numbers, assigned by New Zealand Post, that uniquely identify each postal delivery point. **Mesh block** — Returns the New Zealand Meshblock identifier. A Meshblock is the smallest geographic unit for which statistical data is collected by Statistics New Zealand. Meshblocks vary in size from part of a city block to large areas of rural land. **Aliased suburb** — Returns the New Zealand Aliased suburb. An alternative to the officially-recognized suburb name. **Original Point** — Returns the original latitude and longitude coordinates. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **New Zealand (NZL)**.
Mixed case output addresses	USA	The output data is returned in mixed case. Default = disabled. When not selected, the output data is returned in upper case. Not enabled when **Return all available information** is selected.
Output corrected last line	USA	Corrects the elements of the output lastline, providing a good ZIP Code or close match on the soundex even if the address did not match or was non-existent. Default = disabled. Not enabled when **Return all available information** is selected.
Return coordinates as integer	USA	Returns the latitude and longitude values in integer format, not decimal format. Default = disabled. Not enabled when **Return all available information** is selected.

Option Name	Country Support	Description
	USA	The USA has the following additional return field options: **Centerline** Returns information about a centerline match which includes additional data about the geocode's parent street segment. **Intersection** Returns information resulting from a match to an intersection. **Census** Census output fields contain U.S. Census information about the address. **DPV** DPV® data output fields contain information about a match made using DPV® data. These field values are only returned when matching against DPV® data. Default = disabled. **LACS** Provides the USPS® Locatable Address Conversion System results. LACS corrects addresses that have changed as a result of a rural route address converting to street-style address, a PO Box renumbering, or a street-style address changing. Default = disabled. **Suitelink** SuiteLink is a Postal Service™-maintained database of business addressing information, which will add known secondary (suite) information. SuiteLink uses the input business name, street number location, and 9 digit ZIP+4 to return a unit type (i.e. "STE") and unit number for that business. Default = disabled. **Note:** Ignored in Exact match mode. **Postal** Postal data output fields contain detailed postal information for the address, such as the preferred city name and the US carrier route. **Short Address** Short address output fields contain abbreviated address fields. **Segment** Segment output fields contain information on the street segment identified by the data provider. **Others** Returns additional information about the match. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **United States (USA)** on page 585.
	XWG	The World Geocoder has the following additional return field options: **City Rank** Returns the city ranking from 1 (highest) to 10 (lowest). Zero (0) means that a rank was not available.

Default Return Fields

The following table lists the fields that are returned by default. Unless otherwise noted, all countries have these fields returned. If a field has country-specific return values, refer to the link provided in the note.

Output Field Name	Description
Formatted Street Address	The formatted main address line.
Formatted Location Address	The formatted last address line.
Place Name	Firm, company, organization, business or building name.
Address Number	House or building number.
Street	Street name.

Output Field Name	Description
Precision Code	A code describing the precision of the geocode. The possible match categories are as follows: **Z1** Postal match with post code 1 centroid. **Z2** Postal match with partial post code 2 centroid. **Z3** Postal match with post code 2 centroid. **G1** Geographic match with area name 1 centroid. **G2** Geographic match with area name 2 centroid. **G3** Geographic match with area name 3 centroid. **G4** Geographic match with area name 4 centroid. The matches in the 'S' category indicate that the record was matched to a single address candidate. **SX** Point located at a street intersection. **SC** Match point located at the house-level that has been projected from the nearest segment. **S0** No coordinates are available, but parts of the address may have matched the source data. **S4** The geocode is located at a street centroid. **S5** The geocode is located at a street address. **S7** The geocode is located at a street address that has been interpolated between point house locations. **S8** Match point located at the house location. Additional match information is of the format `HPNTSCSZA`. If a match result was not made for the specified component, a dash (-) will appear in place of a letter. **H** House number. **P** Street prefix direction. **N** Street name. **T** Street type. **S** Street suffix direction. **C** City name. **Z** Post code. **A** Geocoding dataset. **U** Custom User Dictionary. **Note:** For more detailed information including country-specific meanings and values, see **Global Result Codes** on page 708.

Output Field Name	Description
Precision Level	A code describing the precision of the geocode. One of the following: **0** No coordinate information is available for this candidate address. **1** Interpolated street address. **2** Street segment midpoint. **3** Postal code 1 centroid. **4** Partial postal code 2 centroid. **5** Postal code 2 centroid. **6** Intersection. **7** Point of interest. (If database contains POI data.) **8** State/province centroid. **9** County centroid. **10** City centroid. **11** Locality centroid. **12-15** Reserved for unspecified custom items. **16** The result is an address point. **17** The result was generated by using address point data to modify the candidate's segment data. **18** The result is an address point that was projected using the centerline offset feature. You must have both a point and a street range database to use the centerline offset feature. **Note:** This field is not returned for USA. For geocode precision information for USA, see **Location Codes** on page 692.
Identifier	For street- or point-level candidates, this is usually the segment ID.
Source Dictionary	Identifies the dictionary that is the source for the candidate information and data. The source dictionary is a 0-based integer value that indicates which configured dictionary the candidate came from. If you only have a single dictionary this will always be "0".
Point	The candidate's geocode, specified as X (longitude) and Y (latitude) coordinates.

Output Field Name	Description
Status	Reports the success or failure of the match attempt: **null** Success **F** Failure
Status.Code	If the address could not be processed, this field will indicate the reason. • Internal System Error • No Geocode Found • Insufficient Input Data
Status.Description	If the address could not be processed, this field will provide a description of the failure. **Problem + explanation** Returned when Status.Code = Internal System Error. **Geocoding Failed** Returned when Status.code = No Geocode Found. **No location returned** Returned when Status.code = No Geocode Found.

Dataset Configuration for Geocoding

Dataset Configuration allows you to view information about the geocoding datasets that are installed for each of the listed countries. You can choose which datasets to include or exclude when matching as well as setting the preferred search order.

Dataset Configuration works differently in Management Console and Enterprise Designer. See the following sections for information about these differences.

Configuring Datasets in Management Console

To set the dataset configuration for a country, select the country in the **Country Filter** field, click the **Dataset Configuration** tab, and make the desired configuration changes.

Country The three-letter ISO country code. You can sort the countries by ascending or descending alphabetical order with the ordering control at the top of the column.

DataSource	The geocoding dataset vendor. You can limit your display by vendor by using the sort control at the top of the column. Use the `Clear all` value to redisplay all vendor datasets.
Include	Allows you to include or exclude the dataset when matching.
Type	The type of dataset: either geocoding dataset (AD) or custom user dictionary (UD).
Vintage	The release date of the geocoding dataset.
Region	The global area in which a country appears. For example, Europe, Americas, and so forth. You can limit your display by region by using the sort control at the top of the column. Use the `Clear all` value to redisplay all datasets.

There are two additional hidden informational fields you can display by clicking the arrow control in the left-hand column next to a dataset.

Description	A brief description of the geocoding dataset.
Path	The path to the installation location of the geocoding dataset.

To set the geocoding dataset search order:

The initial search order is determined by the order in which the geocoding datasets were installed.

Click on the country you want to set the search order. Then, select a dataset by clicking the checkbox in the right-hand column. If you have more than one dataset, the **Refresh** and **Move Up** and **Move Down** buttons appear. Then use the **Move Up** and **Move Down** buttons to move its position. The dataset in the top row will be the first one that will be used for searching and matching and the one located in the bottom row, the last. Use the **Refresh** button to reset the order to the original search order.

Configuring Datasets in Enterprise Designer

To set the dataset configuration for a country, select the country in the Countries panel and make the desired configuration changes in the **Search Order** panel.

DataSource	The geocoding dataset vendor.
Include	Allows you to include or exclude the dataset when matching.
Type	The type of dataset: either geocoding dataset (AD) or custom user dictionary (UD).
Vintage	The release date of the geocoding dataset.
Description	A brief description of the geocoding dataset.

To set the geocoding dataset search order:

The initial search order is determined by the order in which the geocoding datasets were installed.

Click on the country you want to set the search order. Then, click on a dataset in the table and use the up/down arrows to move its position. The dataset in the top row will be the first one that will be used for searching and matching and the one located in the bottom row, the last. Use the **Refresh**  button to reset the order to the original search order.

Preview

You can preview the results of the **Global Geocoding** stage of the Global Geocoding module in **Management Console** using the module's **Preview** tab. Preview can be useful in helping you decide what options to specify because you can immediately see the effect that different options have on the data returned by the module.

1. Open Management Console.
2. Go to the **Services** menu and select **Global Geocoding**.
3. Click **Global Geocode**.
4. Click the **Preview** tab.
5. Enter the test data into each field or import your test data from a file.
   a) If you are entering data manually, type the test data into the individual fields in the input record. To add additional records, click the **Add** button under **Input Records**.
   b) If you are importing data, click the **Import** button under **Input Records**. The **Import Data** popup appears.

      You can specify or browse to the file from which the data is drawn in the **File name** field and then choose the **Field separator** character from the dropdown. Click **OK** to complete the import process.

   Here are some tips for entering data:

   - You do not have to enter data in every field. Leaving a field empty results in an empty string being used for preview.
   - If you want to preview the effect of passing a null value in a field, hover the cursor over the field name and click the **Disable** icon that appears next to the field. You can reenable the field by hovering the cursor over the field name and clicking the **Reenable** icon.
   - You can preview multiple records at once.
   - Regardless of how you enter your address information, you must provide the three-character ISO code in the **Country** field.
   - If you import test data from a file, note the following:

- The first row in the file must be a header record. The field names in the header must match the field names required by the module.
- You can import as many records as you need.
- If the file uses a space as the field separator, field values must be surrounded by quotes. Here is an example of a file that uses a space as the field separator:

```
AddressLine1 AddressLine2 City StateProvince PostalCode
"One Global View" "" "Troy" "NY" "12180"
"3001 Summer St" "" "Stamford" "CT" "06926"
"224 N Michigan Ave" "Suite 300" "Chicago" "IL" ""
```

- To delete all records, click the **Delete** button at the top of the preview area.
- To delete an individual record, hover over the input record name (for example, "Input Record 1") and click the **Delete** button that appears next to the record name.

6. Click **Run Preview**.

   The service processes the input records and displays the results in the **Output Records** column that appears.

7. Review your output data, making sure the results are what you intended to get from the module. If necessary you can make changes to the module's settings and click **Run Preview** again. You do not need to input the data again.

Preview Fields

You can enter your test records either manually or by importing from a file. Not all fields are required. The simplest form of entry is often the entire address entered in the **AddressLastLine** field accompanied by the three-digit ISO country code in the **Country** field.

For example, `4750 Walnut St Boulder CO 80301` in the **AddressLastLine** field and `USA` in the **Country** field.

Field Name	Description
MainAddressLine	The primary address information, typically the street address or intersection.
AddressLastLine	Additional address information, typically the city, state or province and postcode. If no other field is populated, then the AddressLastLine entry will be treated as a single line input and can be a collection of address field elements. The input order of the address fields should reflect the normal address formatting for your country.

Field Name	Description
PlaceName	The name of a building, place, firm or company name, point of interest associated with the input address. Check the appendix entry for the country-specific support of this field. For example, the Empire State Building or Pitney Bowes.
AreaName1	Specifies the largest geographic area, typically a state or province. Check the appendix entry for the country-specific use of this field.
AreaName2	Specifies the secondary geographic area, typically a county or district. Check the appendix entry for the country-specific use of this field.
AreaName3	Specifies a city or town name. Check the appendix entry for the country-specific use of this field.
AreaName4	Specifies a city subdivision or locality. Check the appendix entry for the country-specific use of this field.
PostCode1	The primary postal code in the appropriate format for the country.
PostCode2	A secondary postal code used in some countries. For example, the four-digit potion of the ZIP+4 code used in the USA. Check the appendix entry for the country-specific use of this field.
Country	The three-character ISO code for the country. This field is required for all records.
AddressNumber	The house or building number.
StreetName	The name of the street.
UnitType	The designation for the type of unit within an address For example, an apartment or office suite.
UnitValue	The number of the unit.

5 - Global Reverse Geocode

In this section

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Global Reverse Geocode Options

The Global Reverse Geocode stage takes latitude/longitude coordinates as input and returns address information that is the best match for that point.

Global Default Values in Reverse Geocoding

You can set global default values in both Management Console and Enterprise Designer. When you set the options in Management Console, the settings you save are applied to all procedures that use the Global Reverse Geocode stage. If you set the options in Enterprise Designer, the settings are applied to that specific instance of the Global Reverse Geocode stage.

Setting Global Defaults in Management Console

The following instructions explain how to enter global default values in Management Console. In many cases, entering the global default values is a matter of accepting the existing default values.

Entering global default values

1. In the **Services** tab, select **Global GeoCoding Module**.
2. In the Global Geocoding module, select the **Global Reverse Geocode** stage from the list.
3. In the **Country Filter** dropdown, select **Global Defaults**.
4. Click the tab in which you want to enter a global default.

   Depending on the tab you choose, there are several settings you can select and enable. You can select the multiple choice options in the dropdown controls and you can enable other options by using the checkboxes. There are also some fields for which you can manually enter a value. For more information, see **Setting Country Overrides** on page 50.

5. Click **Save**  .

Setting Global Defaults in Enterprise Designer

The following instructions explain how to enter global default values in Enterprise Designer. In many cases, entering the global default values is a matter of accepting the existing default values.

Remember that any options you set in Enterprise Designer are specific to that one instance of the Global Reverse Geocoding stage and override the settings made in Management Console.

Entering global default values

1. Start Enterprise Designer.
2. In the **Tasks** panel, select the new type of dataflow you want to create. You can also open an existing dataflow to make changes.
3. From the **Stages** listing in the **Palette** panel, select the **Global Reverse Geocode** stage icon and drag it into the New Dataflow panel.
4. Double click the stage icon to open the **Global Reverse Geocode Options** window.
5. In the **Filters** panel, click **Global Defaults**.
6. Click the arrow to open the category in which you want to enter a global default.

   Depending on the category you choose, there are several settings you can select and enable. You can select the multiple choice options in the dropdown controls and you can enable other options by using the checkboxes. There are also some fields for which you can manually enter a value.

7. When you are finished making your choices, click `OK` and then click the **Save** button to save your dataflow.

Setting Country Overrides

When you set the values for global geocoding, you can override several of the global default values on a per-country basis. Any overrides made through the Management Console are base settings that apply to all data flows that use Global Geocoding stages in Enterprise Designer.

> **Note:** This override functionality is available only through the Management Console. It is not supported in Enterprise Designer.

Setting Country Overrides for Reverse Geocoding

The following instructions explain how to enter, view, and remove country-specific overrides.

Entering country overrides

1. In the **Services** tab, select **Global Geocode**.
2. In the **Global Geocode** module, select the **Global Reverse Geocode** stage from the list.
3. In the **Country Filter** dropdown, select **Global Defaults**.
4. Click the tab in which you want to create a country override.

5. Click the **Add** + icon next to the option for which you want to create the override.

   The **Override Value** popup appears.

6. In the popup, click the **Add** + icon to add the override.

   The dropdown appears and the **Add** + icon in the **Country** column for the option changes to a highlighted number 1 icon. This indicates that there is one override for that option. You can create an override for any country that is available in your datasets. The number icon increments as you add more overrides.

7. In the dropdown, select the country for which you want to create the override.
8. Click the checkbox to enable the override.
9. To close the popup, click the gray **Close** icon.
10. Click **Save**.

Viewing all country overrides

1. In the **Country Filter** dropdown, select **Overrides**.
2. Click the tab for which you want to view the overrides.

   All of the overrides for the options in that tab appear in addition to the initial global setting. The initial global setting has a value of **ALL** in the **Country** column and a highlighted number 1 icon showing the number of overrides associated with that option. Each override is listed below the default global setting with its corresponding country code in the **Country** column. A red **Delete** icon also appears next to the **Country** column. The checkbox for each override appears in the **Setting** column, showing whether the override is enabled.

Viewing country overrides by country

1. In the **Country Filter** dropdown, select the country for which you want to view the overrides.
2. Click the tab for which you want to view the overrides.

   In addition to the initial global setting, any overrides specific to the country chosen appear. The initial global setting has a value of **ALL** in the **Country** column and a highlighted number 2 icon showing the total number of overrides associated with that option. The country-specific override is listed below the default global setting with its corresponding country code in the **Country** column. A red **Delete** icon also appears next to the **Country** column. The checkbox for each override appears in the **Setting** column, showing whether the override is enabled.

Removing country overrides

1. In the **Country Filter** dropdown, select the country for which you want to remove an override.
2. Click the tab in which you want to remove an override.

   The country-specific overrides appear with a red **Delete** icon next to it.

3. Click the delete icon for the override you want to remove.

   The override disappears from the list and the highlighted number decrements.

4. Click **Save**.

Filters

Filters control the display of options and settings.

Filters in Management Console

The options in the **Country Filter** dropdown filter the display of options and settings in the tabs.

Global Defaults

When you select **Global Defaults** in the **Country Filter** dropdown, the tabs display the common set of options for all countries. If you modify a global defaults option, then that selection is applied to all countries unless you enter an override for a specific country.

You can set up overrides for specific countries that have geocoding datasets installed and have custom options and return values. Most countries are covered by the global defaults.

Overrides

When you select **Overrides** in the **Country Filter** dropdown, you can see all of the overrides you have entered.

Country listings

This is the list of the countries that have geocoding datasets installed and that have additional country-specific matching options and return values. When you select a country, the tabs display any country-specific options and return values for the selected country. Most countries are covered by the global defaults.

Filters in Enterprise Designer

The options in the Filters panel determine the display of options and settings in the right-side panel.

Global Defaults

When you click on **Global Defaults** in the Filters panel, the right-side panel displays the common set of options for all countries.

If you modify a global defaults option, then that selection is applied to all countries and cannot be changed on a per-country basis. Subsequently, if you select a country and view its options, the modified global defaults option will be inactive in the GUI.

Country listing

Lists the countries that have geocoding datasets installed and have custom options and return values. When you click on a country, the right-side panel displays the custom options and return values for the selected country. Most countries are covered by the global defaults.

Reverse Geocoding Options

The Reverse Geocoding category provides options that let you set searching and matching criteria. The following sections cover the reverse geocoding **global defaults** options, which are available for all countries, and the **country-specific reverse geocoding options**, which apply to a subset of countries.

Global Defaults in Management Console

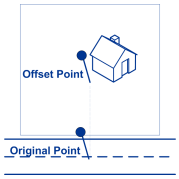
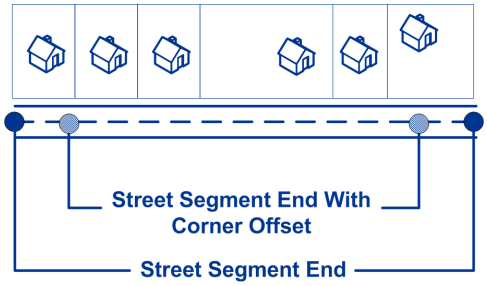
You can create overrides for the global default options on a per-country basis. These options have a + next to the Country column value. For more information about how to create overrides, see **Setting Country Overrides** on page 18.

Global Defaults in Enterprise Designer

If you modify a global defaults option, then that selection is applied to all countries and cannot be changed on a per-country basis. Subsequently, if you select a country and view its options, the modified global defaults option will be inactive in the GUI.

Options

Option Name	Country Support	Description
Search Distance	All	Sets the distance of the radius in which to search for a match to the input coordinates. This value can be specified in either feet or meters. Default = 150 meters. Maximum value = 5280 feet (1 mile) or 1609 meters.

Option Name	Country Support	Description
Street Offset	All	Specifies the offset distance from the street segments to use in street-level geocoding. The offset distance is used in street-level geocoding to prevent the geocode from being in the middle of a street. It compensates for the fact that street-level geocoding returns a latitude and longitude point in the center of the street where the address is located. Since the building represented by an address is not on the street itself, you do not want the geocode for an address to be a point on the street. Instead, you want the geocode to represent the location of the building which sits next to the street. For example, an offset of 50 feet means that the geocode will represent a point 50 feet back from the center of the street. The distance is calculated perpendicular to the portion of the street segment for the address. Offset is also used to prevent addresses across the street from each other from being given the same point. Default value = 7 meters. The following diagram shows an offset point in relation to the original point.  You can select either Feet or Meters for your unit of measurement.
Corner Offset	All	Specifies the distance to offset the street end points in street-level matching. This value is used to prevent addresses at street corners from being given the same geocode as the intersection. Defines the offset position of the geocoded point with respect to the corner. Default value = 7 meters. The following diagram compares the end points of a street to offset end points.  You can select either Feet or Meters for your unit of measurement.

Option Name	Country Support	Description
Coordinate System	All	Specifies the coordinate system that you want to convert the geometry to. The format must be the European Petroleum Survey Group (EPSG) code or the SRID code. Default = epsg:4326.

County-Specific Reverse Geocoding Options

Option Name	Country Support	Description
Find Options	USA	These options set the constraints to use when matching. **Nearest Address** — Attempts to match to the nearest address. Default = enabled. **Nearest Intersection** — Attempts to match to the nearest intersection match. Default = disabled. **Nearest Unranged Segment** — Attempts to match to the nearest unranged segment. Default = disabled. **Prefer Match to Closest Point** — Attempts to match to the nearest point address within the search radius, rather than to the closest feature (e.g. street segment or intersection as well as point addresses). Default = disabled. **Note:** This feature requires that at least one points dataset and one streets dataset are loaded; otherwise, the match will be made to the closest feature.
Keep Multiple Matches	USA	Sets the maximum number of match candidates to be returned. **Enabled** — Return all match candidates. **Disabled** — Return only the best match candidate. Default.

Return Values

The Return Values category allows you to select the fields you would like returned with your match. The following sections cover the **global defaults** return values, which are available for all countries, and the **country-specific return values**, which apply to a subset of countries.

In Management Console, you can set up country-specific overrides for the global defaults. See **Setting Country Overrides** on page 18 for details about setting up these overrides.

Global Defaults

Option Name	Country Support	Description
Return all available information	All	When enabled, returns all available return fields and all available options, including any country-specific options are enabled. When disabled, allows you to selectively choose the return fields listed below. Default = disabled. **Parsed Address** — Returns the separate address fields, such as mainAddressLine, areaName<1-4>, postcodes and country. The meaning of some of these fields may vary by country. For a list of the returned parsed address fields and their definitions, refer to your country's section in **Appendix A - Country-Specific Information**.

Country-Specific Return Values

Option Name	Country Support	Description
	AUS	Australia has the following additional return field options: **Original Points** — Returns the GNAF original latitude/longitude coordinates, and if applicable, the original latitude/longitude coordinates from a User Dictionary. **Level and Lot** — Returns the address level type and number and address lot identifier. **GNAF Identifiers** — Returns the following GNAF identifier fields - `GNAF PID`, `Principal PID`, `Meshblock ID`, `Geocontainment`, `Geofeature`, `Address class`, `SA1`, and `Parcel ID` - from a match to the GNAF National Address File geocoding dataset. **Street Type Abbreviation** — Returns the abbreviated street types instead of the default of fully spelled-out type. **Street frontage** — Coordinates returned from the GNAF geocoding dataset can be returned as standard points or as street frontage points. The standard points are the most precise (rooftop) points available and are returned by default. This option returns points that have been relocated to the frontage of the candidate location. This is generally preferable for routing applications. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **Australia (AUS)** on page 96.
	CAN	Canada has the following additional return field options: **Formatted range** — Returns the formatted range for the address. **Note:** This field is only returned for postal centroid candidates. **Census** — Returns the following Census fields for the matched address location: `Centrus Tract (CT)`, `Census Metropolitan Area (CMA)`, `Census Division (CD)`, `Census Subdivision (CSD)`, and `Census Dissemination Area (DA)`. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **Canada (CAN)**.

Option Name	Country Support	Description
	IND	India has the following additional return field options: **Rural status** — Indicates when the candidate's address is located in a rural region (village). **POI category** — Point of interest category. This return field describes the type of POI, such as a bank, ATM, or restaurant. **Block** — Returns block information. **Sublocality** — Returns the municipal division below locality (areaName4) level. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **India (IND)**.
	JPN	Japan has the following additional return field options: **Jusho code** — Returns a point ID that represents a unique address. **Address Data** — Returns the `chooaza`, `chomoku`, `go`, and `banchi` address fields. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **Japan (JPN)**.
	NZL	New Zealand has the following additional return field options: **UFI** — Returns the New Zealand UFI. The Unique Identifier (UFI) identifies the street segment that the geocoded address belongs to. UFIs are up to 7-digit numbers, assigned by New Zealand Post, that uniquely identify each postal delivery point. **Mesh block** — Returns the New Zealand Meshblock identifier. A Meshblock is the smallest geographic unit for which statistical data is collected by Statistics New Zealand. Meshblocks vary in size from part of a city block to large areas of rural land. **Aliased suburb** — Returns the New Zealand Aliased suburb. An alternative to the officially-recognized suburb name. **Original Points** — Returns the original latitude and longitude coordinates. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **New Zealand (NZL)**.

Option Name	Country Support	Description
	USA	The USA has the following additional return field options: **Quality Descriptors** — Returns the result codes. The result codes indicate how well the input address matched to a known address and assigned a location. They also describe the overall status of a match attempt. For all countries, see **Global Result Codes**. The USA has additional result codes. For details, see **Match and Location Codes for USA**. **Census** — Census output fields contain U.S. Census information about the address. **Intersection** — Returns information resulting from a match to an intersection. **Segment** — Segment output fields contain information on the street segment identified by the data provider. **Other** — Returns additional information about the match. For detailed descriptions of these output fields, see the **Custom Output Fields** section of **United States (USA)** on page 585.

Default Return Fields

The following table lists the fields that are returned by default. Unless otherwise noted, all countries have these fields returned. If a field has country-specific return values, refer to the link provided in the note.

Output Field Name	Description
Formatted Street Address	The formatted main address line.
Formatted Location Address	The formatted last address line.

Output Field Name	Description
Precision Code	A code describing the precision of the geocode. The possible match categories are as follows: **Z1** Postal match with post code 1 centroid. **Z2** Postal match with partial post code 2 centroid. **Z3** Postal match with post code 2 centroid. **G1** Geographic match with area name 1 centroid. **G2** Geographic match with area name 2 centroid. **G3** Geographic match with area name 3 centroid. **G4** Geographic match with area name 4 centroid. The matches in the 'S' category indicate that the record was matched to a single address candidate. **SX** Point located at a street intersection. **SC** Match point located at the house-level that has been projected from the nearest segment. **S0** No coordinates are available, but parts of the address may have matched the source data. **S4** The geocode is located at a street centroid. **S5** The geocode is located at a street address. **S7** The geocode is located at a street address that has been interpolated between point house locations. **S8** Match point located at the house location. Additional match information is of the format `HPNTSCSZA`. If a match result was not made for the specified component, a dash (-) will appear in place of a letter. **H** House number. **P** Street prefix direction. **N** Street name. **T** Street type. **S** Street suffix direction. **C** City name. **Z** Post code. **A** Geocoding dataset. **U** Custom User Dictionary. **Note:** For more detailed information including country-specific meanings and values, see **Global Result Codes** on page 708.

Output Field Name	Description
Precision Level	A code describing the precision of the geocode. One of the following: **0** No coordinate information is available for this candidate address. **1** Interpolated street address. **2** Street segment midpoint. **3** Postal code 1 centroid. **4** Partial postal code 2 centroid. **5** Postal code 2 centroid. **6** Intersection. **7** Point of interest. (If database contains POI data.) **8** State/province centroid. **9** County centroid. **10** City centroid. **11** Locality centroid. **12-15** Reserved for unspecified custom items. **16** The result is an address point. **17** The result was generated by using address point data to modify the candidate's segment data. **18** The result is an address point that was projected using the centerline offset feature. You must have both a point and a street range database to use the centerline offset feature. **Note:** This field is not returned for USA. For geocode precision information for USA, see **Location Codes** on page 692.
Source Dictionary	Identifies the dictionary that is the source for the candidate information and data. The source dictionary is a 0-based integer value that indicates which configured dictionary the candidate came from. If you only have a single dictionary this will always be "0".
Point	The candidate's geocode, specified as X (longitude) and Y (latitude) coordinates.
Search Distance	The distance of the radius that was set for searching for a match to the input coordinates.
Search Distance Units	The unit of measurement that was set for the search distance.

Output Field Name	Description
Status	Reports the success or failure of the match attempt: **null** Success **F** Failure
Status.Code	If the address could not be processed, this field will indicate the reason. • Internal System Error • No Geocode Found • Insufficient Input Data
Status.Description	If the address could not be processed, this field will provide a description of the failure. **Problem + explanation** Returned when Status.Code = Internal System Error. **Geocoding Failed** Returned when Status.code = No Geocode Found. **No location returned** Returned when Status.code = No Geocode Found.

Dataset Configuration for Reverse Geocoding

Dataset Configuration allows you to view information about the geocoding datasets that are installed for each of the listed countries. You can choose which datasets to include or exclude when matching as well as setting the preferred search order.

Dataset Configuration works differently in Management Console and Enterprise Designer. See the following sections for information about these differences.

Configuring Datasets in Management Console

To set the dataset configuration for a country, select the country in the **Country Filter** field, click the **Dataset Configuration** tab, and make the desired configuration changes.

Country The three-letter ISO country code. You can sort the countries by ascending or descending alphabetical order with the ordering control at the top of the column.

DataSource	The geocoding dataset vendor. You can limit your display by vendor by using the sort control at the top of the column. Use the `Clear all` value to redisplay all vendor datasets.
Include	Allows you to include or exclude the dataset when matching.
Type	The type of dataset: either geocoding dataset (AD) or custom user dictionary (UD).
Vintage	The release date of the geocoding dataset.
Region	The global area in which a country appears. For example, Europe, Americas, and so forth. You can limit your display by region by using the sort control at the top of the column. Use the `Clear all` value to redisplay all datasets.

There are two additional hidden informational fields you can display by clicking the arrow control in the left-hand column next to a dataset.

Description	A brief description of the geocoding dataset.
Path	The path to the installation location of the geocoding dataset.

To set the geocoding dataset search order:

The initial search order is determined by the order in which the geocoding datasets were installed.

Click on the country you want to set the search order. Then, select a dataset by clicking the checkbox in the right-hand column. If you have more than one dataset, the **Refresh** and **Move Up** and **Move Down** buttons appear. Then use the **Move Up** and **Move Down** buttons to move its position. The dataset in the top row will be the first one that will be used for searching and matching and the one located in the bottom row, the last. Use the **Refresh** button to reset the order to the original search order.

Configuring Datasets in Enterprise Designer

To set the dataset configuration for a country, select the country in the Countries panel and make the desired configuration changes in the **Search Order** panel.

DataSource	The geocoding dataset vendor.
Include	Allows you to include or exclude the dataset when matching.
Type	The type of dataset: either geocoding dataset (AD) or custom user dictionary (UD).
Vintage	The release date of the geocoding dataset.
Description	A brief description of the geocoding dataset.

To set the geocoding dataset search order:

The initial search order is determined by the order in which the geocoding datasets were installed.

Click on the country you want to set the search order. Then, click on a dataset in the table and use the up/down arrows to move its position. The dataset in the top row will be the first one that will be used for searching and matching and the one located in the bottom row, the last. Use the **Refresh** button to reset the order to the original search order.

Preview

You can preview the results of the **Global Reverse Geocoding** stage of the Global Geocoding module in **Management Console** using the module's **Preview** tab. Preview can be useful in helping you decide what options to specify because you can immediately see the effect that different options have on the data returned by the module.

1. Open Management Console.
2. Go to the **Services** menu and select **Global Geocoding**.
3. Click **Global Reverse Geocode**.
4. Click the **Preview** tab.
5. Enter the test data into each field or import your test data from a file. Do not enter or import any data into the **Location** field. Entries in this field are ignored.
   a) If you are entering data manually, type the test data into the individual fields in the input record.
      To add additional records, click the **Add** button under **Input Records**.
   b) If you are importing data, click the **Import** button under **Input Records**.
      The **Import Data** popup appears.

      You can specify or browse to the file from which the data is drawn in the **File name** field and then choose the **Field separator** character from the dropdown. Click **OK** to complete the import process.

   Here are some tips for entering data:

   - You do not have to enter data in every field. Leaving a field empty results in an empty string being used for preview.
   - If you want to preview the effect of passing a null value in a field, hover the cursor over the field name and click the **Disable** icon that appears next to the field. You can reenable the field by hovering the cursor over the field name and clicking the **Reenable** icon.
   - You can preview multiple records at once.
   - If you import test data from a file, note the following:

- The first row in the file must be a header record. The field names in the header must match the field names required by the module.
- You can import as many records as you need.
- If the file uses a space as the field separator, field values must be surrounded by quotes. Here is an example of a file that uses a pipe as the field separator:

```
X|Y|Country|Locality
          -72.672229|42.076406|USA|
          -82.436915|34.870463|USA|
          -71.2577|46.8461|CAN|
```

- To delete all records, click the **Delete** button at the top of the preview area.
- To delete an individual record, hover over the input record name (for example, "Input Record 1") and click the **Delete** icon that appears next to the record name.

6. Click **Run Preview**.

   The service processes the input records and displays the results in the **Output Records** column that appears.

7. Review your output data, making sure the results are what you intended to get from the module. If necessary you can make changes to the module's settings and click **Run Preview** again. You do not need to input the data again.

Preview Fields

You can enter your test records either manually or by importing from a file. Not all fields are required.

Table 1:

Field Name	Description
X	Longitude in degrees. Specify in millionths of decimal degrees.
Y	Latitude in degrees. Specify in millionths of decimal degrees.
Country	The three-character ISO code for the country. Optional.
Location	Do not use. Entries in this field are ignored.

A - Country-Specific Information

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Country Reference Listing and ISO 3166-1 Country Codes

Country Name	Section link	ISO 3166-1 Alpha-2 Country Code	ISO 3166-1 Alpha-3 Country Code
ALBANIA	**Republic of Albania (ALB)** on page 76	AL	ALB
ALGERIA	**Algeria (DZA)** on page 79	DZ	DZA
AMERICAN SAMOA	See **United States (USA)** on page 585	US	USA
ANDORRA	**Andorra (AND)**	AD	AND
ANGOLA	**Angola (AGO)** on page 83	AO	AGO
ARGENTINA	**Argentina (ARG)** on page 87	AR	ARG
ARUBA	**Aruba (ABW)** on page 92	AW	ABW
AUSTRALIA	**Australia (AUS)** on page 96	AU	AUS
AUSTRIA	**Austria (AUT)** on page 108	AT	AUT
BAHAMAS	**Bahamas (BHS)** on page 113	BS	BHS
BAHRAIN	**Bahrain (BHR)** on page 117	BH	BHR
BARBADOS	**Barbados (BRB)** on page 121	BB	BRB
BELGIUM	**Belgium (BEL)** on page 125	BE	BEL
BELIZE	**Belize (BLZ)** on page 129	BZ	BLZ
BENIN	**Benin (BEN)** on page 133	BJ	BEN
BERMUDA	**Bermuda (BMU)** on page 137	BM	BMU

Country Name	Section link	ISO 3166-1 Alpha-2 Country Code	ISO 3166-1 Alpha-3 Country Code
BOLIVIA	**Bolivia (BOL)** on page 141	BO	BOL
BOTSWANA	**Botswana (BWA)** on page 148	BW	BWA
BOSNIA AND HERZEGOVINA	**Bosnia and Herzegovina (BIH)** on page 144	BA	BIH
BRAZIL	**Brazil (BRA)** on page 152	BR	BRA
BRUNEI DARUSSALAM	**Brunei Darussalam (BRN)** on page 157	BN	BRN
BURKINA FASO	**Burkina Faso (BFA)** on page 161	BF	BFA
BURUNDI	**Burundi (BDI)** on page 165	BI	BDI
CAMEROON	**Cameroon (CMR)** on page 169	CM	CMR
CANADA	**Canada (CAN)** on page 173	CA	CAN
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CONGO, DEMOCRATIC REPUBLIC OF THE	**Democratic Republic of the Congo (COD)** on page 198	CD	COD
COSTA RICA	**Costa Rica (CRI)** on page 202	CR	CRI
CROATIA (LOCAL NAME: HRVATSKA)	**Croatia (HRV)** on page 206	HR	HRV
CUBA	**Cuba (CUB)** on page 210	CU	CUB
CYPRUS	**Cyprus (CYP)** on page 213	CY	CYP
CZECH REPUBLIC	**Czech Republic (CZE)** on page 217	CZ	CZE

Country Name	Section link	ISO 3166-1 Alpha-2 Country Code	ISO 3166-1 Alpha-3 Country Code
DENMARK	**Denmark (DNK)** on page 221	DK	DNK
DOMINICAN REPUBLIC	**Dominican Republic (DOM)** on page 226	DO	DOM
ECUADOR	**Ecuador (ECU)** on page 230	EC	ECU
EGYPT	**Egypt (EGY)** on page 234	EG	EGY
EL SALVADOR	**El Salvador (SLV)** on page 238	SV	SLV
ESTONIA	**Estonia (EST)** on page 242	EE	EST
FINLAND	**Finland (FIN)** on page 246	FI	FIN
FRANCE	**France (FRA)** on page 250	FR	FRA
FRENCH GUYANA	See **France (FRA)** on page 250	GF	GUF
GABON	**Gabon (GAB)** on page 258	GA	GAB
GERMANY	**Germany (DEU)** on page 262	DE	DEU
GHANA	**Ghana (GHA)** on page 266	GH	GHA
GREAT BRITAIN	**Great Britain (GBR)** on page 270	GB	GBR
GREECE	**Greece (GRC)** on page 275	GR	GRC
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GUAM	See **United States (USA)** on page 585	US	USA
GUATEMALA	**Guatemala (GTM)** on page 279	GT	GTM
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Country Name	Section link	ISO 3166-1 Alpha-2 Country Code	ISO 3166-1 Alpha-3 Country Code
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HUNGARY	**Hungary (HUN)** on page 295	HU	HUN
ICELAND	**Iceland (ISL)** on page 299	IS	ISL
INDIA	**India (IND)** on page 303	IN	IND
INDONESIA	**Indonesia (IDN)** on page 308	ID	IDN
IRAQ	**Iraq (IRQ)** on page 311	IQ	IRQ
IRELAND	**Ireland (IRL)** on page 315	IE	IRL
ITALY	**Italy (ITA)** on page 322	IT	ITA
JAMAICA	**Jamaica (JAM)** on page 327	JM	JAM
JAPAN	**Japan (JPN)** on page 331	JP	JPN
JORDAN	**Jordan (JOR)** on page 337	JO	JOR
KENYA	**Kenya (KEN)** on page 341	KE	KEN
KOSOVO	**Kosovo (XKX)** on page 345	XK	XKX
KUWAIT	**Kuwait (KWT)** on page 349	KW	KWT
LATVIA	**Latvia (LVA)** on page 353	LV	LVA
LEBANON	**Lebanonese Republic (LBN)** on page 358	LB	LBN
LESOTHO	**Lesotho (LSO)** on page 362	LS	LSO
LIECHTENSTEIN	See **Switzerland (CHE)** on page 541.	LI	LIE
LITHUANIA	**Lithuania (LTU)** on page 366	LT	LTU

Country Name	Section link	ISO 3166-1 Alpha-2 Country Code	ISO 3166-1 Alpha-3 Country Code
LUXEMBOURG	See **Belgium (BEL)** on page 125.	LU	LUX
MACAO	**Macau (MAC)** on page 370	MO	MAC
MACEDONIA, REPUBLIC OF	**Republic of Macedonia (MKD)**	MK	MKD
MALAWI	**Malawi (MWI)** on page 378	MW	MWI
MALAYSIA	**Malaysia (MYS)** on page 382	MY	MYS
MALI	**Mali (MLI)** on page 386	ML	MLI
MALTA	**Republic of Malta (MLT)** on page 389	ML	MLT
MARTINIQUE	See **France (FRA)** on page 250.	MQ	MTQ
MAURITANIA	**Mauritania (MRT)** on page 393	MR	MRT
MAURITIUS	**Mauritius (MUS)** on page 397	MU	MUS
MAYOTTE	See **France (FRA)** on page 250.	YT	MYT
MEXICO	**Mexico (MEX)** on page 401	MX	MEX
MONACO	See **France (FRA)** on page 250.	MC	MCO
MONTENEGRO	**Montenegro (MNE)** on page 407	ME	MNE
MOROCCO	**Morocco (MAR)** on page 411	MA	MAR
MOZAMBIQUE	**Mozambique (MOZ)** on page 415	MZ	MOZ
NAMIBIA	**Namibia (NAM)** on page 419	NA	NAM
NETHERLANDS	**Netherlands (NLD)** on page 423	NL	NLD
NEW ZEALAND	**New Zealand (NZL)** on page 427	NZ	NZL

Country Name	Section link	ISO 3166-1 Alpha-2 Country Code	ISO 3166-1 Alpha-3 Country Code
NICARAGUA	**Nicaragua (NIC)** on page 432	NI	NIC
NIGER	**Niger (NER)** on page 436	NE	NER
NIGERIA	**Nigeria (NGA)** on page 440	NG	NGA
NORTH MARIANA ISLANDS	See **United States (USA)** on page 585	US	USA
NORWAY	**Norway (NOR)** on page 444	NO	NOR
OMAN	**Oman (OMN)** on page 448	OM	OMN
PALAU	See **United States (USA)** on page 585	US	USA
PANAMA	**Panama (PAN)** on page 452	PA	PAN
PARAGUAY	**Paraguay (PRY)** on page 456	PY	PRY
PERU	**Peru (PER)** on page 460	PE	PER
PHILIPPINES	**Philippines (PHL)** on page 464	PH	PHL
POLAND	**Poland (POL)** on page 468	PL	POL
PORTUGAL	**Portugal (PRT)** on page 472	PT	PRT
PUERTO RICO	See **United States (USA)** on page 585	US	USA
QATAR	**Qatar (QAT)** on page 477	QA	QAT
REUNION	See **France (FRA)** on page 250.	RE	REU
ROMANIA	**Romania (ROU)** on page 481	RO	ROU
RUSSIAN FEDERATION	**Russian Federation (RUS)** on page 485	RU	RUS
RWANDA	**Rwanda (RWA)** on page 489	RW	RWA

Country Name	Section link	ISO 3166-1 Alpha-2 Country Code	ISO 3166-1 Alpha-3 Country Code
SAINT KITTS AND NEVIS	**Saint Kitts and Nevis (KNA)** on page 493	KN	KNA
SAUDI ARABIA	**Saudi Arabia (SAU)** on page 497	SA	SAU
SENEGAL	**Senegal (SEN)** on page 501	SN	SEN
SERBIA	**Republic of Serbia (SRB)** on page 504	RS	SRB
SINGAPORE	**Singapore (SGP)** on page 508	SG	SGP
SLOVAKIA (SLOVAK REPUBLIC)	**Slovakia (SVK)** on page 513	SK	SVK
SLOVENIA	**Slovenia (SVN)** on page 517	SI	SVN
SOUTH AFRICA	**South Africa (ZAF)** on page 521	ZA	ZAF
SPAIN	**Spain (ESP)** on page 525	ES	ESP
SURINAME	**Republic of Suriname (SUR)** on page 529	SR	SUR
SWAZILAND	**Swaziland (SWZ)** on page 533	SZ	SWZ
SWEDEN	**Sweden (SWE)** on page 537	SE	SWE
SWITZERLAND	**Switzerland (CHE)** on page 541	CH	CHE
TAIWAN	**Taiwan (TWN)** on page 545	TW	TWN
TANZANIA, UNITED REPUBLIC OF	**United Republic of Tanzania (TZA)** on page 549	TZ	TZA
THAILAND	**Thailand (THA)** on page 553	TH	THA
TOGO	**Togo (TGO)** on page 557	TG	TGO
TRINIDAD AND TOBAGO	**Trinidad and Tobago (TTO)** on page 561	TT	TTO
TUNISIA	**Tunisia (TUN)** on page 565	TN	TUN

Country Name	Section link	ISO 3166-1 Alpha-2 Country Code	ISO 3166-1 Alpha-3 Country Code
TURKEY	**Turkey (TUR)** on page 569	TR	TUR
UGANDA	**Uganda (UGA)** on page 573	UG	UGA
UKRAINE	**Ukraine (UKR)** on page 577	UA	UKR
UNITED ARAB EMIRATES	**United Arab Emirates (ARE)** on page 581	AE	ARE
UNITED KINGDOM	See **Great Britain (GBR)** on page 270.	GB	GBR
UNITED STATES	**United States (USA)** on page 585	US	USA
URUGUAY	**Uruguay (URY)** on page 620	UY	URY
VENEZUELA	**Venezuela (VEN)** on page 624	VE	VEN
VIRGIN ISLANDS	See **United States (USA)** on page 585	US	USA
WORLD GEOCODER	**World Geocoder (XWG)** on page 632	XW	XWG
YEMEN	**Republic of Yemen (YEM)** on page 669	YE	YEM
ZAMBIA	**Zambia (ZMB)** on page 673	ZM	ZMB
ZIMBABWE	**Zimbabwe (ZWE)** on page 677	ZW	ZWE

Country Sections

Republic of Albania (ALB)

This section defines the supported geocoding datasets, operations, and input and output field information for the Republic of Albania.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Republic of Albania.

Note: Custom User Dictionaries are not supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Albanian	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for the Republic of Albania:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Rr. Reshit Collaku 4 **1000 Tirana**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city, town or locality. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the four-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the Republic of Albania, the country code is ALB. Required for forward geocoding.

Address Guidelines for the Republic of Albania

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on the Republic of Albania addresses, see the Albania Post website: **http://www.en.postashqiptare.al/**

- **Required fields**—Addresses must contain either a city or postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to the Republic of Albania.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in the Republic of Albania.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.

Field Name	Description
areaName2	Not used.
areaName3	The city, town or locality.
areaName4	Not used.
postCode1	The four-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For the Republic of Albania, the country code is ALB.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Republic of Albania does not have any custom output fields.

Algeria (DZA)

This section defines the supported geocoding datasets, operations, and input and output field information for Algeria.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Algeria.

Note: Custom User Dictionaries are supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French, Arabic	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Algeria:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
placeName	String	Not used.
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional.
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the town. Optional.

Field Name	Type	Description
areaName4	String	Not used.
postalCode	String	Not used.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Algeria, the country code is DZA. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Algeria.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in Algeria.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.

Field Name	Description
addressLastLine	The last line of the address.
placeName	Not used.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Algeria, the country code is DZA.
addressNumber	Not used.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Algeria does not have any custom output fields.

Angola (AGO)

This section defines the supported geocoding datasets, operations, and input and output field information for Angola.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Angola.

Note: Custom User Dictionaries are not supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Portuguese	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Angola:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Rua Major Kanhangulo 197 **Luanda**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Angola does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Angola, the country code is AGO. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Angola.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Angola.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not applicable.
areaName2	Not applicable.
areaName3	The city or town.
areaName4	Not applicable.
postCode1	Not applicable.
postCode2	Not applicable.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Angola, the country code is AGO.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Angola does not have any custom output fields.

Argentina (ARG)

This section defines the supported geocoding datasets, operations, and input and output field information for Argentina.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Argentina.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Spanish	Yes	Yes	Yes	Yes	Yes	No	No
NAVTEQ Spanish	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Argentina:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: San Martin 230 **Y5900FNF Villa Maria**
areaName1	String	Specifies the region or province. Optional.
areaName2	String	Specifies the department. Optional.
areaName3	String	Specifies the city or town name. Your input address should use the official city name or alias. For example, "Buenos Aires" is recognized as an alias for Capital Federal. **Note:** In Argentina, Buenos Aires Federal District is not part of the Buenos Aires province. If your input specifies only "Buenos Aires", candidates are returned for the Federal District and in the region of Buenos Aires. For provincial capitals in Argentina, you can use the word Capital as well as the actual capital name. For example, the input of "Capital, MZA" is equivalent to "Mendoza, MZA".
areaName4	String	Specifies the neighborhood or barrio. Optional.
postalCode	String	Specifies the 8-digit postal code. The first letter indicates the province, the next 4 digits indicate the locality, and the last 3 letters indicate the block.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Argentina, the country code is ARG. Required for forward geocoding.

Address Guidelines for Argentina

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Argentine addresses, see the Correo Argentino website: **http://www.correoargentino.com.ar/**.

- **Required fields**—If you are using the standard TomTom database, addresses must contain a city. For the NAVTEQ database, addresses can contain either a city or postal code.
- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. For example, you can input Calle 5 or Calle cinco and get the same returned candidates. Ordinals are also recognized in input addresses. The following numbers and equivalents are recognized as part of a street name input:

  `1,UNO,PRIMERO,PRIMER,PRIMERA`

  `5,CINCO,QUINTO,QUINTA`

  For example, an input street name of "25 de Mayo" is recognized and handled the same way as "Veinticinco de Mayo".

- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported in input addresses. Examples of typical thoroughfare types are:

Avendia	Avendia	Av	Ave	Avda
Calle	C	Clle		
Lateral Ruta	Lat Ruta	L R	LR	
Ruta Provincia	R P	RP		

- **Proper names and dates in street and town names**—Proper names and dates are often used in Argentina addresses, and these are handled by the geocoder for Argentina. For example, an input street name of "Juan F. Ibarra" is recognized and handled the same way as "Juan Felipe Ibarra".
- **Directionals in addresses**—The following directionals are recognized in input addresses: Norte, Oriente, Este, Sur, Oueste, Occidente, Poniente, N, E, S, O, NE, NO, SE, SO, Noreste, Sudeste, Noroeste, Sudoeste.
- **Abbreviations in addresses**—A number of common abbreviations can be used in input addresses. The geocoder for Argentina will recognize the abbreviations and geocode successfully. For example, following is a small sample of equivalent abbreviations. This is not a complete list of address abbreviations.

Bario	BAR

Ciudad	CD	CD.
Colonia	COL	COL.
Doctor	DR	
Francisco	FCO	

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Argentina.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Argentina.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region or province.
areaName2	The department.
areaName3	The city or town.
areaName4	The neighborhood or barrio.
postCode1	The 8-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Argentina, the country code is ARG.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Argentina does not have any custom output fields.

Aruba (ABW)

This section defines the supported geocoding datasets, operations, and input and output field information for Aruba.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Aruba.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Dutch	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Aruba:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: L.G. Smith Boulevard #160 Sun Plaza Suite 110 **Oranjestad**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Required.
areaName4	String	Not used.
postalCode	String	Not used - Aruba does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Aruba, the country code is ABW. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Aruba.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Aruba.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Aruba, the country code is ABW.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Aruba does not have any custom output fields.

Australia (AUS)

This section defines the supported geocoding datasets, operations, and input and output field information for Australia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Australia.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
AUS Standard	Yes	Yes	Yes	Yes	Yes	No	No
PMSA GNAF English	Yes	Yes	Yes	Yes	Yes	Yes	No

Supported Operations

The following operations are supported for Australia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

Australian addresses may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 4360 Dukes Rd. **Kalgoorlie WA 6430**
areaName1	String	Specifies the state or territory. Optional.
areaName2	String	The Local Government Authority (LGA). Optional.
areaName3	String	Specifies a town or suburb.
areaName4	String	Not used.
postalCode	String	Australia uses a four-digit postal code system. In general, the first digit represents a state or territory, the second digit represents a region with a state, and digits three and four representing towns.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Australia, the country code is AUS. Required for forward geocoding.

Address Guidelines for Australia

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Australia addresses, see the Australia Post website: **www.auspost.com.au**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **House numbers and unit information**—The house number pinpoints the location of the address. Unit input can be in one of two formats, as shown in the following examples:

  - Apt 99, 123 Main St., where Apt is the unit type and 99 is the unit number. In this format, you must specify a valid unit type, otherwise the address will not be geocoded correctly. For a listing of valid unit types, see **www.auspost.com.au**.
  - 99-123 Main St. For an address derived from the GNAF database, this address is a unique house number and is geocoded as a single delivery point, not as a range.

- **Directional suffixes**—Use directional suffixes wherever possible. This is especially true in towns and cities that consist mainly of numbered streets. These streets can only be distinguished by their directional suffixes and street types. They also distinguish addresses on streets that change direction. For example: 123 Queen St W and 123 Queen St E would have very different coordinates.
- **Street types**—These distinguish different streets of the same name. For example, Main Avenue and Main Street are two entirely different entities. Using types is not essential, but it adds precision to your data. For a listing of street types, see **www.auspost.com.au**.
- **City/suburb name**—Enter the city/suburb name in the areaName3 field. Note that all input addresses must contain either a city or a postal code. If the geocoder does not make a match on the street in the specified suburb, it can make a match on the Local Government Area (LGA). Local Government Area (LGAs) do not encompass all of Australia. For example, LGAs do not cover extensive northern parts of South Australia, a large part of the Northern Territory, and the Australian Capital Territory. An LGA can include a number of official suburbs. It is best to use the suburb name for geocoding purposes, but it is possible to get a match on the LGA (or to return LGA information) in geocoded results.
- **Postal code**—All postcodes consist of four digits. While there are exceptions, the general format of postcodes is as follows:

  Note: These are general guidelines, and there are exceptions to these postcode number ranges.

  - Digit 1 represents the state or territory, within the following general conventions:

2	NSW
2600 and 2900	ACT
3	VIC
4	QLD
5	SA

6	WA
7	TAS
0	NT

- Digit 2 represents a region within the state. State or territorial capitals usually have a 0 or 1 as the second digit.
- Digits 3 and 4 represent towns. Major towns usually have a 0 as the last digit (or sometimes as the last two digits).

Address Range Input

Street range data represents a range of house numbers that can possibly exist but are not guaranteed to exist. For addresses derived from the Street Range Address database, house number matching is more relaxed compared to the GNAF database. Also, the candidate house number may be changed based on how the input house number matches the suffix/range data.

The following table shows geocoding match results with house number ranges from a Street range data source:

Input House Number	Candidate House Number Range	Candidate House Number	Match or Non-Match
10	10-12	10	Match
10A	10-12	10	Match
10	8-12	10	Match
10-14	10-12	10	Match
10-14	10-20	10-14	Match
10	12-16	12	Non-Match

GNAF Range Address Matching

Australian addresses originating from the GNAF database may contain house number ranges, but these records still represent single address delivery points. These range addresses may also have alphabetic suffixes. For example, the following house address numbers each represent a single address. GNAF suffix address matching GNAF range address matching

10-12 10A-10C 10-10A

The Spectrum™ Technology Platform validates and geocodes these point source addresses. If the criteria are met and the reliability of the match is 1 or 2, the Spectrum™ Technology Platform returns point matches with an S8 result code.

If a complete house number range/suffix is specified for input, candidates from a point data source must be fully matched. If partial house number information is given (without complete range or suffix information), then candidates with non-conflicting range/suffix information (or no range/suffix information) will match.

The following table shows geocoding match results with house number ranges from a point data source (GNAF database.). The matching rules are based on the Address Matching Approval System (AMAS®) developed by Australia Post.

Input House Number	Data House Number	Candidate House Number	Match or Non-Match
10	10A	10A	Match: Input number 10 matches 10A (or 10 with any suffix).
10A	10	10	Match: Input number 10 matches.
10C	10A	10A	Non-Match: Input suffix does not match the data suffix.
10	10-12	10-12	Match: Input number 10 matches the first number of the dashed data range.
12	10-12	10-12	Match: Input number 12 matches the last number of the dashed data range.

Input House Number	Data House Number	Candidate House Number	Match or Non-Match
10A	10-12	10-12	Match: Input number 10 matches the first number of the dashed data range. Input suffix is not in data, but this does not affect matching.
12	10-14	10-14	Non-Match. Input number 12 does not match either number of the dashed data range. No interpolation is performed on a house number ranges.
10-12	10-14	10-14	Match: First input number 10 matches the first number of the data and the second number 12 is within the data range.
10-12	10A-14A	10A-14A	Match: The input has no suffix information, but the input number 10 matches.
10-16	10-12	10-12	Non-Match: Input second number 16 is outside the 10-12 data range.
10-13	10-14	10-14	Non-Match: Both input numbers are within data range, but second number (13) is odd and this does not match with the even range of 10-14.
10-13	10-15	10-15	Match: Data range (10-15) suggests a mixed odd/even range, so input is matched.
RMB 10	10	10	Match: Input number matches
16	A16	A16	Match: Input number matches
RMB 10	A10	A10	Non-Match: Input suffix does not match the data suffix.

Specifying Unit Information in an Address

When you use the GNAF database, the geocoder recognizes several formats of unit types (such as unit, suite, floor, and flat address prefix) in an address, as illustrated below:

- "Unit 5 6 Macleay Street"—Full unit description used in conjunction with unit value and address number.
- "U 5 6 Macleay Street"—Abbreviated unit description used in conjunction with unit value and address number.
- "5/6 Macleay Street"—No Unit abbreviation with unit number and address number separated by a forward slash notation.

Exact matches on unit and address are placed first in the list of returned candidates.

Specifying Level Information in an Address

If you use the GNAF database the geocoder can return level information for some addresses. Level information identifies the floor or level of a multi-storey building. The GNAF database includes level information for some Australian states. Level information may be associated with unit information, but not necessarily. If the GNAF database contains multiple records with the same level, the level information is returned only if the input address contains unique content (such as a unit number).

If the GNAF database has level information for an address, the geocoder returns that information with the matched candidate. The correct level information is returned (when available) even if the input address did not include level information, or if the input had the wrong level information.

If the input address has level information but the GNAF database does not include level information for the matching address, then the input level information is discarded since it is not validated in the GNAF data.

Following are several examples of partial addresses that contain level information. The level component is indicated in bold.

Suite 3 **Level 7**, 17 Jones Street (Suite 3 is a unit)

Floor 2, 17 Jones Street

Level 7, 17-19 Middleborough Road

Single Line Input

Instead of entering each address element in separate fields, you can enter the entire address in the `mainAddress` input field.

[unit_info][level_info][address_number][street_info][area_name_3][area_name_1][post_code]

Where:

- *[unit_info][level_info][address_number]* are optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.).
- *[area_name_3]* is the city.

- *[area_name_1]* is the state or territory.
- *[postal_code]* is the postal code.

For best results, put a comma between street information and the lastline (e.g. city and postal) information.

Custom Options

The following table lists the options that are unique for Australia. These custom fields are optional, and unless otherwise noted, they are available for both Geocoding and Reverse Geocoding.

For the standard set of options available to all countries and their definitions, see the chapters covering Global Geocode and Global Reverse Geocode.

Option Name	Description
Street frontage	Returns the GNAF street frontage points. Default = disabled. You can locate this option on the **Global Geocode** and **Global Reverse Geocode** windows: **Return Values** > **Street frontage** checkbox.
Force postal match	Results in a match when the postal code matches even though the city/suburb does not match. Default = disabled.
Use abbreviated types	Returns the abbreviation for the street type, which is spelled out by default. You can locate this option on the **Global Geocode** and **Global Reverse Geocode** windows: **Return Values** > **Use abbreviated types** checkbox.
Calculate Centerline projection of point	Computes the closest point on the street from the parcel point. Default = disabled. **Note:** This feature requires that a point-level geocoding dataset is installed.
Centerline Offset	Centerline matching is used with point-level matching to tie a point-level geocode with its parent street segment. This functionality is useful for routing applications. The centerline offset specifies the distance to move the point from the street centerline toward the parcel point. Default = 0 meters. You can select either Feet or Meters for your unit of measurement. **Note:** Centerline matching requires that a point-level geocoding dataset is installed. **Note:** Supported only in forward geocoding.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Australia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The state.
areaName2	The Local Government Authority (LGA) name.
areaName3	The town, suburb or locality.
areaName4	Not used.
postCode1	Postcode.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Australia, the country code is AUS.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.

Field Name	Description
unitValue	The unit value/number, such as "3B".
customFields	See the following section for the custom field definitions.

Custom Output Fields

The following table lists the output fields that are unique for Australia. Unless otherwise noted, these fields can be returned for both forward and reverse geocoding.

- To return one or more of these custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **Australia**. Then, on the **Return Values** tab, select the desired output field(s).
- To return all custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **Australia**. Then, on the **Return Values** tab, select the **Return all available information** checkbox.

Field	Description
AUS.Street Type Abbreviation	The abbreviation for the street type, which is spelled out by default. To include this field in the output, select **Return Values** > **Use abbreviated types** checkbox
AUS.Original Latitude	The original GNAF latitude. To include this field in the output, select: **Return Values** > **Original Point** checkbox.
AUS.Original Longitude	The original GNAF longitude. To include this field in the output, select: **Return Values** > **Original Point** checkbox.
AUS.UD Original Latitude	The original latitude returned from a point-based user dictionary. To include this field in the output, select: **Return Values** > **Original Point** checkbox.
AUS.UD Original Longitude	The original longitude returned from a point-based user dictionary. To include this field in the output, select: **Return Values** > **Original Point** checkbox.

Field	Description
AUS.GNAF Parcel Identifier	The GNAF parcel identifier. To include this field in the output, select: **Return Values** > **GNAF Identifiers** checkbox.
AUS.GNAF Persistent PID	The GNAF Persistent Identifier (GNAF PID) is a 14-character alphanumeric string that uniquely identifies each GNAF address. The PID is constructed from a combination of the major address fields of the GNAF Dictionary. An example of a GNAF PID is: GAVIC411711441 To include this field in the output, select: **Return Values** > **GNAF Identifiers** checkbox.
AUS.GNAF Principal PID	The Persistent Identifier of the principal address. To include this field in the output, select: **Return Values** > **GNAF Identifiers** checkbox.
AUS.Geocontainment	This specifies whether the returned coordinates are inside or outside the address boundary. Values are YES for coordinates within, or NO for coordinates outside the boundary. To include this field in the output, select: **Return Values** > **GNAF Identifiers** checkbox.
AUS.Geo Feature	This field returns a geocode feature type if that was not provided in other GNAF fields. GEOFEATURE corresponds to Geocode Types (GEOCODE_TYPE_AUT Codes) that are described in the PSMA Data Product Description Version 2.7 (Aug. 2012). To include this field in the output, select: **Return Values** > **GNAF Identifiers** checkbox.
AUS.GNAF Address Class	The GNAF address classification. To include this field in the output, select: **Return Values** > **GNAF Identifiers** checkbox.
AUS.GNAF SA1	The GNAF Statistical Area Level 1 (SA1) identifier. To include this field in the output, select: **Return Values** > **GNAF Identifiers** checkbox.

Field	Description
AUS.Level Number	The number of a floor or level in a multistory building. For example, **Floor 2**, 17 Jones Street The GNAF database includes level information for some Australian states. Level information may be associated with unit information, but not necessarily. If the GNAF database contains multiple records with the same level, the level information is returned only if the input address contains unique content (such as a unit number). If the GNAF dictionary has level information for an address, that information is returned with the matched candidate. The correct level information is returned (when available) even if the input address did not include level information, or if the input had the wrong level information. If the input address has level information but the GNAF database does not include level information for the matching address, then the input level information is discarded since it is not validated in the GNAF data. To include this field in the output, select: **Return Values** > **Level and Lot** checkbox.
AUS.Level Type	The label used for a floor of a multistory building. For example, "Level" or "Floor". In this example, the level type is "Level": Suite 3 **Level 7**, 17 Jones Street In this example, Suite 3 is a unit. To include this field in the output, select: **Return Values** > **Level and Lot** checkbox.
AUS.Lot Number	Lot numbers are returned for GNAF candidates because some rural addresses do not have adequate physical or house number information. To include this field in the output, select: **Return Values** > **Level and Lot** checkbox.
AUS.Meshblock Identifier	A Meshblock is the smallest geographic unit for which statistical data is collected by the Australian Bureau of Statistics (ABS). Meshblocks usually contain a minimum of 20 to 50 households. This is about one fifth the size of a Collection District (CD). You can use the Meshblock ID to do additional attributions against your own data. To include this field in the output, select: **Return Values** > **GNAF Identifiers** checkbox.

Austria (AUT)

This section defines the supported geocoding datasets, operations, and input and output field information for Austria.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Austria.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom German	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Austria:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Florian 3 **9020 Enthalpy in Kirsten**
areaName1	String	Specifies the state. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town. An alias may also be used. For example, Wien and Vienna are aliases and both names can be used on input. When you geocode, the input name is returned with the candidate. For example: if you use Wien on input, Wien is returned in the output. If you use Vienna on input, Vienna is returned in the output.
areaName4	String	Not used.
postalCode	String	Austria uses a four-digit postal code system. The first two numbers indicate the sector and the last two numbers designate the delivery point within the sector.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Austria, the country code is AUT. Required for forward geocoding.

Address Guidelines for Austria

Follow these guidelines to provide input that Spectrum™ Technology Platform can successfully geocode. For additional information on Austrian addresses, see the Austria Post website: **www.post.at**.

- **Required fields**—Addresses must contain either a city or a postal code.

- **Thoroughfare types**—Austrian thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.
- **Common words and abbreviations**—Common words, directionals, house number indicators, and abbreviations used in addresses are recognized.
- **State abbreviations**—State abbreviations are supported. The following table lists the Austrian states and their abbreviations.

Burgenland	Bgl
Kärnten	Ktn
Niederösterreich	NÖ
Oberösterreich	OÖ
Salzburg	Sbg
Steiermark	Stm
Tirol	Tirol
Vorarlberg	Vbg
Wien	Wien

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Austria.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Austria.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The state.
areaName2	The district.
areaName3	The city or town.
areaName4	Not used.

Field Name	Description
postCode1	The 4-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Austria, the country code is AUT.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Austria does not have any custom output fields.

Bahamas (BHS)

This section defines the supported geocoding datasets, operations, and input and output field information for the Bahamas.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Bahamas.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ English	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Bahamas:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Mickey St **Nassau, New Providence**
areaName1	String	Specifies the district. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Using a town alias is also supported.
areaName4	String	Not used.
postalCode	String	Not used - the Bahamas does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the Bahamas, the country code is BHS. Required for forward geocoding.

Address Guidelines for the Bahamas

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Bahamian addresses, see the Postal Service in the Bahamas website: **http://bahamas-guide.info/travel.basics/postal.services/**

- **Required fields**—Addresses must contain a city. Postal codes are not used in Bahamas.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area_name_3][area_name_1]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any unit type, unit value or pre- or post-directional information (e.g. East, West, etc.).
- *[area_name_3]* is the city.
- *[area_name_1]* is the district.

For best results, put a comma between street information and the lastline (e.g. city and postal) information.

Custom Options

There are no options specific to the Bahamas.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in the Bahamas.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	District.

Field Name	Description
areaName2	Not used.
areaName3	City or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For the Bahamas, the country code is BHS.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Bahamas does not have any custom output fields.

Bahrain (BHR)

This section defines the supported geocoding datasets, operations, and input and output field information for Bahrain.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Bahrain.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Arabic and English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Bahrain:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Manama Centre Building 21 Government Avenue **Manama 306**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 3- or 4-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Bahrain, the country code is BHR. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Bahrain.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Bahrain.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	3- or 4-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Bahrain, the country code is BHR.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Bahrain does not have any custom output fields.

Barbados (BRB)

This section defines the supported geocoding datasets, operations, and input and output field information for Barbados.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Barbados.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Barbados:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Fairchild St **Bridgetown BB11000**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the postal code which consists of the ISO 3166-1 alpha-2 prefix (BB) plus 5-digit numeric. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Barbados, the country code is BRB. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Barbados.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Barbados.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Barbados, the country code is BRB.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Barbados does not have any custom output fields.

Belgium (BEL)

This section defines the supported geocoding datasets, operations, and input and output field information for Belgium and Luxembourg. Content that references Belgium also pertains to Luxembourg.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Belgium.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French, Dutch and German	Yes	Yes	Yes	Yes	Yes	Yes	No

Supported Operations

The following operations are supported for Belgium:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Masterstroke 26 **1070 Wanderlust**
areaName1	String	Not used.
areaName2	String	Specifies the province. Optional.
areaName3	String	Specifies the city or town.
areaName4	String	Not used.
postalCode	String	Belgium uses a four-digit postal code. The first two digits designate the sorting area (with the first digit usually representing the region). The next two digits represent the post office and delivery office.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Belgium, the country code is BEL. For Luxembourg, the country code is LUX. Required for forward geocoding.

Address Guidelines for Belgium

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Belgium addresses, see the Belgium Post website: **www.bpost.be**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Supported languages**—Dutch, French, and German language aliases and address formats are supported.

- **Thoroughfare types**—Belgian thoroughfare types and their common abbreviations are recognized and fully supported on input and output. Dutch, French, and German thoroughfare types are also supported.
- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.
- **Common words and abbreviations**—Common words, directionals, house number indicators, and abbreviations used in addresses are supported.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Belgium.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Belgium.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.

Field Name	Description
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	The province.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 4-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Belgium, the country code is BEL.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Belgium does not have any custom output fields.

Belize (BLZ)

This section defines the supported geocoding datasets, operations, and input and output field information for Belize.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Belize.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Belize:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 4638 Coney Drive **Belize City**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Belize does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Belize, the country code is BLZ. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Belize.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Belize.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Belize, the country code is BLZ.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Belize does not have any custom output fields.

Benin (BEN)

This section defines the supported geocoding datasets, operations, and input and output field information for Benin.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Benin.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Benin:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 93 Rue du Gouverneur Fourn **Cotonou**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town.
areaName4	String	Not used.
postalCode	String	Not used - Benin does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Benin, the country code is BEN. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Benin.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Benin.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Benin, the country code is BEN.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Benin does not have any custom output fields.

Bermuda (BMU)

This section defines the supported geocoding datasets, operations, and input and output field information for Bermuda.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Bermuda.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Bermuda:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 56 Church Street **Hamilton HM12**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the postal code. The postal code for a physical address consists of 4 characters: 2 alpha characters, a space, followed by 2 numeric characters. The postal code for a P.O. Box consists of 4 characters: 2 alpha characters, a space, followed by 2 alpha characters. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Bermuda, the country code is BMU. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Bermuda.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Bermuda.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.

Field Name	Description
postCode1	The 4-character postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Bermuda, the country code is BMU.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Bermuda does not have any custom output fields.

Bolivia (BOL)

This section defines the supported geocoding datasets, operations, and input and output field information for Bolivia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Bolivia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Bolivia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Calle Azurduy 158 **Sucre**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Boliva does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Bolivia, the country code is BOL. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Bolivia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Bolivia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Bolivia, the country code is BOL.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Bolivia does not have any custom output fields.

Bosnia and Herzegovina (BIH)

This section defines the supported geocoding datasets, operations, and input and output field information for Bosnia and Herzegovina.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Bosnia and Herzegovina.

Note: Custom User Dictionaries are not supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Bosnian, Croatian, cyrillic and latin Serbian	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Bosnia and Herzegovinaa:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Vrbanja 1 **Sarajevo 71000**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Bosnia and Herzegovina, the country code is BIH. Required for forward geocoding.

Address Guidelines for Bosnia and Herzegovina

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Bosnia and Herzegovina addresses, see the Bosnia and Herzegovina Post website: **http://www.posta.ba/pocetna/2/0/0.html**

- **Required fields**—Addresses must contain either a city or postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Bosnia and Herzegovinaa.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in Bosnia and Herzegovina.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Bosnia and Herzegovina, the country code is BIH.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Bosnia and Herzegovina does not have any custom output fields.

Botswana (BWA)

This section defines the supported geocoding datasets, operations, and input and output field information for Botswana.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Botswana.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Botswana:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 4775 Notwane Road **Gaborone**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Botswana does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Botswana, the country code is BWA. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Botswana.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Botswana.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Botswana, the country code is BWA.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Botswana does not have any custom output fields.

Brazil (BRA)

This section defines the supported geocoding datasets, operations, and input and output field information for Brazil.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Brazil.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Portuguese, Spanish	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Brazil:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Rua Santo Antonio, 355 **36800-200 Campinas, Sao Paulo**
areaName1	String	Specifies the state. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town.
areaName4	String	Specifies the locality. Optional.
postalCode	String	For Brazil, use the complete eight-digit postcode for the most accurate results; however, you can use a five-digit postcode.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Brazil, the country code is BRA. Required for forward geocoding.

Address Guidelines for Brazil

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Brazilian addresses, see the Correios Brazil website: **http://www.correios.com.br/default.cfm**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Thoroughfare types**—Thoroughfare types (pre and post thoroughfare types) and their common abbreviations are recognized and fully supported on input and output. Following is a partial list of recognized thoroughfare types.

ALAMEDA=AL,ALAMEDA,ALUA LALA
ACESSO=AC,ACESSO
ARCO=ARCO
AUTO-ESTRADA=AUTO-EST,AUTO-ESTRADA
AVENIDA=AV,AVDA,AVE,AVENIDA
AZINHAGA=AZINHAGA
BAIRRO=BAI,BAIRRO
BALUARTE=BALUARTE
BECO=BECO
Many others are also recognized.

- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses. For example, the following are all recognized in an input address:

  um, primera, primeiras, primeiro
  dois, segunda, segundos
  Many other numeric designations are also recognized.

- **Directionals in addresses**—The following directionals are recognized in input addresses: norte, do norte, setentrional, sul, do sul, meridional, leste, este, do leste, do este, oriental, oeste, do oeste, ocidental
- **Common words and abbreviations**—Common words, directionals, house number indicators, and abbreviations used in addresses are supported. This is a partial list of common words and abbreviations that are recognized. Many other common words are also handled.

Common abbreviations	aeroporto=aerop internacio=intern,int internacional=int international=int conselheiro=cnso desembargador=des regente=reg limitado=ltda,ltdo,ltd (and many other abbreviations)

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Brazil.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Brazil.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The state.
areaName2	Not used.
areaName3	The city or town.
areaName4	The locality.

Field Name	Description
postCode1	The 5-digit postal code.
postCode2	The 3-digit postal code extension.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Brazil, the country code is BRA.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Brazil does not have any custom output fields.

Brunei Darussalam (BRN)

This section defines the supported geocoding datasets, operations, and input and output field information for Brunei Darussalam.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Brunei Darussalam.

Note: Custom User Dictionaries are supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Malaysian	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Brunei Darussalam:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
placeName	String	Not used.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Simpang 637-84 **Bandar Seri Begawan BB1114**
areaName1	String	Not used.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 6 alphanumeric (2 letters, 4 digits) postal code. The first letter represents the district; the second is the mukim (group of villages). The next 2 digits indicate the village, and the last 2 digits, the delivery point. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Brunei Darussalam, the country code is BRN. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][area][postal_code]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Brunei Darussalam.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in Brunei Darussalam.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	Not used.
areaName1	Not used.
areaName2	The district.
areaName3	The town.
areaName4	The locality.
postCode1	The 6-alphanumeric postal code.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Brunei Darussalam, the country code is BRN.
addressNumber	Not used.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Brunei Darussalam does not have any custom output fields.

Burkina Faso (BFA)

This section defines the supported geocoding datasets, operations, and input and output field information for Burkina Faso.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Burkina Faso.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Burkina Faso:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 169, Avenue de la Paix **Ouagadougou**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Burkina Faso does not have a postal code system. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Burkina Faso, the country code is BFA. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Burkina Faso.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Burkina Faso.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Burkina Faso, the country code is BFA.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Burkina Faso does not have any custom output fields.

Burundi (BDI)

This section defines the supported geocoding datasets, operations, and input and output field information for Burundi.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Burundi.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Burundi:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 3813 Uprona Boulevard **Bujumbura**
areaName1	String	Not used. Optional.
areaName2	String	Not used. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used. Optional.
postalCode	String	Not used - Burundi does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Burundi, the country code is BDI. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Burundi.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Burundi.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Burundi, the country code is BDI.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Burundi does not have any custom output fields.

Cameroon (CMR)

This section defines the supported geocoding datasets, operations, and input and output field information for Cameroon.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Cameroon.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French, English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Cameroon:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 12 Avenue du Docteur Jamot **Douala**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	The city or town.
areaName4	String	Not used.
postalCode	String	Not used - Cameroon does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Cameroon, the country code is CMR. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Cameroon.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Cameroon.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Cameroon, the country code is CMR.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Cameroon does not have any custom output fields.

Canada (CAN)

This section defines the supported geocoding datasets, operations, and input and output field information for Canada.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Canada.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom MultiNet Canada Data	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NAVTEQ Points English, French	Yes	Yes	Yes	No	No	Yes	No

Note: The following geocoding datasets are also supported:

- Statistics Canada PCCF (Postal Codes) and FSA Boundaries
- Canada Post Address Range Data

Supported Operations

The following operations are supported for Canada:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

Canadian addresses may contain some or all of the following address elements.

Note: Canada requires either post code and/or province and city information to geocode. This information can be provided in either single line format, as a street address with lastline, or using the `areaName<1-4>` fields.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 5500 Explorer Drive **Mississauga, ON L4W5C7**
areaName1	String	Specifies the province. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town name. Optional.
areaName4	String	Specifies the Dissemination Area and Enumeration Area (DA and EA). Optional.
postalCode	String	Canada uses a six-character postal code. The first three characters are typically separated from the second three with a space. The first three characters are the FSA, the second three are the LDU. Street address geocoding only requires the FSA while postal code geocoding requires the full postal code (FSALDU). Choose whether you wish to have a space between the first three and last three characters of the postal code. Keeping this consistent speeds up the geocoding process. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Canada, the country code is CAN. Required for forward geocoding.

Address Guidelines for Canada

Follow these suggestions to ensure that your street input data is in the best format possible for optimum matching and geocoding.

- **Post Office Box numbers**—P.O. Boxes and Rural Route addresses are not geocodable. This user input will be honored and an attempt is made to output Boxes and Rural Route information, but it will not be used for geocoding purposes.
- **Highway addresses**—Highway addresses (such as Hwy 401) are geocoded.
- **House numbers and apartment letters**—Remove spaces between house number and apartment letter. 123 A Main Street does not geocode correctly because the geocoder assumes that the name of the street is A. Two workaround options are available: either do not include the apartment letter or delete the space between the house number and apartment letter.
- **House numbers and unit information**—The house number pinpoints the location of the address. Unit input can be in one of two formats, as shown in the following examples:

  - 99-123 Main St, where 99 is the unit number. In this format, do not specify the unit type. The number 99 could be a suite, apartment, unit, floor or any valid unit type.
  - 123 Main St. Apt 99, where Apt is the unit type and 99 is the unit number. In this format, you must specify a valid unit type (such as Apt or Suite), otherwise the address will not be geocoded correctly.

- **Directional suffixes**—Use directional suffixes wherever possible. This is especially true in towns and cities, such as Calgary, which consist mainly of numbered streets. These streets can only be distinguished by their directional suffixes and street types. They also distinguish addresses on streets that change direction. For example: 123 Main St W and 123 Main St E have very different coordinates.
- **Street types**—These distinguish different streets of the same name. For example, Main Avenue and Main Street are two entirely different entities. Using types is not essential, but it adds precision to your data. For a list of valid street types see **www.canadapost.com**.
- **City name**—Do not abbreviate city names. If the city is unknown, you may leave it blank, although this may affect the accuracy of the geocode.
- **Province name**—You may use the full province name (for example, Ontario), but using the two-character abbreviation (ON) is recommended to reduce the likelihood of input errors. Without a postcode, you must enter both the province and city in order to geocode.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area_name_3][area_name_1][post_code_1][post_code_2]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any unit type, unit value or pre- or post-directional information (e.g. East, West, etc.).

- *[area_name_3]* is the city or town.
- *[area_name_1]* is the province.
- *[postal_code_1]* is the FSA portion of the postal code.
- *[postal_code_2]* is the LDU portion of the postal code.

For best results, put a comma between street information and the lastline (e.g. city and postal) information.

Custom Options

The following table lists the options that are unique to Canada. These custom options are optional, and unless otherwise noted, they are available for both Geocoding and Reverse Geocoding.

For the standard set of options available to all countries and their definitions, see the chapters covering Global Geocode and Global Reverse Geocode.

Option Name	Description
Force LDU match	When enabled, does not return any matches that do not have the full FSA LDU postal code. Default = disabled.
Calculate Centerline projection of point	Computes the closest point on the street from the parcel point. Default = disabled. **Note:** This feature requires that a point-level geocoding dataset is installed.
Centerline Offset	Centerline matching is used with point-level matching to tie a point-level geocode with its parent street segment. This functionality is useful for routing applications. The centerline offset specifies the distance to move the point from the street centerline toward the parcel point. Default = 0 meters. You can select either Feet or Meters for your unit of measurement. **Note:** Centerline matching requires that a point-level geocoding dataset is installed. **Note:** Supported only in forward geocoding.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Canada.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.

- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The province.
areaName2	Not used.
areaName3	The town or city.
areaName4	The Dissemination Area and Enumeration Area (DA and EA).

Field Name	Description
dataType	

Field Name	Description
	The returned numeric value represents a data vendor. 0 USPS 1 TIGER 2 TomTom 3 Sanborn Points 4 Tele Atlas 5 Geosys 6 NAVTEQ 7 TomTom Points 8 Centrus Points 9 Auxiliary 11 NAVTEQ Points 12 Master Location 15 Unknown Vendor 20 MapKing International 21 PT. Duta Astakona Girinda 22 Lepton 23 IPC 24 Map Information Solutions SDN BHD 25 Critchlow 26 MIS 27 Ordnance Survey 28 Spatial Platform 29 Code Point 30 Ordnance Survey AddressBase 31 PMSA Point 32 PMSA 33 MBI 34 PBS 35 NE

Field Name	Description
postCode1	The FSA portion of the postal code.
postCode2	The LDU portion of the postal code.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Canada, the country code is CAN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	See the following section for the custom field definitions.

Custom Output Fields

The following table lists the output fields that are unique for Canada. Unless otherwise noted, these fields can be returned for both forward and reverse geocoding.

- To return one or more of these custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **Canada**. Then, on the **Return Values** tab, select the desired output field(s).
- To return all custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **Canada**. Then, on the **Return Values** tab, select the **Return all available information** checkbox.

Field Name	Description
CAN.Census CD	The Census Division (CD) in which the address is located. To include this field in the output, select **Return Values** > **Census** checkbox.
CAN.Census CMA	The Census Metropolitan Area (CMA) in which the address is located. To include this field in the output, select **Return Values** > **Census** checkbox.

Field Name	Description
CAN.Census CSD	The Census Subdivision (CSD) in which the address is located. To include this field in the output, select **Return Values** > **Census** checkbox.
CAN.Census CT	The Census Tract (CT) in which the address is located. To include this field in the output, select **Return Values** > **Census** checkbox.
CAN.Census DA	The Dissemination Area (DA) in which the address is located. To include this field in the output, select **Return Values** > **Census** checkbox.
CAN.Formatted Street Range	The formatted range data for the address. This field is only returned for postal centroid candidates. To include this field in the output, select **Return Values** > **Formatted range** checkbox.

Chile (CHL)

This section defines the supported geocoding datasets, operations, and input and output field information for Chile.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Chile.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Spanish	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Chile:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Moneda 1152 **8340648 Santiago**
areaName1	String	Specifies the state. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town.
areaName4	String	Specifies the locality or alias. Optional.
postalCode	String	The seven-digit postal code.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Chile, the country code is CHL. Required for forward geocoding.

Address Guidelines for Chile

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Chilean postal system, see the Correos Chile website: **www.correos.cl**.

- **Required fields**—Addresses must contain a town or postcode.
- **Abbreviations in addresses**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.
- **Numbers, Numeric Equivalents, and Ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Chile.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Chile.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The state.

Field Name	Description
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The seven-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Chile, the country code is CHL.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Chile does not have any custom output fields.

China (CHN)

This section defines the supported geocoding datasets, operations, and input and output field information for China.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for China.

Note: The geocoder does not support Chinese characters.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
Map King International	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for China:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 50 Liang Maqiao Road **Beijing 100016**
areaName1	String	Specifies the province. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town.
areaName4	String	Specifies the locality. Optional.
postalCode	String	China has a six-digit postcode system. The first two digits indicate the province. The third digit and fourth digits indicate the district and city/town. The final two digits represent the postal delivery zone or prominent location. Larger provinces or cities might be assigned more than one block of codes. For example, Guangdong Province is assigned 51 and 52 as the first two digits. **Note:** For China, postal centroid geocoding as well as the use of the Fallback to Postcode option require the complete six-digit postcode. However, when a postal code is provided as part of an address for street geocoding, only four-digit postal codes are returned.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For China, the country code is CHN. Required for forward geocoding.

Address Guidelines for China

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Chinese postal system, see the China Post website: **www.chinapost.cn**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Abbreviations in addresses**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.
- **Numbers, Numeric Equivalents, and Ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area_name_4][area_name_3][post_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any unit type, unit value or pre- or post-directional information (e.g. East, West, etc.).
- *[area_name_4]* is the locality.
- *[area_name_3]* is the city or town.
- *[postal_code]* is the postal code.

For best results, put a comma between street information and the lastline (e.g. city and postal) information.

Custom Options

There are no options specific to China.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in China.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The province.
areaName2	Not used.
areaName3	The city or town.
areaName4	The locality.
postCode1	The six-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For China, the country code is CHN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	China does not have any custom output fields.

Colombia (COL)

This section defines the supported geocoding datasets, operations, and input and output field information for Colombia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Colombia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Spanish	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Colombia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Calle 10 # 5-32 **Bogotá, La Candelaria**
areaName1	String	Specifies the province. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the town/settlement.
areaName4	String	Specifies the locality. Optional.
postalCode	String	The seven-digit postal code.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Colombia, the country code is COL. Required for forward geocoding.

Address Guidelines for Colombia

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Colombian postal system, see the website: **http://www.4-72.com.co/**.

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- **Required fields**—Addresses must contain a town or postcode.
- **Abbreviations in addresses**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

- **Numbers, Numeric Equivalents, and Ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Colombia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Colombia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.

Field Name	Description
areaName1	The state.
areaName2	The district.
areaName3	The city or town.
areaName4	Not used.
postCode1	The seven-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Colombia, the country code is COL.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Colombia does not have any custom output fields.

Republic of the Congo (COG)

This section defines the supported geocoding datasets, operations, and input and output field information for the Republic of the Congo.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Republic of Congo.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for the Republic of the Congo:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 198 Avenue Coutassi **Brazzaville**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Congo does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the Republic of the Congo, the country code is COG. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to the Republic of the Congo.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in the Republic of the Congo.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Congo, the country code is COG.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Republic of the Congo does not have any custom output fields.

Democratic Republic of the Congo (COD)

This section defines the supported geocoding datasets, operations, and input and output field information for the Democratic Republic of the Congo.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Democratic Republic of the Congo.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Democratic Republic of the Congo:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Boulevard Patrice Lumumba **Kinshasa**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - the Democratic Republic of the Congo does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the Democratic Republic of the Congo, the country code is COD. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to the Democratic Republic of the Congo.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in the Democratic Republic of the Congo.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For the Democratic Republic of the Congo, the country code is COD.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Democratic Republic of the Congo does not have any custom output fields.

Costa Rica (CRI)

This section defines the supported geocoding datasets, operations, and input and output field information for Costa Rica.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Costa Rica.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Costa Rica:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Calle 98 Vía 104 **Pavas, San Jose 11801**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5- or 9-digit postal code. For the first 5 digits, the first digit codes the province, the next two the canton, and the last two digits specify the district. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Costa Rica, the country code is CRI. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area][postal_code]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Costa Rica.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Costa Rica.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.

Field Name	Description
postCode2	The 4-digit postal code extension.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Costa Rica, the country code is CRI.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Costa Rica does not have any custom output fields.

Croatia (HRV)

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Croatia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Croatian	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Croatia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Å ukljeva Ulica 7 **10362 Zagreb**
areaName1	String	Not used.
areaName2	String	Specifies the province. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the settlement. Optional.
postalCode	String	Specifies the 5-digit postal code. The first 2 digits indicate the district, the next digit, the zone, and the last 2 digits indicate the delivery office. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Croatia, the country code is HRV. Required for forward geocoding.

Address Guidelines for Croatia

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Croatian addresses, see the Postal Service in the Croatia website: **http://www.posta.hr/**

- **Required fields**—Addresses must contain either a city or postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.

- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Croatia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Croatia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.

Field Name	Description
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	The province.
areaName3	The city or town.
areaName4	The settlement.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Croatia, the country code is HRV.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Croatia does not have any custom output fields.

Cuba (CUB)

This section defines the supported geocoding datasets, operations, and input and output field information for Cuba.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Cuba.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Streets Spanish	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Cuba:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Reina #35 **Ciudad de La Habana, CP 11900**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Cuba, the country code is CUB. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area][postal_code]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.

- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Cuba.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Cuba.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Cuba, the country code is CUB.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Cuba does not have any custom output fields.

Cyprus (CYP)

This section defines the supported geocoding datasets, operations, and input and output field information for Cyprus.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Cyprus.

Note: Custom User Dictionaries are not supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English and cyrillic Greek	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Cyprus:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.

- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 13 Agiou Dimitriou **1022 Nicosia**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the four-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Cyprus, the country code is CYP. Required for forward geocoding.

Address Guidelines for Cyprus

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Cyprus addresses, see the Cyprus Post website: **http://www.mcw.gov.cy/mcw/postal/dps.nsf/index_en/index_en?OpenDocument**

- **Required fields**—Addresses must contain either a city or postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Cyprus.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in Cyprus.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The four-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Cyprus, the country code is CYP.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Cyprus does not have any custom output fields.

Czech Republic (CZE)

This section defines the supported geocoding datasets, operations, and input and output field information for the Czech Republic.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Czech Republic.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Czech	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for the Czech Republic:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: KrehlÃkovA 92 **62700 BRNO**
areaName1	String	Specifies the region or alias. For example, the region HLAVNÃ MESTO PRAHA aliased as Prag. Optional.
areaName2	String	Specifies the district or alias. Optional.
areaName3	String	Specifies the city or town.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the five-digit postal code. Postal codes are typically separated by a space between the third and fourth numbers, but variations in spacing or no spacing in postal codes is supported.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Czech Republic, the country code is CZE. Required for forward geocoding.

Address Guidelines for Czech Republic

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Czech addresses, see the Czech Republic Postal Service website: **http://www.ceskaposta.cz/en/**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Aliases for town, district, and region names**—Aliases for town, district, and region names are supported.

- **Thoroughfare types**—Thoroughfare types (pre and post thoroughfare types) and their common abbreviations are recognized and fully supported on input and output.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][areaName4][postal_code][areaName3]

Where:

- *[street_info]* consists of the street name, street type and any unit type, unit value or pre- or post-directional information (e.g. East, West, etc.).
- *[address_number]* is optional.
- *[areaName4]* is the locality.
- *[postal_code]* is the postal code.
- *[areaName3]* is the city or town.
- Either the *[areaName3]* field or *[postal_code]* is required.

For best results, put a comma between street information and the lastline (e.g. city and postal) information.

Custom Options

There are no options specific to the Czech Republic.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in the Czech Republic.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.

Field Name	Description
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region.
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For the Czech Republic, the country code is CZE.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Czech Republic does not have any custom output fields.

Denmark (DNK)

This section defines the supported geocoding datasets, operations, and input and output field information for Denmark.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Denmark.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Danish	Yes	Yes	Yes	Yes	Yes	Yes	No

Supported Operations

The following operations are supported for Denmark:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Lundsgade 15 **1682 Copenhagen**
areaName1	String	Not used.
areaName2	String	Specifies the province. Optional.
areaName3	String	Specifies the city or town.
areaName4	String	Not used.
postalCode	String	Denmark uses a four-digit postal code. The first digit cannot be zero.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Denmark, the country code is DNK. Required for forward geocoding.

Address Guidelines for Denmark

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Denmark postal system, see the Post Danmark website: **www.postdanmark.dk**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Supported languages**—Danish and English language aliases are supported for major town/municipality names. For example, Copenhagen (English) is equivalent to København (Danish).
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output. Following is a list of recognized thoroughfare types. This is not a complete list. Additional thoroughfare types may also be recognized.

ALLÉ=alle
ANLAEG=anlaeg
ANLEAG=anleag
BAKKEN=bakken
BANEN=banen
BASTION=bastion
BOUL=boulevard
BOULEVARD=bulevardi
BRO=bro
BROEN=bro
BUEN=buen
BULEVARDI=bulevardi
DAMMEN=dammen
DOSSERING=dossering
GAARD=garrd
GADE=gade
GANGEN=gangen
GARD=gard
GÂRD=gard
GET=get
HAVE=have
HAVN=havn
HOEJEN=hojen
HOJEN=højen
HøJEN=højen
HOLMEN=holmen
HUSET=huset
KAER=kaer
KEAR=kear
KRAENTEN=kraeten
KREANTEN=kreanten
LAENGEN=laengen
LEANGEN=leangen
MARKEN=marken
PARK=parken
PARKEN=parken
PASSAGEN=passagen
PLADS=plads
SIDEN=siden
STIEN=stien
STRAEDE=straede
STREADE=streade
SVINGET=svinget
TOFTEN=toften
TORV=torv

VAENGE=vaenge
VANGEN=vangen
VARDEN=varden
VEANGE=veange
VEJ=vej

- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.
- **Common words and abbreviations**—Common words, directionals, house number indicators, and abbreviations used in addresses are supported.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Denmark.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Denmark.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	The province.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 4-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Denmark, the country code is DNK.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Denmark does not have any custom output fields.

Dominican Republic (DOM)

This section defines the supported geocoding datasets, operations, and input and output field information for the Dominican Republic.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Dominican Republic.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for the Dominican Republic:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Duarte 189 **10106 Santo Domingo**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. for the Dominican Republic, the country code is DOM. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to the Dominican Republic.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in the Dominican Republic.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For the Dominican Republic, the country code is DOM.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Dominican Republic does not have any custom output fields.

Ecuador (ECU)

This section defines the supported geocoding datasets, operations, and input and output field information for Ecuador.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Ecuador.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Ecuador:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Lallement Oe5-75 y Pedregal **Quito EC170104**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 6-digit postal code. The first two specify the province, the next two the district, and the final two the zip code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Ecuador, the country code is ECU. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area][postal_code]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Ecuador.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Ecuador.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 6-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Ecuador, the country code is ECU.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Ecuador does not have any custom output fields.

Egypt (EGY)

This section defines the supported geocoding datasets, operations, and input and output field information for Egypt.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Egypt.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Arabic and English	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Egypt:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Note: The Arabic character set is also supported.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 154 Anwar Al Sadat Street **Port Said 42511**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. The first digit indicates the region, the second the governorate, the third the quality of service and the last two the delivery area or post office. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Egypt, the country code is EGY. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Egypt.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Egypt.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Egypt, the country code is EGY.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Egypt does not have any custom output fields.

El Salvador (SLV)

This section defines the supported geocoding datasets, operations, and input and output field information for El Salvador.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for El Salvador.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for El Salvador:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Calle Alcaine #29 **CP 1120-Mejicanos, San Salvador**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For El Salvador, the country code is SLV. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to El Salvador.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in El Salvador.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For El Salvador, the country code is SLV.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	El Salvador does not have any custom output fields.

Estonia (EST)

This section defines the supported geocoding datasets, operations, and input and output field information for Estonia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Estonia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Estonian	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Estonia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Lasnamäe 2 **11412 Tallinn**
areaName1	String	Not used.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 5-digit postal code. The first digit cannot be zero. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Estonia, the country code is EST. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.

- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Estonia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Estonia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 5-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Estonia, the country code is EST.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Estonia does not have any custom output fields.

Finland (FIN)

This section defines the supported geocoding datasets, operations, and input and output field information for Finland.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Finland.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Finnish	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Finland:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Storm Robertson 18 **00120 Helsinki**
areaName1	String	Specifies the region. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the five-digit postal code. The first two digits designate the post town or municipal area. The last three digits represent the destination post office. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Finland, the country code is FIN. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Finland.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Finland.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Finland, the country code is FIN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Finland does not have any custom output fields.

France (FRA)

This section defines the supported geocoding datasets, operations, and input and output field information for France. This chapter also applies to the following countries: French Guyana, Guadeloupe, Martinique, Mayotte, Monaco and Reunion. Content that references France also pertains to these countries.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for France.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NAVTEQ French	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NAVTEQ French Premium	Yes	Yes	Yes	No	No	Yes	Yes

Supported Operations

The following operations are supported for France:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 9, rue Paul Lafayette **93217 St Denis Cedex**
areaName1	String	Specifies the region. Optional.
areaName2	String	Specifies the department. Optional.
areaName3	String	Specifies the city or town. Some areas in France are generally recognized as cities even though they are not truly administrative cities. These areas represent Artificial City Areas, or Virtual Towns. For a listing of supported virtual towns, see "Address Guidelines for France".Optional.
areaName4	String	Not used.
postalCode	String	France uses a five-digit postal code. The first two digits usually represent the department. The digits 00 represent military addresses and there are also special digits for overseas territories. The last three digits represent the local delivery area. In the larger cities (Paris, Lyon Marseille), the last two digits represent the arrondissement. For example, in the postcode: 33380, 33 is the department and 380 is the delivery area. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For France, the country code is FRA. For other countries that utilize the French geocoder, see "Overseas Territories Addresses" in the following section. Required for forward geocoding.

Address Guidelines for France

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the French postal system, see the La Poste website: **www.laposte.com**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Virtual town names**—Some areas are generally recognized as cities even though they are not truly administrative cities. These areas represent Artificial City Areas, or Virtual Towns. Since these virtual town names are commonly used by the public, they are supported and treated as aliases for any of the encompassed towns. Returned candidates have the correct real town in place of the input virtual town.

  Note: Virtual town names are supported in the TomTom geocoding dataset only. The NAVTEQ geocoding datasets (streets or points) do not support virtual town names.

Virtual Town Name	Encompassed Real Towns
Défense (La)	Part of: Nanterre, Puteaux, Courbevoie
Sophia Antipolis	Part of: Valbonne, Mougins, Vallauris, Antibes, Biot
Cergy-Pontoise	Menucourt, Courdimanche, Puiseux-Pontoise, Osny, Pontoise, Cergy, Vauréal, Neuville-sur-Oise, Saint-Ouenl'Aumône, Jouy-le-Moutier, Eragny
Marne-la-Vallée	Bry-sur-Marne, Villiers-sur-Marne, Noisy-le-Grand, Champs-sur-Marne, Emerainville, Noisiel, Lognes, Croissy-Beaubourg, Torcy, Collégien, Ferrières, Bussy-Saint-Georges, Bussy-Saint-Martin, Saint-Thibault-des-Vignes, Gouvernes, Conches, Guermantes, Jossigny, Lagny-sur-Marne, Montévrain, Chanteloup-en-Brie, Serris, Chessy, Coupvray, Magny-le-Hongre, Bailly- Romainvilliers
Saint-Quentin-en-Yvelines	Elancourt, Verrière (La), Trappes, Montigny-le- Bretonneux, Guyancourt, Voisins-le-Bretonneux, Magnyle- Hameau
Sénart	Tigery, Combs-la-Ville, Lieusaint, Moissy-Cramayel, Saint-Pierre-du-Perray, Savigny-le-Temple, Réau, Nandy, Cesson, Vert-Saint-Denis

Virtual Town Name	Encompassed Real Towns
Evry	Evry, Bondoufle, Courcouronnes, Lisses
Etang de Berre	Fos-sur-Mer, Miramas, Vitrolles, Istres
Isle-d'Abeau	Four, Isle d'Abeau (L'), Saint-Quentin-Fallavier, Vaulx-le-Milieu, Villefontaine

- **Common words and abbreviations**—The geocoder handles common abbreviations that are used in French addresses. It supports all the official French street type abbreviations plus a number of unofficial street types to help improve geocoding efficiency. A partial list is:

Street Type or Name	Abbreviation
appartement	APP, APT, APPART
Saint	ST
Sainte	STE
rue	r
Charles de Gaulle	CDG
Regiment D'Infanterie de Marine	RIMA
Division Blindée	DB

- **Directionals in addresses**—Abbreviated street directionals are also handled on input and the returned candidate displays the complete directional.

N	N.	Nord
S	S.	Sud
E	E.	Est
O	O.	Ouest
NE	N.E.	Nord-Est
SE	S.E.	Sud-Est
NO	N.O.	Nord-Ouest
SO	S.O.	Sud-Ouest

- **Ordinals and numbered street names**—Input addresses can include ordinals such as 1er, 2e, 2nd, 2nde, 3e. All subsequent ordinal street names are designated with "e" or "ème". You can also specify numbers in street names or express the numbers as words. For example, the following street names are equivalent and can both be geocoded as part of an input address:

  ```
  Rue du 4 septembre
  Rue du quatre septembre
  ```

- **House numbers with letters**—House numbers can include letters, such as `85B Ave des provinces`.
- **Postal box (BP) addresses**—The geocoder can handle Postal Box (Boite Postale) addresses. For the following input address, a match candidate is returned with a result code of S5HPNTSC:

  ```
  mainAddress: BP 112 2 Avenue CDG
  postalCode: 78150
  areaName3: Le Chesnay
  ```

  Note that in this example, the street name `CDG` is returned as `Charles de Gaulle` and the postcode is corrected. The BP itself is not returned.
- **CEDEX addresses**—The geocoder does not use CEDEX for geocoding but CEDEX will not interfere with geocoding. CEDEX can be entered in mainAddress, areaName3, or PostalCode

fields. The CEDEX itself is not returned but the complete postcode is returned. For the following input address, a match candidate is returned with a result code of S5HPNTS--A.

```
mainAddress: 17 Rue Louise Michel
postalCode: 92301 CEDEX
areaName3: Levallois-Perret
```

The postcode is returned but it is not considered to have matched to the postal code (there is no Z in the ninth position of the return code). The CEDEX itself is not returned.

- **Military addresses**—Military addresses (including typical military address abbreviations) are handled. The first two digits usually represent the department. The digits 00 represent military addresses.
- **Monaco addresses**—The geocoder handles Monaco addresses. You can specify Monaco (or the MCO or MC country codes) in the `areaName1` input field. If you input a Monaco address as France, the geocoder attempts to identify this and returns the Monaco candidate if possible. All Monaco postcodes begin with the number 98.
- **Overseas Territories addresses**—The geocoder covers several French overseas territories. The geocoder recognizes the unique French territorial ISO codes, and you can use these codes with input addresses. The territories use the French 5 digit postal code system, but each territorial postal code starts with 3 unique digits. The accompanying table summarizes the ISO codes, data vintages, and unique postal codes of the covered French territories.

Territory Name	ISO 3166-1 Alpha-2	ISO 3166-1 Alpha-3	First 3 Digits of Postal Code
Guadeloupe	GLP	GP	971
Martinique	MTQ	MQ	972
French Guyana	GUF	GF	973
Réunion	REU	RE	974
Mayotte	MYT	MY	976

You can also use the country code for France (FRA or FR). In that case, you can get candidates from France, Monaco, and the territories if that city/town name occurs in either France or in one or more of the territories. However if you explicitly specify MCO or a territorial country code, you will get candidates from the specified country only, and not from France.

- **Placename Support for User Dictionaries**—If your user dictionary includes placenames, you can geocode these placenames and that information is returned with candidates.
- **Additional Fields for Address Range and User Dictionaries**—Additional fields can be created and returned for both Address Range and Point user dictionaries. These additional fields can

contain any special information associated with an address. You cannot geocode using additional fields, but additional field content is returned with each candidate

- **Address point data**— The FRA NAVTEQ Points database includes address point data. Address point candidates return an S8 result code.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no custom options for France.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in France.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.

Field Name	Description
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region.
areaName2	The department.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For France, the country code is FRA.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	France does not have any custom output fields.

Gabon (GAB)

This section defines the supported geocoding datasets, operations, and input and output field information for Gabon.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Gabon.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Gabon:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Avenue Gabriel Lendoye **Libreville**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Gabon does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Gabon, the country code is GAB. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Gabon.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Gabon.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Gabon, the country code is GAB.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Gabon does not have any custom output fields.

Germany (DEU)

This section defines the supported geocoding datasets, operations, and input and output field information for Germany.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Germany.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom German	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Supported Operations

The following operations are supported for Germany:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements. For additional information on German addresses, see the German postal website: **www.deutschepost.de**.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Mulder 2 **77694 Kehl**
areaName1	String	Specifies the Bundesland. Optional.
areaName2	String	Specifies the Kreis. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. The first digit indicates the area of Germany in which the address is situated. The second digit indicates a smaller region within this area. The third digit indicates a city, a part of a city, or a municipality. The last 2 digits indicate the delivery type or group of delivery points. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Germany, the country code is DEU. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no custom options for Germany.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Germany.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The Bundesland.
areaName2	The Kreis.
areaName3	The city or town.
areaName4	Not used.

Field Name	Description
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Germany, the country code is DEU.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	There are no custom output fields for Germany.

Ghana (GHA)

This section defines the supported geocoding datasets, operations, and input and output field information for Ghana.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Ghana.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Ghana:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Mamleshie Road **Accra**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Ghana does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Ghana, the country code is GHA. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Ghana.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Ghana.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Ghana, the country code is GHA.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Ghana does not have any custom output fields.

Great Britain (GBR)

This section defines the supported geocoding datasets, operations, and input and output field information for Great Britain.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Great Britain.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	Yes	Yes	Yes	No	No

The following geocoding dataset(s) are also supported:

- AddressBase Premium
- CodePoint

Supported Operations

The following operations are supported for Great Britain:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

Great Britain addresses may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 186 City Road **London, EC1V 2NT**
areaName1	String	Specifies the region.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	In Great Britain, each address is associated with an alphanumeric code up to seven characters in length. Each postcode includes an average of 15 addresses. In some cases, where a customer receives a substantial amount of mail, for example, a business, the postcode pertains to just that one address (a large-user postcode). Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Great Britain, the country code is GBR. Required for forward geocoding.

Address Guidelines for Great Britain

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on British addresses, see the Royal Mail website: **http://www.royalmail.com/**.

- **Street addresses**—If you provide a street address, and either a town and state, or a postcode, you can perform an address geocode. The geocoder will match your full address record against

its comprehensive geocoding database. Minor misspellings in street addresses are corrected in the returned candidates.

- **Post Office Box numbers**—You can enter PO Box input in the mainAddress field in the format: [PO Box or Post Box] [number]. The number typically ranges from one digit to a maximum of six digits. The acceptable formats for PO Box include the following. These formats are not case sensitive.
  - PO BOX
  - P.O. BOX
  - P.O.BOX
  - PO.BOX
  - POST BOX
  - POST BOX Number
  - POST BOX No
  - POST BOX #
  - POST OFFICE BOX
  - POBOX
  - POB
  - POSTBOX
  - P.BOX
  - PBOX
  - P BOX
  - BOX
- **Postal code**—If you enter the postcode in the **LastLine** input field, you may use either the full postcode or just the post district as long as other street information or post information is present. If you enter the postcode in the **PostalCode** input field, you must use the complete postcode. Providing both the town and postcode can produce better results. The geocoder corrects postcode information and adds postcodes if your input does not already include them.
- **Northern Ireland addresses**—The AddressBase Premium and CodePoint databases include the same Northern Ireland data, accurate to the postcode centroid level. The AddressPoint and AddressBase Plus databases are supplemented with Northern Ireland postcode data from the Royal Mail source. This Northern Ireland data has postcode centroid (result code S3) precision only. That is the highest level of geocoding accuracy available for Northern Ireland addresses, even with the AddressPoint and AddressBase Plus point database sources.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][areaName3][postal_code]

Where:

- *[address_number]* is optional.

- *[street_info]* consists of the street name, street type and any unit type, unit value or pre- or post-directional information (e.g. East, West, etc.).
- *[postal_code]* is the postal code.
- *[areaName3]* is the city or town.
- Either *[areaName3]* or *[postal_code]* is required.

For best results, put a comma between street information and the lastline (e.g. city and postal) information.

Custom Options

There are no custom options for Great Britain.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Great Britain.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region.
areaName2	Not used.
areaName3	The city or town.
areaName4	The locality.

Field Name	Description
PBKey	A unique address identifier that is returned when an address match is made when geocoding or reverse geocoding against the Great Britain premium AddressBase dataset.
postCode1	The postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Great Britain, the country code is GBR.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	There are no custom output fields for Great Britain.

Greece (GRC)

This section defines the supported geocoding datasets, operations, and input and output field information for Greece.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Greece.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Greek and Latin Greek	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Greece:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Note: The Greek Cyrillic character set is also supported.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Doiranis 25 **653 02 Kavala**
areaName1	String	Specifies the region. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Greece, the country code is GRC. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Greece.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Greece.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region.
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 5-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Greece, the country code is GRC.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Greece does not have any custom output fields.

Guatemala (GTM)

This section defines the supported geocoding datasets, operations, and input and output field information for Guatemala.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Guatemala.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Guatemala:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 6 Calle 5-28 Zona 9 **01009 Guatemala City**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. The first two digits indicate the department, the middle digit the delivery method and the final two digits the delivery office.. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Guatemala, the country code is GTM. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Guatemala.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Guatemala.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Guatemala, the country code is GTM.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Guatemala does not have any custom output fields.

Guyana (GUY)

This section defines the supported geocoding datasets, operations, and input and output field information for Guyana.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Guyana.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Guyana:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 72 Brickdam **Georgetown**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Guyana does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Guyana, the country code is GUY. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Guyana.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Guyana.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Guyana, the country code is GUY.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Guyana does not have any custom output fields.

Honduras (HND)

This section defines the supported geocoding datasets, operations, and input and output field information for Honduras.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Honduras.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Honduras:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 12 Calle **Tocoa 32301**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Honduras, the country code is HND. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.

- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Honduras.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Honduras.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Honduras, the country code is HND.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Honduras does not have any custom output fields.

Hong Kong (HKG)

This section defines the supported geocoding datasets, operations, and input and output field information for Hong Kong.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Hong Kong.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Chinese and English	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Hong Kong:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 8 Hong Cheung Street **Kwai Chung, New Territories**
areaName1	String	Specifies the province. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Not used - Hong Kong does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Hong Kong, the country code is HKG. Required for forward geocoding.

Address Guidelines for Hong Kong

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Hong Kong addresses, see guidelines on the Hong Kong postal website **http://www.hongkongpost.com/eng/publications/guide/content/6.1.pdf**.

- **Required fields**—Addresses must contain a city. HKG does not consider postal codes in addresses.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported in input addresses.
- **Common words and abbreviations**—Common words, directionals, house number indicators, and abbreviations used in addresses are supported.

- **Numbers and numeric equivalents**—Numbered streets are mapped to the named equivalents.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][areaName4][areaName3]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.).
- *[areaName4]* is the locality.
- *[areaName3]* is the city or town.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Hong Kong.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Hong Kong.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The province.

Field Name	Description
areaName2	Not used.
areaName3	The city or town.
areaName4	The locality.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Hong Kong, the country code is HKG.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Hong Kong does not have any custom output fields.

Hungary (HUN)

This section defines the supported geocoding datasets, operations, and input and output field information for Hungary.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Hungary.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Hungarian	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Hungary:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Szegedi Gergely Utca 13 **4000 Debrecen**
areaName1	String	Specifies the county (megye). Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 4-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Hungary, the country code is HUN. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Hungary.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Hungary.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The county.
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 4-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Hungary, the country code is HUN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Hungary does not have any custom output fields.

Iceland (ISL)

This section defines the supported geocoding datasets, operations, and input and output field information for Iceland.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Iceland.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Icelandic	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Iceland:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Laugavegur 11 **101 Reykjavík**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the munipality, city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 3-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Iceland, the country code is ISL. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Iceland.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Iceland.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The municipality, city or town.
areaName4	Not used.
postCode1	The 3-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Iceland, the country code is ISL.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Iceland does not have any custom output fields.

India (IND)

This section defines the supported geocoding datasets, operations, and input and output field information for India.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for India.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	Yes	Yes	Yes	Yes	No
Lepton English	Yes	Yes	Yes	Yes	Yes	Yes	No

Supported Operations

The following operations are supported for India:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Gunjur Road **Marattahalli 560017**
areaName1	String	Specifies the state. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	India uses a 6-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For India, the country code is IND. Required for forward geocoding.

Address Guidelines for India

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the India postal system, see the India Post website: **www.indiapost.gov.in**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations in addresses**—The geocoder recognizes common words that are used in street names, directionals, building identifiers, and Points of Interest and can

successfully geocode addresses that use these common words. Common abbreviations are also recognized within addresses.

- **Numbers, Numeric Equivalents, and Ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.
- **Point of Interest**—The geocoder can return S8 match candidates based on a placename combined with any valid locational input (town, locality, or postcode). Points of Interest (POI) can include restaurants, hotels, police stations, banks, ATMs, hospitals, schools, stores, and other businesses and organizations. POI candidates also return sublocality, if that information is available in the data.
- **Sublocality**—The geocoder can return SL sublocality candidates. This indicates a sublocality (block or sector) street level match. An SL result code also requires a match on other geographic input fields (city, district, or state).
- **Street level geocoding**— Street geocoded India addresses can return candidates based on Placename/Point of Interest (S8 result code), sublocality (SL result code), and street centroid (S4 result code).

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[unit_type][unit_value][address_number][pre_directional][street_name]
[post_directional][area_name_3][area_name_1][post_code]

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to India.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in India.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The state.
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 6-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For India, the country code is IND.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The following table lists the custom output fields for India.

Custom Output Fields

The following table lists the output fields that are unique for India. Unless otherwise noted, these fields can be returned for both forward and reverse geocoding.

- To return one or more of these custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **India**. Then, on the **Return Values** tab, select the desired output field(s).

- To return all custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **India**. Then, on the **Return Values** tab, select the **Return all available information** checkbox.

Name	Description
IND.Is Rural	When true, indicates the candidate's address is located in a rural region (village). To include this field in the output, select: **Return Values** > **Rural status** checkbox.
IND.POI Category	Point of interest category. This field describes the type of POI, such as a bank, ATM, or restaurant. To include this field in the output, select: **Return Values** > **POI category** checkbox.
IND.Block Information	Block information. To include this field in the output, select: **Return Values** > **Block** checkbox.
IND.Sublocality	The municipal division below locality (areaName4) level. To include this field in the output, select: **Return Values** > **Sublocality** checkbox.

Indonesia (IDN)

This section defines the supported geocoding datasets, operations, and input and output field information for Indonesia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Indonesia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
PT. Duta Astakona Girinda Indonesian	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Indonesia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 20 Pecenongan **Bandung 40198**
areaName1	String	Specifies the province. Optional.
areaName2	String	Specifies the regency. Optional.
areaName3	String	Specifies the subdistrict. Optional.
areaName4	String	Specifies the village. Optional.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Indonesia, the country code is IDN. Required for forward geocoding.

Address Guidelines for Indonesia

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Indonesian postal system, see the Pos Indonesia website: **www.posindonesia.co.id**. You can also see and search for Indonesian postcodes at **http://kodepos.posindonesia.co.id/**.

- **Required fields**—Addresses must contain a street name and either a subdistrict, regency/city, or postcode.
- **Abbreviations in addresses**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

- **Numbers, Numeric Equivalents, and Ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][areaName3][areaName2][postal_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[areaName3]* is the village.
- *[areaName2]* is the regency.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Indonesia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Indonesia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.

Field Name	Description
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The province.
areaName2	The regency.
areaName3	The subdistrict.
areaName4	The village.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Indonesia, the country code is IDN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Indonesia does not have any custom output fields.

Iraq (IRQ)

This section defines the supported geocoding datasets, operations, and input and output field information for Iraq.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Iraq.

Note: Custom User Dictionaries are not supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Arabic and English	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Iraq:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Adhamiya Street 21 **Baghdad 10010**

Field Name	Type	Description
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the five-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Iraq, the country code is IRQ. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area][postal_code]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Iraq.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in Iraq.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The five-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Iraq, the country code is IRQ.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Iraq does not have any custom output fields.

Ireland (IRL)

This section defines the supported geocoding datasets, operations, and input and output field information for Ireland.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Ireland.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English, Irish	Yes	Yes	Yes	Yes	Yes	Yes	No

Supported Operations

The following operations are supported for Ireland:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 7 Irvine Court **Dublin 3**
areaName1	String	Not used.
areaName2	String	Specifies the province. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies Dublin's postal district. Ireland does not have a postal code system; however, Dublin is divided into postal districts. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Ireland, the country code is IRL. Required for forward geocoding.

Address Guidelines for Ireland

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Ireland postal system, see the An Post website: **www.anpost.ie**.

- **Required fields**—Addresses must contain a city. IRL has very limited postal code data.
- **Thoroughfare types**—Thoroughfare types (pre and post thoroughfare types) and their common abbreviations are recognized and fully supported on input and output. The following table provides a partial list of recognized thoroughfare types. Many others are also recognized.

Pre-Thoroughfare Types	Post Thoroughfare Types
Áirse	Street (Also: St.,ST,STR)
Ard	Terrace (Also: TCE)
Arda	Third
Ardán	Track (Also: TRK,TCK)
Ascaill	Vale
Barra	Valley
Bealach	View
Bogha	Village
Bóithrín	Walk (Also: WK)
Bóthar	Way (Also: WY)
Brí	Wood(s)
Bruach	Yard (Also: Yd.)
Búlbhard	

- **Directionals**—The geocoder recognizes the following directionals: North, N, Nth, South, S, Sth, East, E, Est, West, W, Wst, NE, NW Sea SW Lower, LW, LR, Upper, UP, Upp, Uppe, upr, Thuaidh, Thoirm, Thiar, Theas

- **Common abbreviations**—The geocoder recognizes common abbreviations used in addresses and can geocode these addresses successfully. This is a partial list of abbreviations that are understood by the geocoder. Many other common abbreviations are also handled.

Word	Abbreviation
saint	st., st
great	gt., gt
north	n, nth
south	s, sth
east	e, est
west	w, wst
northeast	ne
northwest	nw
southeast	se
southwest	sw
lower	lw, lr
upper	up, upp, uppe
mount	mnt, mt

Word	Abbreviation
and	&
football	f
club	c
limited	ltd
park	pk
estate	est
gardens	gdns
building	bld
industrial	ind
industries	ind
number	num
center	cnt, centre
centre	cnt, center
country	co

Word	Abbreviation
market	mrkt
square	s

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.).
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the Dublin postal district for addresses in Dublin.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Ireland.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Ireland.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	The province.
areaName3	The city or town.
areaName4	Not used.
postCode1	Dublin's postal district code; otherwise, not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Ireland, the country code is IRL.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Ireland does not have any custom output fields.

Italy (ITA)

This section defines the supported geocoding datasets, operations, and input and output field information for Italy.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Italy.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Italian, French, German	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Italy:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Belvedere Aldo Nardi 1 **20124 Milano**
areaName1	String	Specifies the region. Optional.
areaName2	String	Specifies the province. Optional.
areaName3	String	Specifies the comune. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Italy, the country code is ITA. Required for forward geocoding.

Address Guidelines for Italy

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Italy postal system, see the Posteitaliane website: **www.poste.it**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **German language addresses**—German address formats (common in the South Tyrol area of Italy) are handled and geocoded correctly. Typical German thoroughfare types and abbreviations are supported. For example, the street name Marienstraße could be abbreviated as Marienstr, and the same candidate is returned. Note that regardless of whether strasse or straße is entered as input, strasse is returned in the output candidate.

- **Aliases for regions, localities, and provinces**—Aliases can be used on input. For example, Tuscany is an alias for the region of Toscana. When you geocode, the returned candidate matches the user input. That is, if aliases were used then aliases are returned.
- **Regions and provinces**—For street geocoding, region names (which are entered in the StateProvince field) are not used for geocoding purposes, but are returned. Province abbreviations consisting of two letters are returned in the County field. Italy has 20 regions and 110 provinces.
- **PO boxes**—Post Office Box numbers are not used for address matching or geocoding purposes, but this does not interfere with matching or geocoding. The PO Box information is not returned. The following formats are recognized:

  Casella Postale
  CP

- **Thoroughfare types**—Thoroughfare types (pre and post thoroughfare types) and their common abbreviations are recognized and fully supported on input and output. Both Italian and German thoroughfare formats are supported.
- **Common words, abbreviations, and directionals**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.
- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. For example, if you enter the street name `Via 42 Martiri`, the street name `QUARANTADUE MARTIRI` is returned. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Italy.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Italy.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region.
areaName2	The province.
areaName3	The comune.
areaName4	The locality.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Italy, the country code is ITA.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".

Field Name	Description
customFields	The following table lists the custom fields for Italy.

Custom Output Fields

The following table lists the output fields that are unique for Italy. Unless otherwise noted, these fields can be returned for both forward and reverse geocoding.

- To return one or more of these custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **Italy**. Then, on the **Return Values** tab, select the desired output field(s).
- To return all custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **Italy**. Then, on the **Return Values** tab, select the **Return all available information** checkbox.

Name	Description
ITA.Historical post code	When the input postal code is a historical postal code, returns the previous postal code for this address. To include this field in the output, select: **Return Values** > **Historical post code** checkbox. **Note:** Supported only in forward geocoding.

Jamaica (JAM)

This section defines the supported dta sets, operations, and input and output field information for Jamaica.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Jamaica.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ English	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Jamaica:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 64 Knutsford Boulevard **Kingston 5**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Jamaica currently does not have a national postal code system, except for Kingston and Lower St. Andrew, which are divided into postal districts numbered 1-20. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Jamaica, the country code is JAM. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Jamaica.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Jamaica.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town
areaName4	Not used.
postCode1	For Kingston and Lower St. Andrew, the 1- or 2-digit postal district.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Jamaica, the country code is JAM.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Jamaica does not have any custom output fields.

Japan (JPN)

This section defines the supported geocoding datasets, operations, and input and output field information for Japan.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Japan.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
IPC Kanji, Latin Kanji	Yes	Yes	Yes	No	No	Yes	Yes

Supported Operations

The following operations are supported for Japan:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

Japanese addresses may contain some or all of the following address elements.

Field Name	Type	Description
placeName	String	This field is not used.
mainAddress	String	**Single Line input**—If no other field is populated, then the `mainAddress` entry will be treated as a single line input. For details on single line input for Japanese addresses, see the section **"Single Line Format"** below. **Street Address**—The block and lot number.

Field Name	Type	Description
lastLine	String	The last line of the address. Optional.
areaName1	String	Specifies the prefecture. Optional.
areaName2	String	Specifies the city (shi). Optional.
areaName3	String	Specifies the municipality subdivision (oaza). Optional.
areaName4	String	Specifies the city district (chome). Optional.
postalCode	String	Japan uses a seven-digit numeric postal code system in the format: 999-9999. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Japan, the country code is JPN. Required for forward geocoding.

Address Guidelines for Japan

For information on Japanese addresses, see the Japan Post website: **http://www.post.japanpost.jp**.

A typical Japanese address looks like this:

北海道札幌市中央区大通西２８丁目３番２２号

The elements of this address are described in the following table.

Address Element	Field Name	Example
Prefecture	areaName1	北海道
City (Shi)	areaName2	札幌市中央区
Municipality Subdivision (Oaza)	areaName3	大通西
City District (Chome)	areaName4	２８丁目

Address Element	Field Name	Example
Block/lot number	mainAddress	3番22 Block and lot numbers are the most specific address elements in Japan. Japanese addresses typically do not have street names.

For multiline addresses in Kanji, the general pattern is to enter the postal code on the first line. On the second line, enter the other address elements starting from largest (prefecture) to smallest. The name of the recipient, business, or organization is entered on the third line. For example:

100-8994
東京都中央区八重洲一丁目5番3号
東京中央郵便局

For multiline addresses using Western conventions, the order of address elements is reversed. For example:

Tokyo Central Post Office
5-3, Yaesu 1-Chome
Chuo-ku, Tokyo 100-8994

Single Line Format

Japanese addresses are typically written in single line format, without any delimiters to separate address fields. The typical format is:

[prefecture][city][municipality subdivision][city district][block][lot][other]

Where:

- *prefecture* = ken
- *city* = shi
- *municipality subdivision* = oaza
- *city district* = chome
- *block* = numbered city block (ban)
- *lot* = sub blocks or building number (go)
- *other* = building names, flat numbers, or other identifiers. This information is ignored by the Japan geocoder.

> **Note:** Block and lot numbers are the most specific address elements in Japan. Japanese addresses typically do not have street names.

Example Single Line Japanese Addresses	Description
東京都渋谷区広尾1-1-39	Chome, block, and lot separated by a hyphens.
東京都渋谷区広尾1丁目1-39	Block and lot separated by hyphen, chome indicated by chome identifier.
東京都渋谷区広尾1丁目1番39号	Chome, block, and lot separated by their identifiers.

Custom Options

There are no unique options for Japan.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Japan.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The prefecture.
areaName2	The city (shi).
areaName3	The municipality subdivision (oaza).

Field Name	Description
areaName4	The city district (chome).
postCode1	The first part of the postcode.
postCode2	The second part of the postcode.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Japan, the country code is JPN.
addressNumber	The lot number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	See the following section for the custom field definitions.

Custom Output Fields

The following table lists the output fields that are unique for Japan. Unless otherwise noted, these fields can be returned for both forward and reverse geocoding.

- To return one or more of these custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **Japan**. Then, on the **Return Values** tab, select the desired output field(s).
- To return all custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **Japan**. Then, on the **Return Values** tab, select the **Return all available information** checkbox.

Field Name	Description
JPN.Banchi	The block number. To include this field in the output, select: **Return Values** > **Address Data** checkbox.

Field Name	Description
JPN.Chomoku	The city block number. To include this field in the output, select: **Return Values** > **Address Data** checkbox.
JPN.Chooaza	The number for a group of city blocks. To include this field in the output, select: **Return Values** > **Address Data** checkbox.
JPN.Go	The house number. To include this field in the output, select: **Return Values** > **Address Data** checkbox.
JPN.Jusho Code	A point ID that represents a unique address. To include this field in the output, select: **Return Values** > **Jusho code** checkbox.

Jordan (JOR)

This section defines the supported geocoding datasets, operations, and input and output field information for Jordan.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Jordan.

Note: Custom User Dictionaries are supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Arabic, English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Jordan:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
placeName	String	Not used.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional.
areaName1	String	Specifies the state. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Not used.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Jordan, the country code is JOR. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Jordan.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in Jordan.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	Not used.
areaName1	The state.
areaName2	The district.
areaName3	The town.
areaName4	The locality.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Jordan, the country code is JOR.
addressNumber	Not used.

Field Name	Description
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Jordan does not have any custom output fields.

Kenya (KEN)

This section defines the supported geocoding datasets, operations, and input and output field information for Kenya.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Kenya.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Kenya:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Taratibu Street **Mombasa**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	For deliveries to PO Boxes only, the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Kenya, the country code is KEN. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Kenya.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Kenya.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code for an address with a PO Box.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Kenya, the country code is KEN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Kenya does not have any custom output fields.

Kosovo (XKX)

This section defines the supported geocoding datasets, operations, and input and output field information for Kosovo.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Kosovo.

Note: Custom User Dictionaries are supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Serbian, Latin Serbian	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Kosovo:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
placeName	String	Not used.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional.
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Not used.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Kosovo, the country code is XKX. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Kosovo.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in Kosovo.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	Not used.
areaName1	Not used.
areaName2	Not used.
areaName3	The town.
areaName4	The locality.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Kosovo, the country code is XKX.
addressNumber	Not used.

Field Name	Description
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Kosovo does not have any custom output fields.

Kuwait (KWT)

This section defines the supported geocoding datasets, operations, and input and output field information for Kuwait.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Kuwait.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Arabic, English	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Kuwait:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Salwa, Area 11, Street 9 **22057 Salmiya**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. The first two digits represent the sector and the last three digits represents the post office. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Kuwait, the country code is KWT. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.

- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Kuwait.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Kuwait.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Kuwait, the country code is KWT.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Kuwait does not have any custom output fields.

Latvia (LVA)

This section defines the supported geocoding datasets, operations, and input and output field information for Latvia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Latvia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Latvian	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Latvia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Aglonas iela 21 **Valmiera, LV-4201**
areaName1	String	Specifies the state. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the postal code. Latvian postal codes consist of 4 digits, usually preceded by `LV-`. The first two digits indicate the routing area and the last two digits the post office. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Latvia, the country code is LVA. Required for forward geocoding.

Address Guidelines for Latvia

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Latvia postal system, see the Latvias Pasts website: **www.pasts.lv**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Abbreviations in addresses**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output. The following table shows is a partial list of recognized thoroughfare types. Many others are recognized.

Pre-Thoroughfare Types	AUGUSTA=AUGUSTA KÂRÏA=KÂRÏA,K KRIÐJÂÒA=KRIÐJÂÒA,KR
Post-Thoroughfare Types This is a partial list. Additional thoroughfare types are recognized.	ALEJA=ALEJA BULVARIS=BULVARIS, BULVÂRIS, BOULEVARD, BLVD CEÏÐ=CEÏÐ DAMBIS=DAMBIS GATVE=GATVE IELA=IELA,STREET,STR KRASTMALA=KRASTMALA LAUKUMS=LAUKUMS LINIJA=LINIJA MAGISTRALE=MAGISTRALE PIEKRASTE=PIEKRASTE PROSPEKTS=PROSPEKTS SETA=SETA ÐOSEJA=ÐOSEJA ÐÍÇRSIELA=ÐÍÇRSIELA ÐÍÇRSLINIJA=ÐÍÇRSLINIJA LAUKUMS=LAUKUMS

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area][postal_code]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Latvia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Latvia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The state.
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 4-digit postal code (may be preceded by *LVA*-).
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Latvia, the country code is LVA.
addressNumber	The address number.

Field Name	Description
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Latvia does not have any custom output fields.

Lebanonese Republic (LBN)

This section defines the supported geocoding datasets, operations, and input and output field information for the Lebanonese Republic.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Lebanonese Republic.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Arabic, English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for the Lebanonese Republic:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 119 Bina Street **Raocheheh Beirut 2038 3054**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 4- or 8-digit postal code. The first four digits represent the region or postal zone, the last four digits indicate the building. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the Lebanonese Republic, the country code is LBN. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to the Lebanonese Republic.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in the Lebanonese Republic.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.

Field Name	Description
postCode1	The 4-digit postal code indicating the region or postal zone.
postCode2	The 4-digit postal code indicating the building.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Lebanon, the country code is LBN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Lebanonese Republic does not have any custom output fields.

Lesotho (LSO)

This section defines the supported geocoding datasets, operations, and input and output field information for Lesotho.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Lesotho.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Lesotho:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Mpilo Road **Maseru 100**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 3-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Lesotho, the country code is LSO. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.

- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Lesotho.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Lesotho.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 3-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Lesotho, the country code is LSO.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Lesotho does not have any custom output fields.

Lithuania (LTU)

This section defines the supported geocoding datasets, operations, and input and output field information for Lithuania.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Lithuania.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Lithuanian	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Lithuania:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Vivulskio g. 4 **03220 Vilnius**
areaName1	String	Not used.
areaName2	String	Specifies the county. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 5-digit postal code. The first three digits indicate the routing district, the last two are the delivery office. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Lithuania, the country code is LTU. Required for forward geocoding.

Address Guidelines for Lithuania

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Lithuania postal system, see the Lietuvos paštas website: **www.post.lt**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Abbreviations in addresses**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

- **Numbers, Numeric Equivalents, and Ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Lithuania.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Lithuania.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.

Field Name	Description
areaName1	Not used.
areaName2	The county.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Lithuania, the country code is LTU.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Lithuania does not have any custom output fields.

Macau (MAC)

This section defines the supported geocoding datasets, operations, and input and output field information for Macau.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Macau.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Portuguese	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Macau:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Rua Cidade de Lisboa N.o 130 **Taipa**
areaName1	String	Specifies the state. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Not used - Macau does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Macau, the country code is MAC. Required for forward geocoding.

Address Guidelines for Macau

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Macau addresses, see the Macau Post website: **http://www.macaupost.gov.mo/**.

- **Required fields**—Addresses must contain a city.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Note: Postal geocoding is not available with Macau.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Macau.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Macau.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The state.

Field Name	Description
areaName2	Not used.
areaName3	The city or town.
areaName4	The locality.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Macau, the country code is MAC.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Macau does not have any custom output fields.

Republic of Macedonia (MKD)

This section defines the supported geocoding datasets, operations, and input and output field information for Macedonia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Macedonia.

Note: Custom User Dictionaries are supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Latin Macedonian	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Macedonia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
placeName	String	Not used.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional.
areaName1	String	Specifies the state. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Not used.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Macedonia, the country code is MKD. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Macedonia.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in Macedonia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	Not used.
areaName1	The state.
areaName2	The district.
areaName3	The town.
areaName4	The locality.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Macedonia, the country code is MKD.
addressNumber	Not used.

Field Name	Description
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Macedonia does not have any custom output fields.

Malawi (MWI)

This section defines the supported geocoding datasets, operations, and input and output field information for Malawi.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Malawi.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Malawi:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 5 Mzimba Avenue **Blantyre 3**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Some addresses in larger cities may be followed by a single-digit numeric sorting code. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Malawi does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Malawi, the country code is MWI. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Malawi.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Malawi.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town. Some addresses in larger cities may be followed by a single-digit numeric sorting code.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Malawi, the country code is MWI.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Malawi does not have any custom output fields.

Malaysia (MYS)

This section defines the supported geocoding datasets, operations, and input and output field information for Malaysia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Malaysia.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
MapInformation Solutions Sdn Bhd Malay	Yes	Yes	Yes	Yes	No	Yes	Yes

Supported Operations

The following operations are supported for Malaysia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 906 Am Jln Pantai Batu Buruk **20400 Kuala Terengganu**
areaName1	String	Specifies the state (negeri). Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. The first three digits represent the main delivery office, the last two digits indicate the delivery area. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Malaysia, the country code is MYS. Required for forward geocoding.

Address Guidelines for Malaysia

For information on Malaysian addresses, see the Pos Malaysia website: **www.pos.com.my**. Some Malaysian addresses do not require a city or a postal code. For certain addresses, the geocoder can obtain a geocode by using only street information, which can be a combination of address number and street name, without any town or postal code.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Malaysia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Malaysia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The state (negeri).

Field Name	Description
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Malaysia, the country code is MYS.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Malaysia does not have any custom output fields.

Mali (MLI)

This section defines the supported geocoding datasets, operations, and input and output field information for Mali.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Mali.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Mali:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Rue 97 **Bamako**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Mali does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Mali, the country code is MLI. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Mali.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Mali.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Mali, the country code is MLI.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Mali does not have any custom output fields.

Republic of Malta (MLT)

This section defines the supported geocoding datasets, operations, and input and output field information for the Republic of Malta.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Republic of Malta.

Note: Custom User Dictionaries are not supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Maltese	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for the Republic of Malta:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 22 Old Bakery Street **Valletta VLT 1459**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the alphanumeric postal code. Post codes in Malta are made up of three letters, which represent the locality, followed by four digits. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the Republic of Malta, the country code is MLT. Required for forward geocoding.

Address Guidelines for Malta

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Malta addresses, see the Malta Post website: **http://www.maltapost.com/**

- **Required fields**—Addresses must contain either a city or postal code.

- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to the Republic of Malta.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in the Republic of Malta.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.

Field Name	Description
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The alphanumeric postal code. Post codes in Malta are made up of three letters, which represent the locality, followed by four digits.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For the Republic of Malta, the country code is MLT.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Republic of Malta does not have any custom output fields.

Mauritania (MRT)

This section defines the supported geocoding datasets, operations, and input and output field information for Mauritania.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Mauritania.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Mauritania:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 28, rue Abdallaye **Nouakchott**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Mauritania does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Mauritania, the country code is MRT. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Mauritania.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Mauritania.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Mauritania, the country code is MRT.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Mauritania does not have any custom output fields.

Mauritius (MUS)

This section defines the supported geocoding datasets, operations, and input and output field information for Mauritius.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Mauritius.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English, French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Mauritius:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 217, Royal Road **Curepipe 74432**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. The first digit indicates the district, the second and third the village council area and the final two digits the sub-locality. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Mauritius, the country code is MUS. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area][postal_code]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Mauritius.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Mauritius.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Mauritius, the country code is MUS.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Mauritius does not have any custom output fields.

Mexico (MEX)

This section defines the supported geocoding datasets, operations, and input and output field information for Mexico.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Mexico.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	Yes	Yes	Yes	Yes	No
TomTom Spanish	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Supported Operations

The following operations are supported for Mexico:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Nezahualcoyotl 109 **77520 Cancun, Q. ROO**
areaName1	String	Specifies the state. Optional.
areaName2	String	Specifies the province. Optional.
areaName3	String	The city or town name. Your input address should use the official city name or alias. For example, either Miguel Hidalgo or Mexico City can be used. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 5-digit postal code. The first two digits identify the state (or a part thereof), except for Nos. 00 to 16, which indicate delegaciones (boroughs) of the Federal District (Mexico City). The third digit indicates an important city or town. The fourth digit indicates a municipality or suburb within a town. The last digit indicates a group of blocks or the specific street address of a large user. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Mexico, the country code is MEX. Required for forward geocoding.

Address Guidelines for Mexico

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional recommendations about the Mexican postal system, see the Correos de México website **http://www.sepomex.gob.mx/Paginas/Home.aspx**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Aliases for states**—You can use state aliases. For example, if you enter "YUC" it would match to Yucatán.

State	Alias
Aguascalientes	AGS/AG/AGU
Baja California	Bassa California/Neder-Californië/BC/BJ/BN/ BAJ/B C
Baja California Sur	Bassa California del Sud/BCS/BS/BAS/B C S
Campeche	CAM/CP/CM
Chiapas	CHIS/CH/CU/CHP
Chihuahua	CHIH/CI/CL/CHU
Colima	COL/CL/CH
Coahuila de Zaragoza	COAH/CU/CS/COA/CZ/C Z/Coahuila
Distrito Federal	Distretto Federale/DF/MDF/D F
Durango	DGO/DG/DUR
Guanajuato	GTO/GJ/GT/GUA
Guerrero	GRO/GR/GUE
Hidalgo	HGO/HG/HID

State	Alias
Jalisco	JAL/JA
México	Mexico/Mexiko/Meksiko/Messico/MEX/EM/MX
Michoacán de Ocampo	MICH/MH/MC/MIC/MO/M O/Michoacan
Morelos	MOR/MR
Nayarit	NAY/NA
Nuevo León	NL/NUE/N L
Oaxaca	OAX/OA
Puebla	PUE/PU/PUB
Querétaro Arteaga	QRO/QA/QE/QDA/Q A/Queretaro
Quintana Roo	QROO/QR/QI/QRO/Q R/Q Roo
San Luis Potosí	San Luis Potosí
Sinaloa	SIN/SI
Sonora	SON/SO
Tabasco	TAB/TA/TB

State	Alias
Tamaulipas	TAMPS/TM/TAM
Tlaxcala	TLAX/TL/TLX
Veracruz de Ignacio de la Llave	VER/VZ/VE/VCL/Veracruz
Yucatán	Yucatan/YUC/YC/YU
Zacatecas	ZAC/ZT/ZA

- **Numbers, numeric equivilants, and ordinals**—Numbered streets are mapped to the named equivalents. For example, you can input Calle 5 or Calle cinco and get the same returned candidates. Ordinals are also recognized in input addresses. For example, the following are all recognized in an input address: 5, CINCO, QUINTO, and QUINTA.
- **Directionals**—The following directionals are recognized in input addresses: Norte, Oriente, Este, Sur, Oueste, Occidente, Poniente, N, E, S, O, NE, NO, SE, SO, Noreste, Sudeste, Noroeste, and Sudoeste.
- **Address point data**— The MEX NAVTEQ Points database includes address point data. Address point candidates return an S8 result code.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Mexico.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Mexico.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The state.
areaName2	The province.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Mexico, the country code is MEX.
addressNumber	The address number.

Field Name	Description
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Mexico does not have any custom output fields.

Montenegro (MNE)

This section defines the supported geocoding datasets, operations, and input and output field information for Montenegro.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Montenegro.

Note: Custom User Dictionaries are not supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Montenegrin, Latin Montenegrin	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Montenegro:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Ulica Slobode broj 1 **81000 Podgorica**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Montenegro, the country code is MNE. Required for forward geocoding.

Address Guidelines for Montenegro

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Montenegro addresses, see the Montenegro Post website: **http://www.postacg.me/**

- **Required fields**—Addresses must contain either a city or postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.

- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Montenegro.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in Montenegro.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.

Field Name	Description
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Montenegro, the country code is MNE.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Montenegro does not have any custom output fields.

Morocco (MAR)

This section defines the supported geocoding datasets, operations, and input and output field information for Morocco.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Morocco.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Morocco:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 25 Avenue Moukhtar Soussi **28630 Ain Harrouda**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. The first two digits refer to a province, the third digit to a sub-central delivery office and the last two digits to a delivery office. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Morocco, the country code is MAR. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Morocco.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Morocco.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Morocco, the country code is MAR.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Morocco does not have any custom output fields.

Mozambique (MOZ)

This section defines the supported geocoding datasets, operations, and input and output field information for Mozambique.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Mozambique.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Portuguese	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Mozambique:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Rua da Namaacha, 492 **1100 Maputo**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 4-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Mozambique, the country code is MOZ. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Mozambique.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Mozambique.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 4-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Mozambique, the country code is MOZ.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Mozambique does not have any custom output fields.

Namibia (NAM)

This section defines the supported geocoding datasets, operations, and input and output field information for Namibia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Namibia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Namibia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 14 Katanga Street **Swakopmund**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Namibia does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Namibia, the country code is NAM. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Namibia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Namibia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Namibia, the country code is NAM.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Namibia does not have any custom output fields.

Netherlands (NLD)

This section defines the supported geocoding datasets, operations, and input and output field information for the Netherlands.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Netherlands.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Dutch, French, German	Yes	Yes	Yes	Yes	Yes	Yes	No

Supported Operations

The following operations are supported for the Netherlands:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Raadhuisstraat 52 **1016 AG Amsterdam**
areaName1	String	Not used.
areaName2	String	Specifies the province. Optional.
areaName3	String	Specifies the city or town name. Your input address should use the official city name or alias.
areaName4	String	Not used.
postalCode	String	Specifies the 4-digit and 2-letter alphanumeric postal code.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the Netherlands, the country code is NLD. Required for forward geocoding.

Address Guidelines for Netherlands

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Netherlands addresses, see the TNT Post website: **www.tntpost.nl**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Aliases for cities**—Locality, town, and province aliases can be used on input. When you geocode, the better matched input name (the official name or alias) is returned with the candidate.

- **Post office box numbers**—Post Office Box numbers are not used for address matching or geocoding purposes, but this does not interfere with matching or geocoding. The PO Box information is not returned. The following formats are recognized: Postbus, PostFach.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.
- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to the Netherlands.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in the Netherlands.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	The province.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 4-digit and 2-letter alphanumeric postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For the Netherlands, the country code is NLD.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Netherlands does not have any custom fields.

New Zealand (NZL)

This section defines the supported geocoding datasets, operations, and input and output field information for New Zealand.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for New Zealand.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
Critchlow English	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Supported Operations

The following operations are supported for New Zealand:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 56 Namata Road One Tree Hill **Auckland 2001**
areaName1	String	Specifies the region. A region is an administrative division of the country. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the suburb. Optional.
postalCode	String	The four-digit postal code. The first digit represents the geographic region. The second and third digits represent the postal sort area. The last digit represents a specific urban area, rural delivery or PO box lobby. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For New Zealand, the country code is NZL. Required for forward geocoding.

Address Guidelines for New Zealand

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on New Zealand addresses, see the New Zealand Post website: **www.nzpost.co.nz**.

- **Required fields**—Addresses must contain either a city or a postal code.

- **Aliases for suburbs**—The geocoder supports locally used suburb names in addition to the officially recognized suburb names. For example, Rosedale is an alias of the official suburb name of Hargest.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.
- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[unit_info][address_number][street_info][areaName4][areaName3][postal_code]

Where:

- *[unit_info] is the unit type and/or value. Optional.*
- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.).
- *[areaName4]* is the suburb.
- *[areaName3]* is the city.
- *[postal_code]* is the 4-digit postal code.
- Either *[areaName3]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no custom options for New Zealand.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in New Zealand.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region.
areaName2	Not used.
areaName3	The city or town.
areaName4	The suburb.
postCode1	The 4-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For New Zealand, the country code is NZL.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The following table lists the custom fields for New Zealand.

Custom Output Fields

The following table lists the output fields that are unique for New Zealand. Unless otherwise noted, these fields can be returned for both forward and reverse geocoding.

- To return one or more of these custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **New Zealand**. Then, on the **Return Values** tab, select the desired output field(s).

- To return all custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **New Zealand**. Then, on the **Return Values** tab, select the **Return all available information** checkbox.

Name	Description
NZL.Aliased Suburb	New Zealand Aliased suburb. An alternative to the officially-recognized suburb name. To include this field in the output, select: **Return Values** > **Aliased suburb** checkbox.
NZL.KEY UFI	New Zealand UFI. The Unique Identifier (UFI) identifies the street segment that the geocoded address belongs to. UFIs are up to 7-digit numbers, assigned by New Zealand Post, that uniquely identify each postal delivery point. The UFI is always returned if available, but you cannot use the UFI for input. To include this field in the output, select: **Return Values** > **UFI** checkbox.
NZL.NZL Mesh Block ID	New Zealand Meshblock identifier. A Meshblock is the smallest geographic unit for which statistical data is collected by Statistics New Zealand. Meshblocks vary in size from part of a city block to large areas of rural land. To include this field in the output, select: **Return Values** > **Mesh block** checkbox.
NZL.Original Latitude	The original latitude value. To include this field in the output, select: **Return Values** > **Original Point** checkbox.
NZL.Original Longitude	The original longitude value. To include this field in the output, select: **Return Values** > **Original Point** checkbox.

Nicaragua (NIC)

This section defines the supported geocoding datasets, operations, and input and output field information for Nicaragua.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Nicaragua.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Nicaragua:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Puerto Salvador Allende **12001 Managua**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Nicaragua, the country code is NIC. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Nicaragua.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Nicaragua.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Nicaragua, the country code is NIC.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Nicaragua does not have any custom output fields.

Niger (NER)

This section defines the supported geocoding datasets, operations, and input and output field information for Niger.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Niger.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Niger:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 21, Avenue de l'Afrique **8006 Niamey**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 4-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Niger, the country code is NER. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Niger.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Niger.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Niger, the country code is NER.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Niger does not have any custom output fields.

Nigeria (NGA)

This section defines the supported geocoding datasets, operations, and input and output field information for Nigeria.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Nigeria.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Nigeria:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 53 Yakubu Avenue **234800 Kaduna**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 6-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Nigeria, the country code is NGA. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Nigeria.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Nigeria.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 6-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Nigeria, the country code is NGA.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Nigeria does not have any custom output fields.

Norway (NOR)

This section defines the supported geocoding datasets, operations, and input and output field information for Norway.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Norway.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Norwegian	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Norway:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Breidablikkvegen 28 **3711 Skien**
areaName1	String	Not used.
areaName2	String	Specifies the district (fylke/counties). Optional.
areaName3	String	Specifies the city or town.
areaName4	String	Not used.
postalCode	String	Specifies the 4-digit postal code. The first two digits designate the geographic area.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Norway, the country code is NOR. Required for forward geocoding.

Address Guidelines for Norway

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Norway addresses, see the Posten Norge website: **www.posten.no**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Common words, abbreviations, and directionals**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations, such as St for Sankt, used in addresses and can geocode these addresses successfully.

- **Numbers, equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Norway.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Norway.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.

Field Name	Description
areaName1	Not used.
areaName2	The district (fylke/counties).
areaName3	The city or town.
areaName4	Not used.
postCode1	The 4-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Norway, the country code is NOR.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Norway does not have any custom output fields.

Oman (OMN)

This section defines the supported geocoding datasets, operations, and input and output field information for Oman.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Oman.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Arabic and English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Oman:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements. For additional information on Oman addresses, see the Oman Post website: **www.omanpost.om**.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 8 Bait Al Wallaj Street **113 Muscat**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 3-digit postal code. The first digit represents the region. The last two digits represent the post office. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Oman, the country code is OMN. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Oman.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Oman.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 3-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Oman, the country code is OMN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Oman does not have any custom output fields.

Panama (PAN)

This section defines the supported geocoding datasets, operations, and input and output field information for Panama.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Panama.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Panama:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Calle Basílica 24 **2545, Chitré**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 4-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Panama, the country code is PAN. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Panama.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Panama.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 4-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Panama, the country code is PAN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Panama does not have any custom output fields.

Paraguay (PRY)

This section defines the supported geocoding datasets, operations, and input and output field information for Paraguay.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Paraguay.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Paraguay:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Paí Peréz No 552 **1531 Asuncion**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 4-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Paraguay, the country code is PRY. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Paraguay.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Paraguay.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 4-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Paraguay, the country code is PRY.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Paraguay does not have any custom output fields.

Peru (PER)

This section defines the supported geocoding datasets, operations, and input and output field information for Peru.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Peru.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Peru:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Av. Larco 1301 **15074 Lima**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Peru, the country code is PER. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Peru.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Peru.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Peru, the country code is PER.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Peru does not have any custom output fields.

Philippines (PHL)

This section defines the supported dictionaries, operations, and input and output field information for the Philippines.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Philippines.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for the Philippines:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 7114 Kundiman Street, Sampaloc **1008 Manila**
areaName1	String	Specifies the state. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 4-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Philippines, the country code is PHL. Required for forward geocoding.

Address Guidelines for Philippines

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Philippines addresses, see the Philippine postal website **http://www.philpost.gov.ph/**www.philpost.gov.ph/.

- **Required fields**—Addresses must contain a city. PHL does not consider postal codes in addresses.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported in input addresses.
- **Common words and abbreviations**—Common words, directionals, house number indicators, and abbreviations used in addresses are supported.

- **Numbers and numeric equivalents**—Numbered streets are mapped to the named equivalents.

  Note: Postal geocoding is not available with Philippines.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][areaName3][areaName2]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[areaName3]* is the city or town. Required.
- *[areaName2]* is the district.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to the Philippines.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in the Philippines.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.

Field Name	Description
areaName1	The state.
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 4-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Philippines, the country code is PHL.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Philippines does not have any custom output fields.

Poland (POL)

This section defines the supported geocoding datasets, operations, and input and output field information for Poland.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Poland.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Polish	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Poland:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Plac Teatralny 13 **45-056 Opole**
areaName1	String	Specifies the province (voivodship). Optional.
areaName2	String	Specifies the district (poviat). Optional.
areaName3	String	Specifies the city or town.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code in the following format: xy-zzz. The first digit represents the postal district. The second digit represents a subdivision of the district. The three digits after the dash represent the post office, or in case of large cities, a particular street or part of a street.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Poland, the country code is POL. Required for forward geocoding.

Address Guidelines for Poland

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Poland addresses, see the Polish Post website: **www.poczta-polska.pl**.

- **Required fields**—Addresses must contain either a city or a postal code.

- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.
- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Poland.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Poland.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.

Field Name	Description
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The province (voivodship).
areaName2	The district (poviat).
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Poland, the country code is POL.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Poland does not have any custom output fields.

Portugal (PRT)

This section defines the supported geocoding datasets, operations, and input and output field information for Portugal.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Portugal.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Portuguese	Yes	Yes	Yes	Yes	Yes	Yes	No
TomTom Portuguese	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Portugal:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Rua Miguel Bombarda 49 **2775-153 Parede**
areaName1	String	Specifies the region. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. This may also be the town alias. For example, Lisbon, Lisbonne, Lissabon, and Lisbona are aliases for Lisboa. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Portugal uses a four-digit postal code beginning with a number between 1 and 9. More recently, Portugal instituted a seven-digit postcode with a dash and three additional digits following the first four digits. The geocoder ignores the additional three digits and returns the four-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Portugal, the country code is PRT. Required for forward geocoding.

Address Guidelines for Portugal

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Portugal addresses, see the CTT Portugal Post website: **www.ctt.pt**.

- **Required fields**—Addresses must contain either a city or a postal code.

- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.
- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.
- **Address point data**— The PRT NAVTEQ Points database includes address point data. Address point candidates return an S8 result code.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

The following table lists the options that are unique for Portugal. These custom fields are applicable to the Geocoding operation and are optional input parameters. For the standard set of options available to all countries and their definitions, see the chapters covering Global Geocode and Global Reverse Geocode.

Option Name	Description
Calculate Centerline projection of point	Computes the closest point on the street from the parcel point. Default = disabled. **Note:** This feature requires that a point-level geocoding dataset is installed.

Option Name	Description
Centerline Offset	Centerline matching is used with point-level matching to tie a point-level geocode with its parent street segment. This functionality is useful for routing applications. The centerline offset specifies the distance to move the point from the street centerline toward the parcel point. Default = 0 meters. You can select either Feet or Meters for your unit of measurement. **Note:** Centerline matching requires that a point-level geocoding dataset is installed. **Note:** Supported only in forward geocoding.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Portugal.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region.
areaName2	Not used.
areaName3	The city or town.

Field Name	Description
areaName4	The locality.
postCode1	The first 4 digits of the postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Portugal, the country code is PRT.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Portugal does not have any custom output fields.

Qatar (QAT)

This section defines the supported geocoding datasets, operations, and input and output field information for Qatar.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Qatar.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Arabic, English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Qatar:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements. For additional information on Qatar addresses, see the Qatar postal website: **www.qpost.com.qa**

Note: The Arabic character set is also supported.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Street 656 **Al Rayyan**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town.
areaName4	String	Not used.
postalCode	String	Not used - Qatar does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Qatar, the country code is QAT. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Qatar.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Qatar.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Qatar, the country code is QAT.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Qatar does not have any custom output fields.

Romania (ROU)

This section defines the supported geocoding datasets, operations, and input and output field information for Romania.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Romania.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Romanian	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Romania:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Strada Alexandru Ioan Cuza 13 **200585 Craiova**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the sector in the case of Bucharest.
postalCode	String	Specifies the 6-digit postal code. The first digit indicates the postal region. The second digit indicates the district of a region or sector in Bucharest. The last 4 digits indicate the delivery area. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Romania, the country code is ROU. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Romania.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Romania.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	The urban sector.
postCode1	The 6-digit postal code.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Romania, the country code is ROU.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Romania does not have any custom output fields.

Russian Federation (RUS)

This section defines the supported geocoding datasets, operations, and input and output field information for the Russian Federation.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Russian Federation.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Russian, English	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for the Russian Federation:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Note: The Russian Cyrillic character set is also supported.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Vzletnaya Str 5 **Krasnogorsk 143400**
areaName1	String	Specifies the region. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 6-digit postal code. The first three digits indicate the region or large town, the last three the post office.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the Russian Federation, the country code is RUS. Required for forward geocoding.

Address Guidelines for Russia

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Russian addresses, see the Russian Post website: **http://www.russianpost.ru/**

- **Required fields**—Addresses must contain either a city or a postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.

- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area][postal_code]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to the Russian Federation.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in the Russian Federation.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.

Field Name	Description
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region.
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 6-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For the Russian Federation, the country code is RUS.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Russian Federation does not have any custom output fields.

Rwanda (RWA)

This section defines the supported geocoding datasets, operations, and input and output field information for Rwanda.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Rwanda.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Rwanda:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 265 Akagera Street **Kigali**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Rwanda does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Rwanda, the country code is RWA. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Rwanda.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Rwanda.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Rwanda, the country code is RWA.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Rwanda does not have any custom output fields.

Saint Kitts and Nevis (KNA)

This section defines the supported geocoding datasets, operations, and input and output field information for Saint Kitts and Nevis.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Saint Kitts and Nevis.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Saint Kitts and Nevis:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Wellington Road **Basseterre**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - St. Kitts and Nevis does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Saint Kitts and Nevis, the country code is KNA. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Saint Kitts and Nevis.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Saint Kitts and Nevis.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Saint Kitts and Nevis, the country code is KNA.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Saint Kitts and Nevis does not have any custom output fields.

Saudi Arabia (SAU)

This section defines the supported geocoding datasets, operations, and input and output field information for Saudi Arabia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Saudi Arabia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Arabic, English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Saudi Arabia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 8104 Al Abbas Ibn Al Ahnif, Al Mursalat **Riyadh 12464**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town.
areaName4	String	Not used.
postalCode	String	Specifies the 5- or 9-digit postal code.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Saudi Arabia, the country code is SAU. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Saudi Arabia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Saudi Arabia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	The 4-digit extension.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Saudi Arabia, the country code is SAU.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Saudi Arabia does not have any custom output fields.

Senegal (SEN)

This section defines the supported geocoding datasets, operations, and input and output field information for Senegal.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Senegal.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Senegal:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 12 Avenue Cheikh Anta Diop **12500 Dakar**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. The first digit indicates the delivery zone, the second and third digits represent the post office and the final two digits indicate the distribution point. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Senegal, the country code is SEN. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Senegal.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Senegal.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Senegal, the country code is SEN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Senegal does not have any custom output fields.

Republic of Serbia (SRB)

This section defines the supported geocoding datasets, operations, and input and output field information for the Republic of Serbia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Republic of Serbia.

Note: Custom User Dictionaries are not supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English, Serbian	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for the Republic of Serbia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Vase Pelagića 32 **11040 Beograd**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the Republic of Serbia, the country code is SRB. Required for forward geocoding.

Address Guidelines for Serbia

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Serbia addresses, see the Serbia Post website: **http://www.posta.rs/default-eng.asp**

- **Required fields**—Addresses must contain either a city or postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to the Republic of Serbia.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in the Republic of Serbia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For the Republic of Serbia, the country code is SRB.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Republic of Serbia does not have any custom output fields.

Singapore (SGP)

This section defines the supported geocoding datasets, operations, and input and output field information for Singapore.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Singapore.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
MIS English	Yes	Yes	Yes	Yes	No	Yes	Yes

Supported Operations

The following operations are supported for Singapore:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 5 Bishan Place **Singapore 579841**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town.
areaName4	String	Not used.
postalCode	String	Specifies the six-digit postal code. The first two numbers represent the sector and the last four numbers represent the delivery point within the sector. Every building in Singapore has a unique postal code.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Singapore, the country code is SGP. Required for forward geocoding.

Address Guidelines for Singapore

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Singapore addresses, see the Singapore Post website: **www.singpost.com**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **PO box addresses**—Post Office Box numbers are not used for address matching or geocoding purposes, but this does not interfere with matching or geocoding. The PO Box information is not returned. The following formats are recognized: P O Box, Locked Bag Service.

- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output. The following table shows is a partial list of recognized thoroughfare types. Others may also be recognized.

Pre-thoroughfare types	lorong=lorong, lrg, lor, lorang jalan=jalan, jln, jl lengkong=lengkong, lkg kallang=kallang mount=mount, mt upper=upper, upp
Post-thoroughare types	track=trk,tck street=st road=rd drive=dr crescent=cr,cres,crescent,cresent boulevard=bvd,blvd,bouleyard,boulvard hill=hill gate=gate mall=mall avenue=ave,av,avnue link=lk lane=l walk=wk green=grn highway=hwy quay=quay, qy parkway=pwy

- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully. Thr following table shows a partial list of common abbreviations that are recognized. Other common abbreviations may also be recognized.

Common abbreviations	AYE=Ayer Rajah Expressway BKE=Bukit Timah Expressway CTE=Central Expressway ECP=East Coast Parkway KJE=Kranji Expressway KPE=Kallang-Paya Lebar Expressway PIE=Pan Island Expressway SLE=Seletar Expressway TPE=Tampines Expressway Ctrl=Central JLN=Jalan LRG=Lorong TG.=TANJONG

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][Singapore][postal_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[Singapore]* If not supplied, a postal code is required.
- *[postal_code]* is the postal code. Required if "Singapore" does not appear in the address.

For best results, put a comma between the street information and the last address line information.

Custom Options

Singapore does not have any custom options.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Singapore.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 6-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Singapore, the country code is SGP.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Singapore does not have any custom output fields.

Slovakia (SVK)

This section defines the supported geocoding datasets, operations, and input and output field information for Slovakia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Slovakia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Slovakian	Yes	Yes	Yes	Yes	Yes	Yes	No

Supported Operations

The following operations are supported for Slovakia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Tatranská Lomnica 121 **062 01 Vysoké Tatry**
areaName1	String	Not used.
areaName2	String	Specifies the town. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality or alias. Optional.
postalCode	String	Specifies the 5-digit postal code. It is typical for the postal code to have a space between the third and fourth digits. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Slovakia, the country code is SVK. Required for forward geocoding.

Address Guidelines for Slovakia

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Slovakian postal system, see the Slovakia Post website: **http://www.posta.sk/**.

- **Required fields**—Addresses must contain a street name and either a town or a postal code.
- **Abbreviations in addresses**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

- **Numbers, Numeric Equivalents, and Ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Slovakia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Slovakia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.

Field Name	Description
areaName1	Not used.
areaName2	The town.
areaName3	The city or town.
areaName4	The locality or alias.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Slovakia, the country code is SVK.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Slovakia does not have any custom output fields.

Slovenia (SVN)

This section defines the supported geocoding datasets, operations, and input and output field information for Slovenia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Slovenia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Slovenian	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Slovenia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Metelkova ulica 2 **1000 Ljubljana**
areaName1	String	Not used.
areaName2	String	Specifies the region. Optional.
areaName3	String	Specifies the city or town.
areaName4	String	Specifies the locality or alias. Optional.
postalCode	String	Specifies the 4-digit postal code.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Slovenia, the country code is SVN. Required for forward geocoding.

Address Guidelines for Slovenia

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Slovenia postal system, see the Slovenia Post website: **www.posta.si**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Thoroughfare types**—Slovenian thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Abbreviations in addresses**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Slovenia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Slovenia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.

Field Name	Description
areaName1	Not used.
areaName2	The region.
areaName3	The city or town.
areaName4	The locality or alias.
postCode1	The 4-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Slovenia, the country code is SVN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Slovenia does not have any custom output fields.

South Africa (ZAF)

This section defines the supported geocoding datasets, operations, and input and output field information for South Africa.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for South Africa.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for South Africa:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 211 Waterval Road **2034 Randburg**
areaName1	String	Specifies the state. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 4-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For South Africa, the country code is ZAF. Required for forward geocoding.

Address Guidelines for South Africa

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on South African addresses, see the South African Postal Service website: **http://www.postoffice.co.za/**.

- **Required fields**—Addresses must contain a city. ZAF does not consider postal codes in addresses.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to South Africa.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in South Africa.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The state.

Field Name	Description
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 4-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For South Africa, the country code is ZAF.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	South Africa does not have any custom output fields.

Spain (ESP)

This section defines the supported geocoding datasets, operations, and input and output field information for Spain.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Spain.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Streets English, Spanish, Basque, Catalan	Yes	Yes	Yes	Yes	Yes	No	No
TomTom Points	Yes	Yes	Yes	Yes	Yes	Yes	No
NAVTEQ Points	Yes	Yes	Yes	Yes	Yes	Yes	No

Supported Operations

The following operations are supported for Spain:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Calle de Mesena, 77 **28033 Madrid**
areaName1	String	Specifies the region. Optional.
areaName2	String	Specifies the province. Optional.
areaName3	String	Specifies the city or town. The input can be the official city name or alias. The alias can be either a local alternative name or a language alternative (Basque or Catalan). The city name returned will match the name specified in the input. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Spain, the country code is ESP. Required for forward geocoding.

Address Guidelines for Spain

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information about the Spain postal system, see the Spanish postal service website: **www.correos.es**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Supported languages**—If a street has a Spanish name and Basque or Catalan alternate name, the returned candidate street name will match the input. That is, if a Basque or Catalan street

name is used on input, then the Basque or Catalan alternate street name is returned as a close match candidate. If the Spanish street name is input, the Spanish street name is returned.

- **Abbreviations in addresses**—The geocoder handles common abbreviations that are used in Spanish addresses. This includes abbreviations for building types, floor indicators, titles, and articles of speech. The geocoder also supports all the official Spanish street type abbreviations plus a number of unofficial street types to help improve geocoding efficiency. Abbreviated street directionals are also handled on input and the returned candidate displays the complete directional. For example, input of Arroya Guadalpia N returns the street Arroya Guadalpia Norte.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Spain.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Spain.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName`, `addressNumber`, `unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region.
areaName2	The province.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Spain, the country code is ESP.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Spain does not have any custom output fields.

Republic of Suriname (SUR)

This section defines the supported geocoding datasets, operations, and input and output field information for the Republic of Suriname.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Republic of Suriname.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Dutch	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for the Republic of Suriname:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Bombaystraat 21a **Paramaribo**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - The Republic of Suriname does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the Republic of Suriname, the country code is SUR. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to the Republic of Suriname.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Suriname.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For the Republic of Suriname, the country code is SUR.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Republic of Suriname does not have any custom output fields.

Swaziland (SWZ)

This section defines the supported geocoding datasets, operations, and input and output field information for Swaziland.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Swaziland.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Swaziland:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 172 Malkerns Road **Mbabane M204**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 4 character alpha-numeric postal code. The letter identifies one of the country's four districts. The three digits indicate the post office. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Swaziland, the country code is SWZ. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Swaziland.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Swaziland.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 4 character alpha-numeric postal code.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Swaziland, the country code is SWZ.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Swaziland does not have any custom output fields.

Sweden (SWE)

This section defines the supported geocoding datasets, operations, and input and output field information for Sweden.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Sweden.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Swedish	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TomTom Swedish	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Sweden:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

Swedish addresses may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Gustavslundsvägen 147 2 tr **167 51 Bromma**
areaName1	String	Specifies the region (lan). Optional.
areaName2	String	Specifies the kommun. Optional.
areaName3	String	Specifies the city or town name.
areaName4	String	Not used.
postalCode	String	Sweden uses a five-digit postal code beginning with a number between 1 and 9. There is typically a space between the first three digits (the outward sorting part of the postcode) and the last two digits (the inward sorting part).
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Sweden, the country code is SWE. Required for forward geocoding.

Address Guidelines for Sweden

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Sweden addresses, see the Post Norden website: **www.posten.se**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.

- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.
- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.
- **Address point data**— The SWE NAVTEQ Points geocoding dataset includes address point data. Address point candidates return an S8 result code.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no custom options for Sweden.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Sweden.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.

Field Name	Description
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The region (lan). .
areaName2	The kommun.
areaName3	The town or city.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Sweden, the country code is SWE.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Sweden does not have any custom output fields.

Switzerland (CHE)

This section defines the supported geocoding datasets, operations, and input and output field information for Switzerland and Liechtenstein. Content that references Switzerland also pertains to Liechtenstein.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Switzerland.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom German, French, Italian	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Switzerland:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Vogelsangstrasse 17 **8307 Illnau-Effretikon**
areaName1	String	Not used.
areaName2	String	Specifies the province. Optional.
areaName3	String	Specifies the city or town. A city alias is also supported. For example, Losanna is one of the aliases for Lausanne.
areaName4	String	Not used.
postalCode	String	Specifies the 4-digit postal code. The initial digit indicates the largest postal regions (routing areas). The second digit indicates the region within this area (routing district). The third digit indicates the route, and the fourth the destination locality. Larger towns may have an additional digit after the town name to indicate the sorting district.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Switzerland, the country code is CHE. For Liechtenstein, the country code is LIE. Required for forward geocoding.

Address Guidelines for Switzerland

The Switzerland geocoder supports locations in Switzerland and Liechtenstein. Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Swiss addresses, see the Swiss Post website:

www.swisspost.ch. For additional information on the Liechtenstein postal system, see the Liechtenstein Post Corp website: **www.post.li**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Thoroughfare types**—German, French, and Italian thoroughfare types and their common abbreviations are recognized and fully supported on input and output. Over 300 thoroughfare types are recognized.
- **Common words and abbreviations**—You can use German, French, and Italian common words, directionals, house number indicators, and abbreviations that are typically used in addresses.
- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents in German, French, or Italian. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Switzerland.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Switzerland.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	The province.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 4-digit postal code.
postCode2	The 1-digit sorting code.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Switzerland, the country code is CHE.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Switzerland does not have any custom output fields.

Taiwan (TWN)

This section defines the supported geocoding datasets, operations, and input and output field information for Taiwan.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Taiwan.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Chinese, English	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Taiwan:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: No. 720, Jiuru 1st Road **Kaohsiung City, Taiwan 807**
areaName1	String	Specifies the county or special municipality. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 3-digit or 3+2-digit postal code. The first three digits refer to the third level administrative divisions, which include districts, county-controlled cities and townships. The last 2 digits refer to a more detailed division.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Taiwan, the country code is TWN. Required for forward geocoding.

Address Guidelines for Taiwan

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Taiwanese addresses, see the Taiwan Post website: **http://www.post.gov.tw/post/internet/u_english/index.htm**

- **Required fields**—Addresses must contain either a city or a postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.

- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][areaName3][areaName1][postal_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[areaName3]* is the city.
- *[areaName1]* is the county or special municipality.
- *[postal_code]* is the postal code.
- Either *[areaName3]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Taiwan.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Taiwan.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.

Field Name	Description
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The county or special municipality.
areaName2	Not used.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 3- or 3+2-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Taiwan, the country code is TWN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Taiwan does not have any custom output fields.

United Republic of Tanzania (TZA)

This section defines the supported geocoding datasets, operations, and input and output field information for Tanzania.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Tanzania.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Tanzania:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 79 Haile Salassie Road **38263 Oysterbay, Dar es Salaam**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. The first 3 digits indicate the locality. The last 2 digits indicate the delivery area or post office. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Tanzania, the country code is TZA. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Tanzania.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Tanzania.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Tanzania, the country code is TZA.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Tanzania does not have any custom output fields.

Thailand (THA)

This section defines the supported geocoding datasets, operations, and input and output field information for Thailand.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Thailand.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Latin Thai	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for Thailand:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 474 Praditmanutham Rd. **Wangthonglang, Bangkok, 10310**
areaName1	String	Specifies the province (changwat). Optional.
areaName2	String	Not used.
areaName3	String	Specifies the subdistrict (tambon).
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. The first two digits of the postal code indicate the province, the last three digits indicate the district (amphoe).
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Thailand, the country code is THA. Required for forward geocoding.

Address Guidelines for Thailand

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Thailand addresses, see the Thailand Post website: **www.thailandpost.com**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.

- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.
- **Numbers, numeric equivalents, and ordinals**—Numbered streets are mapped to the named equivalents. Ordinals are also recognized in input addresses.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][areaName3][areaName1][postal_code]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[areaName3]* is the subdistrict (tambon).
- *[areaName1]* is the province (changwat).
- *[postal_code]* is the postal code.
- Either *[areaName3]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Thailand.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Thailand.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.

Field Name	Description
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The province (changwat).
areaName2	Not used.
areaName3	The subdistrict (tambon).
areaName4	Not used.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Thailand, the country code is THA.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Thailand does not have any custom output fields.

Togo (TGO)

This section defines the supported geocoding datasets, operations, and input and output field information for Togo.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Togo.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Togo:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 120, Rue Naboiane **Lome**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Togo does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Togo, the country code is TGO. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Togo.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Togo.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Togo, the country code is TGO.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Togo does not have any custom output fields.

Trinidad and Tobago (TTO)

This section defines the supported geocoding datasets, operations, and input and output field information for Trinidad and Tobago.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Trinidad and Tobago.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Trinidad and Tobago:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 143A Coffee St **CHAGUANAS 500234**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 6-digit postal code. The first two digits specify a postal district (one of 72), the next two digits a carrier route, and the last two digits a building or zone along that route. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Trinidad and Tobago, the country code is TTO. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area][postal_code]

Where:

- *[address_number]* is optional.

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Trinidad and Tobago.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Trinidad and Tobago.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.

Field Name	Description
postCode1	The 6-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Trinidad and Tobago, the country code is TTO.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Trinidad and Tobago does not have any custom output fields.

Tunisia (TUN)

This section defines the supported geocoding datasets, operations, and input and output field information for Tunisia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Tunisia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom French	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Tunisia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 25 Rue Hedi Nouira **1080 Tunis**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 4-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Tunisia, the country code is TUN. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.

- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Tunisia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Tunisia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 4-digit postal code.
postCode2	Not used.

Field Name	Description
country	The three-letter ISO 3166-1 Alpha-3 country code. For Tunisia, the country code is TUN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Tunisia does not have any custom output fields.

Turkey (TUR)

This section defines the supported geocoding datasets, operations, and input and output field information for Turkey.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Turkey.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Turkish	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Turkey:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Ziya Gökalp Cd No:68 **06590 Ankara**
areaName1	String	Specifies the province. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 5-digit postal code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Turkey, the country code is TUR. Required for forward geocoding.

Address Guidelines for Turkey

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Turkish addresses, see the Turkey PTT website: **http://www.ptt.gov.tr**.

- **Required fields**—Addresses must contain either a city or a postal code.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output. Examples of typical thoroughfare types and their abbreviations are: Bulvar, Bulvari (boulevard) Cadde, Caddesi, Cd, Cad (avenue, lane) Mahalle, Mahallesi, Mah (neighborhood, quarter) Sokak, Sk, Sokagi (street) Yolu, Yol (way, road) This is not a complete list. Other thoroughfare types are also recognized.

- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][areaName4][postal_code][areaName3]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[areaName4]* is the locality.
- *[postal_code]* is the postal code.
- *[areaName3]* is the city.
- Either *[areaName3]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Turkey.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Turkey.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.

Field Name	Description
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The province.
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Turkey, the country code is TUR.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Turkey does not have any custom output fields.

Uganda (UGA)

This section defines the supported geocoding datasets, operations, and input and output field information for Uganda.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Uganda.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Uganda:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Sir Apollo Kaggwa Rd **Kampala**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - Uganda does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Uganda, the country code is UGA. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Uganda.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Uganda.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Uganda, the country code is UGA.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Uganda does not have any custom output fields.

Ukraine (UKR)

This section defines the supported geocoding datasets, operations, and input and output field information for Ukraine.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Ukraine.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Ukranian, English	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Ukraine:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Novoshchipnyi Ryad Str. 25 **65000 Odessa**
areaName1	String	Specifies the region (oblast). Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the city or town.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 5-digit postal code.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Ukraine, the country code is UKR. Required for forward geocoding.

Address Guidelines for Ukraine

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Ukrainian addresses, see the Ukrposhta website: **http://www.ukrposhta.com/www/upost_en.nsf/**

- **Required fields**—Addresses must contain a city. UKR does not consider postal codes in addresses.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Note: Postal geocoding is not available with Ukraine.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Ukraine.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Ukraine.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.

Field Name	Description
areaName1	The region (oblast).
areaName2	The district.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Ukraine, the country code is UKR.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Ukraine does not have any custom output fields.

United Arab Emirates (ARE)

This section defines the supported geocoding datasets, operations, and input and output field information for the United Arab Emirates.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the United Arab Emirates.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Arabic, English	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for the United Arab Emirates:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Sheikh Rashid Bin Saeed St. **Abu Dhabi**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Not used - the United Arab Emirates does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the United Arab Emirates, the country code is ARE. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to the United Arab Emirates.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in the United Arab Emirates.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For the United Arab Emirates, the country code is ARE.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	the United Arab Emirates does not have any custom output fields.

United States (USA)

This section defines the supported geocoding datasets, operations, and input and output field information for the United States.

The following sections are presented:

- **Supported Geocoding Datasets**
- **Supported Operations**
- **Input Fields**
- **Unsupported Options**
- **Custom Options**
- **Custom Output Fields**

Supported Geocoding Datasets

The following table shows the geocoding levels available.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
Point geocoding datasets	Yes	Yes	Yes	Yes	Yes	Yes*	No

* This requires the use of an optional point geocoding dataset.

Street Geocoding Datasets

Street geocoding datasets contain the spatial data necessary to perform address standardization and geocoding. You must install at least one of these geocoding datasets to perform geocoding for USA.

These geocoding datasets use proprietary files called GSD files. For ZIP Code centroid matching, the file us.Z9 contains all the centroid info for all states and normally has a z9 extension.

- **TomTom Streets** — This geocoding dataset provides street segment data by TomTom, a third-party provider of spatial data, and postal data from the U.S. Postal Service.
- **NAVTEQ Streets** — This geocoding dataset provides street segment data by NAVTEQ, a third-party provider of spatial data.

Each geocoding dataset has an optional Statewide Intersections Index. The Statewide Intersection Index is designed to enable fast intersection identification on a statewide basis. For example, the Statewide Intersection Index will allow the geocoding dataset search for "1st && Main St, CO" and

return a list of possible matches in Colorado more quickly than searching the entire geocoding geocoding dataset for each instance of the intersection.

Point Geocoding Datasets

Note: To use a point geocoding dataset, you must also install a street geocoding dataset.

Point geocoding datasets contain data for locating the center of a parcel. These geocoding datasets provides enhanced geocoding accuracy for internet mapping, property and casualty insurance, telecommunications, utilities, and others.

These geocoding datasets are optional, but either Centrus Enhanced Points or Centrus Premium Points is required for Reverse Assessor's Parcel Number (APN) Lookup. These geocoding datasets are also separately licensed.

- **Centrus Points** — This geocoding dataset contains the data necessary to locate the center of a parcel or building. It does not contain Assessor's Parcel Number (APN) or elevation data.
- **Centrus Elevation** — This geocoding dataset contains the same data as Centrus Points, plus elevation data.
- **Centrus Enhanced Points** — This geocoding dataset contains the same data as Centrus Points, plus APN data.
- **Centrus Premium Points** — This geocoding dataset contains the same data as Centrus Points, plus both APN and elevation data.
- **Centrus TomTom Points** — The data in this geocoding dataset is provided by TomTom, a third-party provider of spatial data.
- **NAVTEQ Points**—This database is provided by NAVTEQ, a third-party data provider. It contains data used to locate addresses at the center of the actual building footprint or parcel.
- **Master Location Data** — This geocoding dataset provides the best available address point location for every mailable and deliverable address in the United States.

Reverse Geocoding Geocoding Dataset

The Reverse Geocoding geocoding dataset contains the data you need to convert a latitude/longitude location to an address.

This geocoding dataset is optional, but is required for reverse geocoding. This geocoding dataset is also separately licensed.

Custom User Dictionaries

Custom User Dictionaries contain user-defined records. You can use Custom User Dictionaries to provide custom data to use in address matching and geocoding.

DPV® Geocoding Dataset

The Delivery Point Validation geocoding dataset allows you to check the validity of any individual mailing address in the U.S. The DPV geocoding dataset is distributed as an optional feature and can be installed to enhance the geocoding geocoding dataset's ability to validate mailing addresses. Each time an edition of the geocoding geocoding dataset is released, a corresponding edition of the optional DPV geocoding dataset is released. The date of the DPV geocoding dataset must match

the date of the geocoding geocoding dataset for DPV processing to function. DPV lookups may not be performed after the expiration date of the DPV geocoding dataset.

This geocoding dataset is optional, but is required for CASS Certified™ processing. The DPV geocoding dataset is also required to determine ZIP + 4 and ZIP + 4 related output (DPBC, USPS record type, etc.). This geocoding dataset is also separately licensed.

> **Note:**
>
> Postal Service licensing prohibits using DPV for the generation of addresses or address lists, and also prohibits the DPV geocoding dataset being exported outside the United States.

EWS Geocoding Dataset

The Early Warning System (EWS) geocoding dataset contains data that prevents address records from miscoding due to a delay in postal data reaching the U.S. Postal geocoding dataset.

The USPS® refreshes the EWS file on a weekly basis. Unlike the DPV and LACS^{Link} geocoding datasets, the EWS geocoding dataset does not need to have the same date as the geocoding geocoding dataset. You can download the EWS.zip file free of charge from the CASS section of the USPS® RIBBS website at:

https://ribbs.usps.gov//index.cfm?page=doclist

When you download the EWS geocoding dataset, you will receive a file named OUT. You must rename the OUT file to EWS.txt before using it.

LACS ^{Link} Geocoding Dataset

The LACS^{Link} geocoding dataset allows you to correct addresses that have changed as a result of a rural route address converting to street-style address, a PO Box renumbering, or a street-style address changing.

This geocoding dataset is optional, but is required for CASS Certified™ processing. The LACS^{Link} geocoding dataset is also required in CASS mode to receive ZIP + 4 and ZIP + 4 related output (delivery point barcode, USPS record type, etc.).

The date of the LACS^{Link} geocoding dataset must match the date of the geocoding geocoding dataset for LACS^{Link} processing to function.

> **Note:** USPS licensing prohibits using LACS^{Link} for the generation of addresses or address lists, and also prohibits the LACS^{Link} geocoding dataset being exported outside the United States.

Supported Operations

The following operations are supported for the United States:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Note: Reverse geocoding is currently not available for Guam.

- **Reverse APN Lookup**—Takes an Assessor's Parcel Number (APN), Federal Information Processing Standards (FIPS) county code, and FIPS state code and returns the address of the parcel.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.
mainAddress	String	**Single Line Input**—If no other address field is populated, then the `mainAddress` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `mainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by one of the following tokens: and, &, &&, at, AT, or @. **Note:** The USPS does not consider intersections valid addresses for postal delivery. Therefore, Spectrum™ Technology Platform does not match intersections when processing in CASS mode.
lastLine	String	The last line of the address. Optional. For example: 3001 Summer St. **Stamford, CT 06905**
areaName1	String	Specifies the state. Optional.
areaName2	String	Specifies the county. Optional.
areaName3	String	Specifies the town or city. Optional.

Field Name	Type	Description
areaName4	String	Specifies the urbanization (used only for Puerto Rico). Optional.
postalCode	String	ZIP Code. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the United States and its territories: Puerto Rico, American Samoa, Guam, North Mariana Islands, Palau, and Virgin Islands, the country code is USA. Required for forward geocoding.

City-only Lastline Matching

City-only lastline matching permits address matching with only a city in the input lastline. The city should be provided using either the `mainAddress` (using single-line address input), `LastLine` or `areaName3` input fields.

With city-only lastline input, all of the states are searched in which the input city exists. Therefore, there is the possibility of an increase in multimatches (return of E023 or E030 Match Codes) when matching with city-only input instead of city+state input.

Restrictions:

- City-only lastlne input matching is not supported in CASS mode.
- City-only lastline is not supported when matching to User Dictionaries.
- When matching using city-only lastline, the Matching option **Prefer ZIP over city** setting is ignored.
- It is strongly recommended to not use city-only lastline matching in Relaxed match mode to avoid the return of false-positive matches.

Address Range Matching

Some business locations are identified by address ranges. For example, a shopping plaza could be addressed as 10-12 Front St. This is how business mail is typically addressed to such a business location. These address ranges can be geocoded to the interpolated mid-point of the range.

Address ranges are different from hyphenated (dashed) addresses that occur in some metropolitan areas. For example, a hyphenated address in Queens County (New York City) could be 243-20 147 Ave. This represents a single residence (rather than an address range) and is geocoded as a single address. If a hyphenated address returns as an exact match, Spectrum™ Technology Platform does not attempt to obtain an address range match.

Address range matching is not available in Exact or CASS modes, since an address range is not an actual, mailable USPS® address. The following fields are not returned by address range geocoding:

- ZIP + 4® (in multiple segment cases)
- Delivery point
- Check digit

- Carrier route
- Record type
- Multi-unit
- Default flag

Address range matching works within the following guidelines:

- There must be two numbers separated by a hyphen.
- The first number must be lower than the second number.
- Both numbers must be of the same parity (odd or even) unless the address range itself has mixed odd and even addresses.
- Numbers can be on the same street segment or can be on two different segments. The segments do not have to be contiguous.
- If both numbers are on the same street segment, the geocoded point is interpolated to the approximate mid-point of the range.
- If the numbers are on two different segments, the geocoded point is based on the last valid house number of the first segment. The ZIP Code and FIPS Code are based on the first segment.
- In all cases, odd/even parity is evaluated to place the point on the correct side of the street.

Correct Lastline

When **Output corrected last line** is enabled, the elements of the output lastline are corrected, providing a good ZIP Code or close match on the soundex even if the address did not match or was non-existent. This feature is disabled by default.

When Correct Lastline is enabled, the following elements are corrected:

- **City correction** - The city correction is based on input ZIP Code unless a match to city and state exists in which case both search areas are retained. The input state must be correct or spelled out correctly when no ZIP Code is input. The returned location code and coordinates are based on the output ZIP Code.
  - Input city is incorrect:

    HAUDENVILLE MA 01039
    Returns LASTLINE=HAYDENVILLE, MA 01039 LAT= 42396500 LON= -72689100

- **State correction** - State is abbreviated when spelled out correctly or corrected when a ZIP Code is present. There are some variations of the input state which are recognized, ILL, ILLI, CAL, but not MASS. The US geocoder does not consider the abbreviation of the variation a change, so ILL to IL is not identified as a change in the match code. In addition, the output of the ZIP Code for a single ZIP Code city is not considered a change.
  - Input city exists:

    Bronx NT, 10451
    Returns LASTLINE= BRONX, NY 10451

Bronx NT
Returns LASTLINE= BRONX NT
No ZIP Code for correction.

- Input city does not exist - preferred city for ZIP Code returned:

  60515
  Returns LASTLINE=DOWNERS GROVE, IL 60515
  MATCH_CODE=E622

  ILLINOIS 60515 (or ILL 60515 or IL 60515 or ILLI 60515)
  Returns LASTLINE=DOWNERS GROVE, IL 60515
  MATCH_CODE=E222

- **ZIP Code correction** - The ZIP Code is corrected only when a valid city/state is identified and has only one ZIP Code.
  - Exists on input:

    HAUDENVILLE MA 01039
    Returns LASTLINE=HAYDENVILLE, MA 01039

  - Incorrect on input - ZIP Code correction is not performed, both search areas are retained:

    HAUDENVILLE MA 01030
    Returns LASTLINE=HAYDENVILLE, MA 01030
    City and ZIP Code do not correspond.

  - Does not exist on input:

    DOWNRS GROVE, IL
    Returns LASTLINE=DOWNERS GROVE, IL
    City with multiple ZIP Codes.

LILSE IL
Returns LASTLINE=LISLE, IL 60532
City with a single ZIP Code.

DOWNERS GROVE LL
Returns LASTLINE=DOWNERS GROVE LL,
No ZIP Code for correction.

DOWNRS GROVE, LL
Returns LASTLINE=DOWNRS GROVE, LL
No ZIP Code for correction.

LILSE ILLINOIS
Returns LASTLINE= LISLE, IL 60532
Correct spelled out state.

LISLE ILLINOS
Returns LASTLINE= LISLE ILLINOS
Incorrect spelled out state, no ZIP Code for correction.

Note: For information about the returned match codes, see **Correct Lastline Match Codes** on page 688.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

```
[address_number][street_info][areaName3][areaName1][postal_code]
```

Where:

- `[address_number]` is optional.
- `[street_info]` consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- `[areaName3]` is the city.
- `[areaName1]` is the state. Optional.
- `[postal_code]` is the postal code.
- Either `[areaName3]` or `[postal_code]` is required.

Unsupported Options

- When matching using the **Custom Mode Must Match Fields** settings, the **City/Town Subdivision** and **State/Province Subdivision** options are not supported.

Custom Options

The following table lists the options that are unique for USA. These custom fields are optional , and unless otherwise noted, they are available for both Geocoding and Reverse Geocoding. For the standard set of options available to all countries and their definitions, see the chapters covering Global Geocode and Global Reverse Geocode.

Option Name	Description
Global Geocode options: Matching tab > Search Criteria	
Search Area	These options set the search constraints to use when matching. These can assist in finding a match when the input address contains limited or inaccurate city or ZIP Code information. **Note:** The following Search Area options are ignored in CASS match mode; the default value is used. **Finance Area** — Searches the entire Finance Area for possible streets. Default. **Note:** This option has no effect when performing a ZIP centroid match or a geographic geocode. **City** — Searches the specified city. **Search Radius** — Allows the setting of the search radius distance to use when matching. **Search Radius - limit to state** — Allows for limiting the search to the state. **Note:** Supported only in forward geocoding.
Search Radius Distance	When the **Search Radius** option is selected, this field allows you to enter the search radius distance to use when matching. You can select either miles or kilometers. The max. radius setting is 99 miles/159 kilometers. The default radius distance is 25 meters. **Note:** Ignored in CASS match mode. **Note:** In Global Reverse Geocode, the Search Distance is a Global Defaults option. Then enter the radius value in the **Search Radius Distance** input textfield and select your unit of measurement using the dropdown menu.

Option Name	Description
Search on first letter of Street Name	Specifies whether to look for the correct first letter of a street name if the first letter is missing or incorrect. If selected, the Global Geocoding Module searches through the alphabet looking for the correct first letter to complete the street address. Default = disabled. **Note:** Ignored in Exact match mode. **Note:** Supported only in forward geocoding.
Check for first letter Missing/Wrong	Enables extra processing for bad first letter (missing, wrong, etc.). Default = disabled. **Note:** Ignored in Exact match mode. **Note:** Supported only in forward geocoding.
Global Geocode options: Matching tab > Conflicting input	
Prefer Zip over City	Prefers candidates matching the input ZIP Code over matches to input city. Default = disabled. **Note:** Ignored for CASS and Interactive match modes. Interactive match mode attempts to return the best address regardless of this setting. **Note:** Supported only in forward geocoding.
Prefer PO Box over Street Address	If both a street address and a PO Box are provided in the input address, the PO Box is used for matching. Default = disabled. **Note:** Ignored in CASS match mode. **Note:** Supported only in forward geocoding.

Option Name	Description
Firm name lookup	Determines whether the preferred lookup is to look for only a street match, the streets first or the firms first. **Disabled** — Do not use firm name matching. Default. **Match street only** — Matches to the address line. **Attempt street match first** — Matches to the address line, if a match is not made, then matches to the `Place Name` line. **Attempt firm match first** — Matches to the `Place Name` line, if a match is not made, then matches to the address line. **Note:** Ignored in CASS match mode. **Note:** Supported only in forward geocoding.
Global Geocode options: Matching tab > Find Options	
Building Search on Address Line	Attempts to obtain a street address when the input address contains a building name with no suite or unit number. When this option is disabled, Global Geocoding is able to match to building names only if there is a unit number in the input. Default = disabled. **Note:** Ignored in CASS match mode. **Note:** Supported only in forward geocoding.
Allow Ranged Address Numbers	Some business locations are identified by address ranges. For example, a shopping plaza could be addressed as 10-12 Front St. This is how business mail is typically addressed to such a business location. These address ranges can be geocoded to the interpolated mid-point of the range. Default = disabled. **Note:** Ignored in Exact or CASS match modes (an address range is not an actual, mailable USPS® address). **Note:** Supported only in forward geocoding.

Option Name	Description
Street Locator	Specifies whether to return a street segment geocode as an automatic geocoding fallback. Default = disabled. **Note:** Ignored in CASS match mode. **Note:** Supported only in forward geocoding.
Global Geocode options: Geocoding tab	
ZIP Code Centroid Level	A ZIP Code centroid match returns the center point of an area defined by one of the following types of ZIP Codes: **Any** — Returns the most accurate ZIP Code centroid match found. Default. **9-Digit ZIP** — Returns the center point of a ZIP + 4 Code area. **7-Digit ZIP** — Returns the center point of a ZIP + 2 Code area. **5-Digit ZIP** — Returns the center point of a ZIP Code area. This is the least accurate of the ZIP Code centroids.
Calculate Centerline projection of point	Computes the closest point on the street from the parcel point. Default = disabled. **Note:** This feature requires that a point-level geocoding dataset is installed.
Centerline Offset	Centerline matching is used with point-level matching to tie a point-level geocode with its parent street segment. This functionality is useful for routing applications. The centerline offset specifies the distance to move the point from the street centerline toward the parcel point. Default = 0 meters. You can select either Feet or Meters for your unit of measurement. **Note:** Centerline matching requires that a point-level geocoding dataset is installed. **Note:** Supported only in forward geocoding.
Global Geocode options: Return Values tab	

Option Name	Description
Mixed case output address	Returns candidate information in mixed case rather than uppercase. Default = mixed case.
Output corrected last line	Corrects elements of the output lastline, providing a good ZIP Code or close match on the soundex even if the address would not match or was non-existent. **Note:** Supported only in forward geocoding.
Return coordinates as integer	Returns the `LAT` and `LON` custom output fields as integer values in millionths of degrees. The default is the `LAT` and `LON` custom output fields are returned as decimal values. **Note:** Supported only in forward geocoding.
For information about the return fields for USA, see **Custom Output Fields** on page 598.	
Global Reverse Geocode options: Reverse Geocoding tab	
Find Options	These options set the constraints to use when matching. **Nearest Address** — Attempts to match to the nearest address. Default = enabled. **Nearest Intersection** — Attempts to match to the nearest intersection match. Default = disabled. **Nearest Unranged Segment** — Attempts to match to the nearest unranged segment. Default = disabled. **Prefer Match to Closest Point** — Attempts to match to the nearest point address within the search radius, rather than to the closest feature (e.g. street segment or intersection as well as point addresses). Default = disabled. **Note:** This feature requires that at least one points dataset and one streets dataset are loaded; otherwise, the match will be made to the closest feature.
Global Reverse Geocode options: Return Values tab	
For information about the return fields for USA, see **Custom Output Fields** on page 598.	

Custom Output Fields

This section lists the unique output fields for USA. Unless otherwise noted, these fields can be returned for both forward and reverse geocoding.

The following categories of output fields are defined:

- **Quality Descriptors**
- **Parsed Address**
- **Point**
- **Centerline**
- **Intersection**
- **Census**
- **Postal**
- **DPV**
- **LACS^{Link}**
- **Suite^{Link}**
- **Short Address**
- **Segment**
- **Other**

To include one or more of these categories in the output:

- In Management Console: Use the **Country Filter** dropdown menu and select **United States**. Then, on the **Return Values** tab, select the desired output category checkboxes.

To return all category output fields:

- In Management Console: Use the **Country Filter** dropdown menu and select **United States**. Then, on the **Return Values** tab, select the **Return all available information** checkbox.

Quality Descriptors Output Fields

The Quality Descriptors output fields provide information about the results of the matching and geocoding processes.

Field Name	Description
USA.Match Code	Match codes indicate the portions of the address that matched or did not match to the reference file. For descriptions of match codes, see **Match Codes** on page 682 in the appendix.
USA.Location Code	Location codes indicate the accuracy of the assigned geocode. For descriptions of location codes, see **Address Location Codes** on page 692 in the appendix.

Field Name	Description
USA.MM Result Code	The MapMarker result code for this candidate. See result codes in **Global Result Codes** on page 708 in the appendix.

Parsed Address Output Fields

The Parsed Address output fields provide the components of a matched address which have been parsed and standardized by the geocoder.

Field Name	Description
USA.Parsed Address Line	The address line for single line input addresses.
USA.Parsed City	The abbreviated city name from the last line of the input or output address; the value from `USA.ParsedCityName` or `USA.ParsedPreferredCity`.
USA.Parsed County Name	The county name.
USA.Parsed Firm Name	The name of firm from the USPS data or the input firm name. Not applicable to street intersection matches.
USA.Parsed House Number	The house number of input or output address. Not applicable to street intersection matches.
USA.Parsed Last Line	The complete last line of the address.
USA.Parsed Main Address	The complete first line of the address.
USA.Parsed Name	The street name.
USA.Parsed City Name	The city name for the matched address from the City-State record.
USA.Parsed Preferred City	The preferred city name for the output ZIP Code of the matched address.
USA.Parsed State	The state abbreviation.
USA.Parsed Unit Number	The unit number. Not applicable to street intersection matches.
USA.Parsed Unit Type	The unit type (APT, STE, etc.). Not applicable to street intersection matches.

Field Name	Description
USA.Parsed Zip	5-digit ZIP Code. Not applicable to street intersection matches.
USA.Parsed Zip4	4-digit ZIP Code extension.
USA.Parsed Zip9	9-digit ZIP Code (ZIP + 4).
USA.Parsed Zip10	10-digit ZIP Code (ZIP + 4) with dash separator.

Point Output Fields

The Point output fields provide additional information about the geocode resulting from a match using point-level data.

Note: Except where noted, supported only in forward geocoding.

Field Name	Description
USA.APN ID	The Assessor's Parcel Number Identifier. Not applicable to street intersection matches.
USA.Nearest Distance	Gives the distance, in feet, from the input location to the matched street segment, point address, or intersection. **Note:** For reverse geocoding only.
USA.Parcen Elevation	The elevation of the geocode at the parcel centroid. Not applicable to street intersection matches.
USA.PBKey	A unique address identifier that is returned when an address match is made using the Master Location Dataset. The pbKey™ unique identifier is used as a lookup key to a GeoEnrichment dataset, in order to return attribute data for the match. **Note:** For forward and reverse geocoding. **Note:** To return this field, select the **Return all available information** checkbox.

Field Name	Description
USA.Point ID	The unique point ID of the matched record when matched to point-level data. Blank if the matched record is not from point-level data. Not applicable to street intersection matches.

Centerline Output Fields

Centerline matching is used with point-level matching to tie a point-level geocode with its parent street segment. This type of match provides you with additional data about the parent street segment that is not available with only a point-level match. The output information also includes the bearing and distance from the point data geocode to the centerline match.

Note: Supported only in forward geocoding.

Field Name	Description
USA.Centerline Bearing	For centerline candidates, provides the compass direction, in decimal degrees, from the point data match to the centerline match. Measured clockwise from 0 degrees north.
USA.Centerline Left Block	For centerline candidates, the Census block ID from the left side of the street. Not applicable to street intersection matches.
USA.Centerline Right Block	For centerline candidates, the Census block ID from the right side of the street. Not applicable to street intersection matches.
USA.Centerline Left Block	For centerline candidates, the current left block suffix for Census 2010 geography. This field will be blank if the matched record is from point-level data.
USA.Centerline Right Block	For centerline candidates, the current right block suffix for Census 2010 geography. This field will be blank if the matched record is from point-level data.

Field Name	Description
USA.CenterLine Datatype	For centerline candidates, the data type used to make the centerline match. **0** USPS **1** TIGER **2** TomTom Streets geocoding dataset **6** NAVTEQ Streets geocoding dataset **7** TomTom Points geocoding dataset **8** Centrus Points geocoding dataset **9** Auxiliary file **10** User Dictionary **11** NAVTEQ Points geocoding dataset **12** Master Location Data
USA.Centerline Is Alias	For centerline candidates, returns 'True' if the matched centerline record was located via an alias index.
USA.CenterLine Latitide	For centerline candidates, the latitude in millionths.
USA.CenterLine Longitude	For centerline candidates, the longitude in millionths.
USA.Centerline Name	For centerline candidates, the primary street name.
USA.Centerline Nearest Distance	For centerline candidates, gives the distance, in feet, from the point-level match to the centerline match.
USA.Centerline Post Directional	For centerline candidates, the street postfix directional. Can be blank, N, S, E, W, NE, NW, SW, or SE.
USA.Centerline Pre Directional	for centerline candidates, the street prefix directional. Can be blank, N, S, E, W, NE, NW, SW, or SE.
USA.Centerline QCity	For centerline candidates, the state, city, or finance numbers.
USA.Centerline Road Class	For centerline candidates, the road class code: **0** Minor road, main data file **1** Major road, main data file **10** Minor road, supplemental file **11** Major road, supplemental data file

Field Name	Description
USA.Centerline Segment Direction	For centerline candidates, gives the direction of the segment: **F** Numbers are forward. **R** Numbers are reversed.
USA.Centerline Segment HiRange	For centerline candidates, provides the high house number in the segment.
USA.Centerline Segment Parity	For centerline candidates, provides the segment parity. The parity indicates which side of the street the odd numbers in the segment are located: **L** Left side of the street **R** Right side of the street **B** Both sides of the street **U** Unknown
USA.Centerline Segment LoRange	For centerline candidates, provides the low house number in the segment.
USA.Centerline Segment ID	For centerline candidates, the unique segment ID from data vendors.
USA.Centerline Type	For centerline candidates, provides the street type.

Intersection Output Fields

The Intersection output fields provide data about the second segment in an intersection match.

Field Name	Description
USA.Block Left 2	For intersection matches, the Census block ID from the left side of the street for the second segment in an intersection.
USA.Block Right 2	For intersection matches, the Census block ID from the right side of the street for the second segment in the intersection.
USA.Block SFX Left 2	For intersection matches, the current left block suffix for Census 2010 geography for the second segment in the intersection.
USA.Block SFX Right 2	For intersection matches, the current right block suffix for Census 2010 geography for the second segment in the intersection.

Field Name	Description
USA.CBSA Division Name 2	For intersection matches, the Core Based Statistical Area (CBSA) division name for the second segment in the intersection.
USA.CBSA Division Number 2	For intersection matches, the Core Based Statistical Area (CBSA) division number for the second segment in the intersection.
USA.CBSA Name 2	For intersection matches, the name of the Core Based Statistical Area (CBSA) for the second segment in the intersection.
USA.CBSA Number 2	For intersection matches, the Core Based Statistical Area (CBSA) number for the second segment in the intersection.
USA.County Name 2	For intersection matches, the County name for the second segment in the intersection.
USA.County 2	For intersection matches, the county FIPS code for the second segment in the intersection.
USA.CSA Name 2	For intersections matches, the Combined Statistical Area (CSA) name for the second segment in the intersection.
USA.CSA Number 2	For intersection matches, the Combined Statistical Area (CSA) number for the second segment in the intersection.
USA.Data Type 2	For intersection matches, the type of data used to make the match for the second segment in the intersection. **0** USPS **1** TIGER **2** TomTom Streets geocoding dataset **6** NAVTEQ Streets geocoding dataset **7** TomTom Points geocoding dataset **8** Centrus Points geocoding dataset **9** Auxiliary file **10** User Dictionary **11** NAVTEQ Points geocoding dataset **12** Master Location Data

Field Name	Description
USA.Metro Flag 2	Indicates whether the Core Based Statistical Area (CBSA) in which the address is located is a metropolitan area or a micropolitan area. One of the following: **Y** The address is located in a Metropolitan Statistical Area. Metropolitan areas have a population greater than 50,000. **N** The address is not located in a Metropolitan Statistical Area. It is located in a micropolitan area. Micropolitan areas have a population between 10,000 and 49,999. ***Blank*** Is blank (the county does not contain a CBSA).
USA.Name 2	For intersection matches, the street name for the second segment of the intersection.
USA.Post Directional 2	For intersection matches, the postfix direction of the second street in the intersection. Can be blank, N, S, E, W, NE, NW, SW, or SE.
USA.Pre Directional 2	For intersection matches, the prefix direction of the second street in the intersection. Can be blank, N, S, E, W, NE, NW, SW, or SE.
USA.Road Class 2	For intersection matches, the road class code of the second segment in the intersection: **0** Minor road, main data file **1** Major road, main data file **10** Minor road, supplemental file **11** Major road, supplemental data file
USA.Seg Hi Range 2	For intersection matches, provides the high house number of the second segment in the intersection.
USA.Seg Lo Range 2	For intersection matches, provides the low house number of the second segment in the intersection.
USA.Segment Direction 2	For intersection matches, gives the direction of the second segment in the intersection: **F** Numbers are forward. **R** Numbers are reversed.
USA.Segment ID 2	For intersection matches, the Segment ID (TLID) or unique ID from premium data vendors for the second segment in the intersection.

Field Name	Description
USA.Segment Parity 2	For intersection matches, provides the segment parity for the second segment in the intersection. The parity indicates which side of the street the odd numbers in the segment are located: **L** Left side of the street **R** Right side of the street **B** Both sides of the street **U** Unknown
USA.Type 2	For intersection matches, the street type for the second segment in the intersection.

Census Output Fields

Census output fields contain U.S. Census information about the address.

Field Name	Description
USA.Block	15-digit census block ID/census FIPS code, using the syntax `ssccctttttgbbb` where: • **ss**—2-digit State FIPS Code • **ccc**—3-digit County FIPS Code • **tttttt**—6-digit Census Tract FIPS Code (without period) • **g**—Single-digit Block FIPS Code • **bbb**—Block FIPS Code Not applicable to street intersection matches.
USA.County	The county FIPS code.
USA.State FIPS	The state FIPS code.

Postal Output Fields

The Postal output fields contain detailed postal information for the address.

Note: Supported only in forward geocoding.

Field Name	Description
USA.Alt Flag	Alternate/base record indicator: **A** Alternate **B** Base
USA.CART	Carrier route ID. Not applicable to street intersection matches.
USA.Check Digit	The check digit.
USA.County State Key	USPS city state key (an alphanumeric value that uniquely identifies a locale in the USPS city state product).
USA.DFLT	Indicates the return status of `USA.Highrise DFLT` and `USA.Rural Routes`: **Y** Either `USA.Highrise DFLT` and `USA.Rural Routes` returned Y. ***Blank*** Both `USA.Highrise DFLT` and `USA.Rural Routes` returned N or *Blank*.
USA.DPBC Code	Delivery Point Barcode.
USA.EWS Match	Indicates if an EWS match was made: **Y** Match denied because it matched to EWS data. **Blank** Input record did not match to EWS data.
USA.Govt Flag	The government building indicator: **A** City government building **B** Federal government building **C** State government building **D** Firm only **E** City government building and firm only **F** Federal government building and firm only **G** State government building and firm onl A, B, C, E, F, and G are valid for alternate records only (ALT_FLAG=A). D is valid for both base and alternate records.

Field Name	Description
USA.Hi Rise Dflt	Indicates if the match was made to a highrise. **N** Matched to an exact highrise record or a street record. **Y** Did not match to an exact record. Matched to the USPS default highrise record or a street record. Check the input address for accuracy and completeness. ***Blank*** Does not apply to the input address (for example, PO Boxes and General Delivery addresses) or did not find a match.
USA.Lot Code	Lot ascending and descending value. Only available for addresses that can be standardized. Blank if running in CASS mode and you have not initialized DPV or the output address does not DPV confirm. **A** Ascending **D** Descending
USA.Lot Number	4-digit eLot number. Requires an input address that can be standardized. Blank if running in CASS mode and you have not initialized DPV or the output address does not DPV confirm.
USA.Mail Stop	Returns address information appearing after mail stop designator words: MSC, MS, MAILSTOP, MAIL STOP, ATTN, ATTENTION.
USA.PMB Designator	PMB designator (always “PMB”).
USA.PMB Number	PMB number.
USA.Rural Routes	Match indicator for rural routes. **N** Matched to an exact rural route record. **Y** Did not find an exact record. Matched to the USPS default rural route record. Check the input address for accuracy and completeness. ***Blank*** Does not apply to the input address (for example, street addresses, P.O. Boxes, and General Delivery addresses) or no match found.
USA.URB Name	The urbanization name for Puerto Rico.

Field Name	Description
USA.Zip Carrt Sort	Indicates the type of cart sort allowed: **A** Automation cart allowed, optional cart merging allowed. **B** Automation cart allowed, optional cart merging not allowed. **C** Automation cart not allowed, optional cart merging allowed. **D** Automation cart not allowed, optional cart merging not allowed.
USA.Zip Class	ZIP Classification Code: ***Blank*** Standard ZIP Code **M** Military ZIP Code **P** ZIP Code has P.O. Boxes only **U** Unique ZIP Code. (A unique ZIP Code is a ZIP Code assigned to a company, agency, or entity with sufficient mail volume to receive its own ZIP Code.)
USA.Zip Facility	Returns the USPS City State Name Facility Code: **A** Airport Mail Facility (AMF) **B** Branch **C** Community Post Office (CPO) **D** Area Distribution Center (ADC) **E** Sectional Center Facility (SCF) **F** Delivery Distribution Center (DDC) **G** General Mail Facility (GMF) **K** Bulk Mail Center (BMC) **M** Money Order Unit **N** Non-Postal Community Name, Former Postal Facility, or Place Name **P** Post Office **S** Station **U** Urbanization

DPV Output Fields

DPV data output fields contain information about a match made using DPV data.

Note: Supported only in forward geocoding.

Field Name	Description
USA.DPV CMRA	Delivery Point Validation CMRA indicator. **Y** Address found in CMRA table. **N** Address not found in CMRA table. ***Blank*** DPV not loaded.
USA.DPV Confirm	Indicates if a match occurred for DPV data. **N** Nothing confirmed. **Y** Everything confirmed (ZIP+4, primary and secondary) **S** ZIP+4 and primary (house number) confirmed. **D** ZIP+4 and primary (house number) confirmed and a default match (`HI_RISE_DLT = Y`, secondary did not confirm. ***Blank*** Non-matched input address to USPS ZIP+4 data, or DPV data not loaded.
USA.DPV False POS	DPV false-positive indicator. **Y** False-positive match found. ***Blank*** False-positive match not found.
USA.DPV FootNote 1	Information about the matched DPV records. **AA** ZIP+4 matched. **A1** Failure to match a ZIP+4. ***Blank*** Address not presented to hash table or DPV data not loaded.

Field Name	Description
USA.DPV FootNote 2	Information about the matched DPV records. **BB** All DPV categories matched. **CC** DPV matched primary/house number, where the secondary/unit number did not match (present but invalid). **M1** Missing primary/house number. **M3** Invalid primary/house number. **N1** DPV matched primary/house number, with a missing secondary number. **P1** Missing PS, RR, or HC Box number. **P3** Invalid PS, RR or HC Box number. **F1** All military addresses. **G1** All general delivery addresses. **U1** All unique ZIP Code addresses. ***Blank*** Address not presented to hash table or DPV data not loaded. **Note:** A unique ZIP Code is a ZIP Code assigned to a company, agency, or entity with sufficient mail volume to receive its own ZIP Code.
USA.DPV FootNote 3	Information about the matched DPV records. **R1** Matched to CMRA but PMB designator not present. **R2** Matched to CMRA and PMB designator present (PMB 123 or #123). ***Blank*** Address not presented to hash table or DPV data not loaded.
USA.DPV No STAT	**Y** The address is valid for CDS pre-processing. **N** The address is not valid for CDS pre-processing. ***Blank*** DPV is not loaded or DPV did not confirm.
USA.DPV Shutdown	**Y** Address was found in false-positive table. **N** Address was not found in false-positive table. ***Blank*** Address was not presented to hash table or DPV data not loaded.

Field Name	Description	
USA.DPV Vacant	**Y**	The address is vacant.
	N	The address is not vacant.
	Blank	DPV is not loaded or DPV did not confirm (so vacancy is irrelevant).

LACS^{Link} Output Fields

LACS^{Link} data output fields contain information about a match made using the LACS^{Link} dataset.

Note: Supported only in forward geocoding.

Field Name	Description	
USA.LACS Flag	Indicates if the address is marked for conversion.	
	L	Address marked for LACS conversion.
	Blank	Address not marked for LACS conversion.
USA.LACS Link IND	LACS^{Link} indicator.	
	Y	Matched LACS^{Link} record.
	N	LACS^{Link} match NOT found.
	F	False-positive LACS^{Link} record.
	S	Secondary information (unit number) removed to make a LACS^{Link} match.
	Blank	Not processed through LACS^{Link}.
USA.LACS Link RetCode	LACS^{Link} return code.	
	A	Matched LACS^{Link} record.
	00	LACS^{Link} match NOT found.
	09	Matched to highrise default, but no LACS^{Link} conversion.
	14	Found LACS^{Link} match, but no LACS^{Link} conversion.
	92	Secondary information (unit number) removed to make a LACS^{Link} match.
	Blank	Not processed through LACS^{Link}.

Field Name	Description	
USA.LACS Link Shutdown	**Y**	False-positive occurred and LACSLink library shutdown.
	N	LACSLink library has not shutdown or not loaded.

Suite^{Link} Output Fields

The Suite^{Link} output fields contain information about a match made using the Suite^{Link} dataset.

Note: Supported only in forward geocoding.

Field Name	Description	
USA.Suite Link Ret Code	**A**	Suite^{Link} record match.
	00	No Suite^{Link} match.
	Blank	This address was not processed through Suite^{Link}.

Short Address Output Fields

The short address output fields contain abbreviated elements of the matched address.

Note: Supported only in forward geocoding.

Field Name	Description
USA.Short Addressline	Shortest possible address line that can be constructed from available short street name and other address line components.
USA.Short City Name	The output city name that appears in `LASTLINE_SHORT`. This value is determined by logic similar to `CITY`. Whenever possible, this city name is 13 characters or less. This output city name is determined by CASS rules. This can be either City State Name, City State Name Abbreviation, or Preferred Last Line City State Name.

Field Name	Description
USA.Short Last line	The address last line. Whenever possible, this field is 29 characters or less: • 13-character city name • 2 (comma and space) • 2-character state abbreviation • 2 spaces • 10-digit ZIP Code
USA.Short Street Name	The short street name used to construct the short address line. All attempts are made to abbreviate this name according to the process specified by the USPS in the 30 Character Abbreviation - Cycle M Flow Chart. If an abbreviated address cannot be constructed that is 30 characters or less, this field then contains the same street name value as the `NAME` field return.
USA.Short Post Directional	Postdir from the `ADDRLINE_SHORT` field.
USA.Short Pre Directional	Predir from the `ADDRLINE_SHORT` field.
USA.Short Street Type	Postdir from the `ADDRLINE_SHORT` field.

Segment Output Fields

Segment output fields contain information on the street segment identified by the data provider.

Field Name	Description
USA.Left Block ID	Census block ID from the left side of the street. Not applicable to street intersection matches.
USA.Right Block ID	Census block ID from the right side of the street. Not applicable to street intersection matches.
USA.Left SFX Block	The current left block suffix for Census 2010 geography. This field will be blank if the matched record is from point-level data.
USA.Right SFX Block	The current right block suffix for Census 2010 geography. This field will be blank if the matched record is from point-level data.

Field Name	Description
USA.Data Type	The type of data used to make the match. **0** USPS **1** TIGER **2** TomTom Streets geocoding dataset **6** NAVTEQ Streets geocoding dataset **7** TomTom Points geocoding dataset **8** Centrus Points geocoding dataset **9** Auxiliary file **10** User Dictionary **11** NAVTEQ Points geocoding dataset **12** Master Location Data
USA.DataType Name	The source data vendor for the candidate match.
USA.High Range	House number at the high end of the range. Not applicable to street intersection matches.
USA.High Unit	High unit number for the range. Not applicable to street intersection matches.
USA.High ZIP+4	High ZIP+4 for the range. Not applicable to street intersection matches.

Field Name	Description
USA.Is Street Alias	The first character: **N** Normal street match **A** Alias match (including buildings, aliases, firms, etc.) The next 2 characters: **01** Basic index, normal address match **02** USPS street name alias index **03** USPS building index **05** Statewide intersection alias (when using the Usw.gsi, Use.gsi,or Us.gsi file) **06** Spatial data street name alias (when using the Us_pw.gsi, Usw.gsi, Us_pe.gsi, Use.gsi, Us_ps.gsi, Usp.gsi, Us_psw.gsi, or Us_pse.gsi file is required.) **07** Alternate index (when using ZIP9.gsu, ZIP9E.gsu, and ZIP9W.gsu) **08** LACS^{Link} **09** Unused **09** Auxiliary file match. **10** Centrus Alias index (when using usca.gsi)
USA.Low Range	House number at the low end of the range. Not applicable to street intersection matches.
USA.Low Unit	Low unit number. Not applicable to street intersection matches.
USA.Low ZIP+4	Low ZIP+4 for this range. Not applicable to street intersection matches.
USA.Street Post Directional	Postfix direction. Can be blank, N, S, E, W, NE, NW, SW, or SE.
USA.Street Pre Directional	Prefix direction. Can be blank, N, S, E, W, NE, NW, SW, or SE.
USA.QCity	State, city, or finance numbers.
USA.Range Parity	Indicates the parity of the house number in the range: **E** Even **O** Odd **B** Both

Field Name	Description
USA.Rec Type	The range record type: **A** Auxiliary file **F** Firm **G** General Delivery **H** Highrise **P** Post Office/PO Box **R** Rural Route **S** Street **T** TIGER record match **U** User Dictionary Not applicable to street intersection matches.
USA.Road Class	The road class code: **0** Minor road, main data file **1** Major road, main data file **10** Minor road, supplemental file **11** Major road, supplemental data file Not applicable to street intersection matches.
USA.Segment High Range	Provides the high house number in the segment.
USA.Segment Low Range	Provides the low house number in the segment.
USA.Segment Direction	Gives the direction of the segment: **F** Numbers are forward. **R** Numbers are reversed.
USA.Segment ID	Segment ID (TLID) or unique ID from premium data vendors. Not applicable to street intersection matches.

Field Name	Description
USA.Segment Parity	Provides the segment parity. The parity indicates which side of the street the odd numbers in the segment are located: **L** Left side of the street **R** Right side of the street **B** Both sides of the street **U** Unknown
USA.Street Side	The matched address is on the following side of the street: **L** Left side of the street. **R** Right side of the street. **B** Both sides of the street. **U** Unknown side of the street. This is relative to the segment end points and the segment direction (`SEGMENT_DIRECTION`).
USA.ThoroughfareType	Street type.

Other Output Fields

The Other output fields contain additional information about the match.

Field Name	Description
USA.Aux User Data	User data from the auxiliary file. Blank if no auxiliary file.
USA.CBSA Division Name	Core Based Statistical Area (CBSA) division name.
USA.CBSA Division Number	Core Based Statistical Area (CBSA) division number.
USA.CBSA Name	The name of the Core Based Statistical Area (CBSA) in which the address is located. A CBSA is a collective term that refers to both metropolitan and micropolitan areas. A metropolitan area has a population of more than 50,000, and a micropolitan area has a population between 10,000 and 49,999. For more information, see *Metropolitan and Micropolitan Statistical Areas* section of the U.S. Census Bureau website:**http://www.census.gov/population/www/metroareas/metroarea.html**

Field Name	Description
USA.CBSA Number	Core Based Statistical Area (CBSA) number.
USA.CSA Name	Combined Statistical Area (CSA) name.
USA.CSA Number	Combined Statistical Area (CSA) number.
USA.LAT	The latitude of the address.
USA.LON	The longitude of the address.
USA.Matched DB	Index of geocoding dataset for matched record.
USA.MCD Name	Minor Civil Division name from the auxiliary file. Blank if no auxiliary file match.
USA.MCD Number	Minor Civil Division number from the auxiliary file. Blank if no auxiliary file match.
USA.Metro Flag	Indicates whether the Core Based Statistical Area (CBSA) in which the address is located is a metropolitan area or a micropolitan area. One of the following: **Y** The address is located in a Metropolitan Statistical Area. Metropolitan areas have a population greater than 50,000. **N** The address is not located in a Metropolitan Statistical Area. It is located in a micropolitan area. Micropolitan areas have a population between 10,000 and 49,999. ***Blank*** Is blank (the county does not contain a CBSA).
USA.Resolved Line	Indicates which line in a 2-line address was used to resolve the address.

Uruguay (URY)

This section defines the supported geocoding datasets, operations, and input and output field information for Uruguay.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Uruguay.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Spanish	Yes	Yes	No	Yes	Yes	No	No

Supported Operations

The following operations are supported for Uruguay:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Juan Manuel Blanes 1000 **Montevideo 11100**
areaName1	String	Specifies the department. Optional.
areaName2	String	Not used.
areaName3	String	Specifies the city or town.
areaName4	String	Specifies the locality. Optional.
postalCode	String	Specifies the 5-digit postal code.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Uruguay, the country code is URY. Required for forward geocoding.

Address Guidelines for Uruguay

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Uruguayan addresses, see the Uruguay Postal Service website: **http://www.correo.com.uy/index.asp**

- **Required fields**—Addresses must contain a city. URY does not consider postal codes in addresses.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.
- **Common words and abbreviations**—The geocoder recognizes common words, directionals, house number indicators, and abbreviations used in addresses and can geocode these addresses successfully.

Note: Postal geocoding is not available with Uruguay.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Uruguay.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Uruguay.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.

Field Name	Description
areaName1	The department.
areaName2	Not used.
areaName3	The city or town.
areaName4	The locality.
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Uruguay, the country code is URY.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Uruguay does not have any custom output fields.

Venezuela (VEN)

This section defines the supported geocoding datasets, operations, and input and output field information for Venezuela.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Venezuela.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Spanish	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Venezuela:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: Paseo Meneses **Ciudad Bolivar 8001**
areaName1	String	Specifies the state. Optional.
areaName2	String	Specifies the region. Optional.
areaName3	String	Specifies the city or town.
areaName4	String	Not used.
postalCode	String	Specifies the 4-digit postal code. The first 2 digits refer to the resion, the last two digits indicate the delivery office. Post office box addresses sometimes include a letter after the 4 digits. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Venezuela, the country code is VEN. Required for forward geocoding.

Address Guidelines for Venezuela

Follow these suggestions to ensure that your input address data is in the best format possible for optimum matching and geocoding. For additional information on Venezuelan addresses, see the IPOSTEL website: **http://www.ipostel.gob.ve/**

- **Required fields**—Addresses must contain a city. House numbers are not available in the data. VEN does not consider postal codes in addresses.
- **Thoroughfare types**—Thoroughfare types and their common abbreviations are recognized and fully supported on input and output.

- **Common words and abbreviations**—The geocoder recognizes common words, directionals, and abbreviations used in addresses and can geocode these addresses successfully.

  Note: Postal geocoding is not available with Venezuela.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][areaName3][postal_code][areaName1]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[areaName3]* is the city.
- *[postal_code]* is the postal code.
- *[areaName1]* is the state.
- Either *[areaName3]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Venezuela.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Venezuela.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.

Field Name	Description
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The state.
areaName2	The region.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 4-digit postal code. This may have a letter appended after the digits.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Venezuela, the country code is VEN.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Venezuela does not have any custom output fields.

Vietnam (VNM)

This section defines the supported geocoding datasets, operations, and input and output field information for Vietnam.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Vietnam.

Note: Custom User Dictionaries are supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
NAVTEQ Vietnamese	Yes	Yes	No	Yes	Yes	No	No
TomTom Vietnamese	Yes	Yes	Yes	Yes	Yes	No	No

Supported Operations

The following operations are supported for Vietnam:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 2 2 Tháng 9 **Đà Nẵng**
areaName1	String	Specifies the province. Optional.
areaName2	String	Specifies the district. Optional.
areaName3	String	Specifies the precint, district or town name.
areaName4	String	Not used.
postalCode	String	Vietnam uses a five-digit postal code beginning with a number between 1 and 9. There is typically a space between the first three digits (the outward sorting part of the postcode) and the last two digits (the inward sorting part).
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Vietnam, the country code is VNM. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[street_info][address_number][postal_code][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[address_number]* is optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no custom options for Vietnam.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Vietnam.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	The province.
areaName2	The precinct or district.
areaName3	The town or city.
areaName4	Not used.

Field Name	Description
postCode1	The 5-digit postal code.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Vietnam, the country code is VNM.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Vietnam does not have any custom output fields.

World Geocoder (XWG)

This section defines the supported geocoding datasets, operations, and input and output field information for the World Geocoder.

Supported Data Sets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the World Geocoder.

Note: Custom User Dictionaries are not supported.

Data Set	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom, GeoNames, Pitney Bowes World data	Yes	Yes	Yes	No	No	No	No

Supported Operations

The following operations are supported for the World Geocoder:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.

Postal Geocoding

The World Geocoder can geocode to a postal centroid if postcode information is available from the country. Postcode information can come from any of the data sources (TomTom, GeoNames, or Pitney Bowes). See **Country Postal Data Coverage** on page 657 for a summary of postal data coverage. Depending on the country, postal geocoding may provide more accurate results that geographic geocoding. Postal level geocoding is possible if these conditions are met:

- Your input address consists of a valid postcode.
- The data source contains postcode information for the country. Not every country has postcode data.

Geographic Geocoding

The World Geocoder can geocode to the centroid of an administrative division (such as town or village). The World Geocoder can geocode to the geographic level if these conditions are met:

- Your input addresses contains accurate geographic information without valid postcode address content in the input. If the address in question includes valid postcode input, then the World Geocoder will attempt postal geocoding.
- The data source contains geographic level information for the country. Geographic information can come from any of the data sources (TomTom, GeoNames, or Pitney Bowes).

Country Coverage

The World Geocoder has coverage for almost every country in the world. The accuracy and scope of coverage varies depending on the quality of the available data source. Some countries include postcode data, while other countries have geographic coverage only. See the following table for a complete list of Geographic coverage by country. For a complete list of Geographic coverage by country, see **Country Geographic Data Coverage** on page 639. For Postal coverage by country, see **Country Postal Data Coverage** on page 657

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
placeName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional. **Note:** Information provided in this field will be ignored by the World Geocoder.
mainAddress	String	**Single Line Input**—If no other address field is populated, then the `mainAddress` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `mainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&). **Note:** Information provided in this field will be ignored by the World Geocoder.
lastLine	String	The last line of the address. Optional. For example: 2 Manchester Rd **Harare**

Field Name	Type	Description
areaName1	String	The name of one of the following depending on the country: • **Not used**—BEL, CHE, DNK, IRL, LIE, LUX, NLD, NOR, SGP • **Bundesland**—DEU • **Province**—CAN • **Province (changwat)**—THA • **Province (voivodship)**—POL • **Region**—AUT, ESP, FRA, GBR, NZL, PRT • **Region (län)**—FIN • **Region (lan)**—SWE • **State**—AUS, BRA • **State (negeri)**—MYS
areaName2	String	The name of one of the following depending on the country: • **Not used**—AUT, BRA, CAN, FIN, GBR, MYS, PRT, SGP. • **Department**—FRA • **District (amphoe)**—THA • **District (fylke/counties)**—NOR • **District (poviat)**—POL • **Kommun**—SWE • **Kreis**—DEU • **Local Government Authority (LGA)**—AUS • **Province**—BEL, CHE, DNK, ESP, IRL, ITA, LIE, LUX, NLD • **Region**—NZL
areaName3	String	Specifies the city or town name. Your input address should use the official city name. This will produce the best geocoding results. For Thailand, this field contains the subdistrict (tambon).
areaName4	String	The name of one of the following depending on the country: • **Not used**—AUS, AUT, BEL, CHE, DEU, DNK, FIN, FRA, IRL, LIE, LUX, MYS, NLD, NOR, POL, SGP, SWE, THA • **Dissemination Area and Enumeration Area (DA and EA)**—CAN • **Locality**—BRA, GBR, ITA, PRT • **Suburb**—NZL
postalCode	String	The postal code in the appropriate format for the country.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the World Geocoder, the country code is XWG. Required for forward geocoding.

Address Guidelines for the World Geocoder

Follow these suggestions to ensure that your street input data is in the best format possible for optimum matching and geocoding.

- **Address Aliases** — Some countries have alternative administrative names. For example, there may be an official name for a city or town, but there may also be common but unofficial alternative name for the same city or town. If alias information is available in the source data, World includes this alias in the database. This enables World to geocode successfully when alternative names are used in input addresses.
- **Language Aliases** — Some countries have more than one official or prominent language. For example, the same town may be commonly known by both German and Italian names. If language alias information is available in the source data, World uses this in the database. This enables World to geocode successfully when alternative language names are used in input addresses.
- **State or Province Abbreviations** — In some countries, the state or province is an important part of the address and often this address element is abbreviated. For selected countries, these state/province abbreviations are recognized by World. For example, in the United States each state has a two-letter abbreviation (such as CA for California). Similarly, Netherlands, state abbreviations (such as GLD for Gelderland) are recognized.

  The World Geocoder accepts state/province abbreviations for the following countries:

  - Australia (AUS)
  - Canada (CAN)
  - Italy (ITA)
  - Mexico (MEX)
  - Netherlands (NLD)
  - United States (USA)

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered in the typical order for the country. Some examples of common address element ordering is as follows:

[address_number][street_info][postal_code][area]

[address_number][street_info][area][postal_code]

[street_info][address_number][area][postal_code]

[street_info][address_number][postal_code][area]

[street_info][address_number][area]

[address_number][street_info][area]

Where:

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.

- *[address_number]* is optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- *[postal_code]* is the postal code.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no custom options for the XWG geocoder.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located by the World Geocoder.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.

Field Name	Description
areaName1	The meaning varies by country: • AUS—State • AUT—Region • BEL—Not used • BRA—State • CAN—Province • CHE—State • DEU—Bundesland • DNK—Not used • ESP—Region • FIN—Region (län) • FRA—Region • GBR—Region • IRL—Not used • ITA—Region • LIE—State • LUX—Not used • MYS—State (negeri) • NLD—Not used • NOR—Not used • NZL—Region • POL—Province (voivodship) • PRT—Region • SGP—Not used • SWE—Region (lan) • THA—Province (changwat)

Field Name	Description
areaName2	This field contains an area that is smaller than a state/province but larger than a city. The specific area varies by country: • AUS—Local Government Authority (LGA) • AUT—Province • BEL—Province • BHS—Not used • BRA—Not used • CAN—Not used • CHE—Province • DEU—Kreis • DNK—Province • FIN—Province (kommune) • FRA—Department • GBR—County • ITA—Province • LIE—Province • LUX—Province • MYS—District (daerah) • NLD—Province • NZL—Not used • POL—District (poviat) • PRT—Not used • SGP—District • SWE—Region (kommun) • THA—District (amphoe)
areaName3	The city or town.
areaName4	The meaning varies by country: • **Not used**—AUS, AUT, BEL, CHE, DEU, DNK, FIN, FRA, IRL, LIE, LUX, MYS, NLD, NOR, POL, SGP, SWE, THA • **Dissemination Area and Enumeration Area (DA and EA)**—CAN • **Locality**—BRA, GBR, ITA, PRT • **Suburb**—NZL
postCode1	The postal code for the address. The format of the postal code varies by country.
postCode2	The postal code extension, if applicable to the country.
country	The three-letter ISO 3166-1 Alpha-3 country code. For the World Geocoder, the country code is XWG.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The World Geocoder custom output fields are listed in the following section.

Custom Output Fields

The following table lists the output fields that are unique for the XWG geocoder.

- To return one or more of these custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **World Geocoder XWG**. Then, on the **Return Values** tab, select the desired output field(s).
- To return all custom output fields: In Management Console, use the **Country Filter** dropdown menu and select **World Geocoder XWG**. Then, on the **Return Values** tab, select the **Return all available information** checkbox.

Name	Description
City Rank	This option returns the city ranking from 1 (highest) to 10 (lowest). Zero (0) means that a rank was not available.

Country Geographic Data Coverage

The following table provides a list of the countries that have geographic data coverage.

Country Name	ISO 3166 Country Code	Data Source
Afghanistan	AFG	GeoNames
Aland Islands	ALA	GeoNames
Albania	ALB	TomTom

Country Name	ISO 3166 Country Code	Data Source
Algeria	DZA	GeoNames
American Samoa	ASM	GeoNames
Andorra	AND	TomTom
Angola	AGO	TomTom
Anguilla	AIA	GeoNames
Antarctica	ATA	GeoNames
Antigua and Barbuda	ATG	GeoNames
Argentina	ARG	TomTom
Armenia	ARM	GeoNames
Aruba	ABW	GeoNames
Australia	AUS	GeoNames
Austria	AUT	TomTom
Azerbaijan	AZE	GeoNames
Bahamas	BHS	GeoNames

Country Name	ISO 3166 Country Code	Data Source
Bahrain	BHR	TomTom
Bangladesh	BGD	GeoNames
Barbados	BRB	GeoNames
Belarus	BLR	TomTom
Belgium	BEL	TomTom
Belize	BLZ	GeoNames
Benin	BEN	TomTom
Bermuda	BMU	GeoNames
Bhutan	BTN	GeoNames
Bolivia	BOL	GeoNames
Bonaire, Sint Eustatius and Saba	BES	GeoNames
Bosnia and Herzegovina	BIH	TomTom
Botswana	BWA	TomTom
Bouvet Island	BVT	GeoNames

Country Name	ISO 3166 Country Code	Data Source
Brazil	BRA	TomTom
British Indian Ocean Territory	IOT	GeoNames
Brunei Darussalam	BRN	TomTom
Bulgaria	BGR	TomTom
Burkina Faso	BFA	TomTom
Burundi	BDI	GeoNames
Cambodia	KHM	GeoNames
Cameroon	CMR	TomTom
Canada	CAN	TomTom
Cape Verde	CPV	GeoNames
Cayman Islands	CYM	GeoNames
Central African Republic	CAF	GeoNames
Chad	TCD	GeoNames
Chile	CHL	TomTom

Country Name	ISO 3166 Country Code	Data Source
China	CHN	GeoNames
Christmas Island	CXR	GeoNames
Cocos (Keeling) Islands	CCK	GeoNames
Colombia	COL	GeoNames
Comoros	COM	GeoNames
Congo	COG	TomTom
Congo, Democratic Republic of the	COD	TomTom
Cook Islands	COK	GeoNames
Costa Rica	CRI	GeoNames
Cote d'Ivoire	CIV	GeoNames
Croatia (local name: Hrvatska)	HRV	TomTom
Cuba	CUB	GeoNames
Curaçao	CUW	GeoNames
Cyprus	CYP	GeoNames

Country Name	ISO 3166 Country Code	Data Source
Czech Republic	CZE	TomTom
Denmark	DNK	GeoNames
Djibouti	DJI	GeoNames
Dominica	DMA	GeoNames
Dominican Republic	DOM	GeoNames
Ecuador	ECU	GeoNames
Egypt	EGY	TomTom
El Salvador	SLV	GeoNames
Equatorial Guinea	GNQ	GeoNames
Eritrea	ERI	GeoNames
Estonia	EST	TomTom
Ethiopia	ETH	GeoNames
Falkland Islands (Malvinas)	FLK	GeoNames
Faroe Islands	FRO	GeoNames

Country Name	ISO 3166 Country Code	Data Source
Fiji	FJI	GeoNames
Finland	FIN	TomTom
France	FRA	TomTom
French Guiana	GUF	TomTom
French Polynesia	PYF	GeoNames
French Southern Territories	ATF	GeoNames
Gabon	GAB	TomTom
Gambia	GMB	GeoNames
Georgia	GEO	GeoNames
Germany	DEU	TomTom
Ghana	GHA	TomTom
Gibraltar	GIB	GeoNames
Greece	GRC	TomTom
Greenland	GRL	GeoNames

Country Name	ISO 3166 Country Code	Data Source
Grenada	GRD	GeoNames
Guadeloupe	GLP	TomTom
Guam	GUM	GeoNames
Guatemala	GTM	GeoNames
Guernsey	GGY	GeoNames
Guinea	GIN	GeoNames
Guinea-Bissau	GNB	GeoNames
Guyana	GUY	GeoNames
Haiti	HTI	GeoNames
Heard and McDonald Islands	HMD	GeoNames
Honduras	HND	GeoNames
Hong Kong	HKG	TomTom
Hungary	HUN	TomTom
Iceland	ISL	GeoNames

Country Name	ISO 3166 Country Code	Data Source
India	IND	GeoNames
Indonesia	IDN	TomTom
Iran (Islamic Republic of)	IRN	GeoNames
Iraq	IRQ	GeoNames
Ireland	IRL	TomTom
Isle of Man	IMN	GeoNames
Israel	ISR	GeoNames
Italy	ITA	TomTom
Jamaica	JAM	GeoNames
Japan	JPN	GeoNames
Jersey	JEY	GeoNames
Jordan	JOR	GeoNames
Kazakhstan	KAZ	GeoNames
Kenya	KEN	TomTom

Country Name	ISO 3166 Country Code	Data Source
Kiribati	KIR	GeoNames
Korea, Democratic People's Republic of	PRK	GeoNames
Korea, Republic of	KOR	GeoNames
Kuwait	KWT	TomTom
Kyrgyzstan	KGZ	GeoNames
Lao People's Democratic Republic	LAO	GeoNames
Latvia	LVA	TomTom
Lebanon	LBN	GeoNames
Lesotho	LSO	TomTom
Liberia	LBR	GeoNames
Libyan Arab Jamahiriya	LBY	GeoNames
Liechtenstein	LIE	GeoNames
Lithuania	LTU	TomTom
Luxembourg	LUX	TomTom

Country Name	ISO 3166 Country Code	Data Source
Macao	MAC	TomTom
Macedonia, the former Yugoslav Republic of	MKD	TomTom
Madagascar	MDG	GeoNames
Malawi	MWI	TomTom
Malaysia	MYS	TomTom
Maldives	MDV	GeoNames
Mali	MLI	TomTom
Malta	MLT	TomTom
Marshall Islands	MHL	GeoNames
Martinique	MTQ	GeoNames
Mauritania	MRT	TomTom
Mauritius	MUS	TomTom
Mayotte	MYT	GeoNames
Mexico	MEX	TomTom

Country Name	ISO 3166 Country Code	Data Source
Micronesia, Federated States of	FSM	GeoNames
Moldova, Republic of	MDA	TomTom
Monaco	MCO	GeoNames
Mongolia	MNG	GeoNames
Montenegro	MNE	TomTom
Montserrat	MSR	GeoNames
Morocco	MAR	TomTom
Mozambique	MOZ	TomTom
Myanmar	MMR	GeoNames
Namibia	NAM	GeoNames
Nauru	NRU	GeoNames
Nepal	NPL	GeoNames
Netherlands	NLD	TomTom
Netherlands Antilles	ANT	Pitney Bowes

Country Name	ISO 3166 Country Code	Data Source
New Caledonia	NCL	GeoNames
New Zealand	NZL	GeoNames
Nicaragua	NIC	GeoNames
Niger	NER	TomTom
Nigeria	NGA	TomTom
Niue	NIU	GeoNames
Norfolk Island	NFK	GeoNames
Northern Mariana Islands	MNP	GeoNames
Norway	NOR	TomTom
Oman	OMN	TomTom
Pakistan	PAK	GeoNames
Palau	PLW	GeoNames
Palestinian Territory, occupied	PSE	GeoNames
Panama	PAN	GeoNames

Country Name	ISO 3166 Country Code	Data Source
Papua New Guinea	PNG	GeoNames
Paraguay	PRY	GeoNames
Peru	PER	GeoNames
Philippines	PHL	TomTom
Pitcairn	PCN	GeoNames
Poland	POL	TomTom
Portugal	PRT	TomTom
Puerto Rico	PRI	GeoNames
Qatar	QAT	TomTom
Reunion	REU	TomTom
Romania	ROU	TomTom
Russian Federation	RUS	TomTom
Rwanda	RWA	GeoNames
Saint Barthélemy	BLM	GeoNames

Country Name	ISO 3166 Country Code	Data Source
Saint Helena, Ascension and Tristan Da Cunha	SHN	GeoNames
Saint Kitts and Nevis	KNA	GeoNames
Saint Lucia	LCA	GeoNames
Saint Martin (French part)	MAF	GeoNames
Saint Pierre and Miquelon	SPM	GeoNames
Saint Vincent and the Grenadines	VCT	GeoNames
Samoa	WSM	GeoNames
San Marino	SMR	TomTom
Sao Tome and Principe	STP	GeoNames
Saudi Arabia	SAU	TomTom
Senegal	SEN	TomTom
Serbia	SRB	TomTom
Seychelles	SYC	GeoNames
Sierra Leone	SLE	GeoNames

Country Name	ISO 3166 Country Code	Data Source
Singapore	SGP	TomTom
Sint Maarten (Dutch part)	SXM	GeoNames
Slovakia (Slovak Republic)	SVK	TomTom
Slovenia	SVN	TomTom
Solomon Islands	SLB	GeoNames
Somalia	SOM	GeoNames
South Africa	ZAF	GeoNames
South Georgia and the South Sandwich Islands	SGS	GeoNames
Spain	ESP	TomTom
Sri Lanka	LKA	GeoNames
Sudan	SDN	GeoNames
Suriname	SUR	GeoNames
Svalbard and Jan Mayen Islands	SJM	GeoNames
Swaziland	SWZ	TomTom

Country Name	ISO 3166 Country Code	Data Source
Sweden	SWE	TomTom
Switzerland	CHE	TomTom
Syrian Arab Republic	SYR	GeoNames
Taiwan	TWN	TomTom
Tajikistan	TJK	GeoNames
Tanzania, United Republic of	TZA	TomTom
Thailand	THA	TomTom
Timor-Leste	TLS	GeoNames
Togo	TGO	TomTom
Tokelau	TKL	GeoNames
Tonga	TON	GeoNames
Trinidad and Tobago	TTO	GeoNames
Tunisia	TUN	GeoNames
Turkey	TUR	TomTom

Country Name	ISO 3166 Country Code	Data Source
Turkmenistan	TKM	GeoNames
Turks and Caicos Islands	TCA	GeoNames
Tuvalu	TUV	GeoNames
Uganda	UGA	TomTom
Ukraine	UKR	TomTom
United Arab Emirates	ARE	TomTom
United Kingdom	GBR	TomTom
United States	USA	GeoNames
United States Minor Outlying Islands	UMI	GeoNames
Uruguay	URY	TomTom
Uzbekistan	UZB	GeoNames
Vanuatu	VUT	GeoNames
Vatican City State (Holy See)	VAT	GeoNames
Venezuela	VEN	GeoNames

Country Name	ISO 3166 Country Code	Data Source
Vietnam	VNM	GeoNames
Virgin Islands (British)	VGB	GeoNames
Virgin Islands (U.S.)	VIR	GeoNames
Wallis and Futuna Islands	WLF	GeoNames
Western Sahara	ESH	GeoNames
Yemen	YEM	GeoNames
Zambia	ZMB	TomTom
Zimbabwe	ZWE	GeoNames

Country Postal Data Coverage

The following table provides a list of the countries that have postal data coverage.

Country Name	ISO 3166 Country Code	Data Source
ALGERIA	DZA	Pitney Bowes
AMERICAN SAMOA	ASM	GeoNames
ANDORRA	AND	TomTom
ARGENTINA	ARG	GeoNames

Country Name	ISO 3166 Country Code	Data Source
ARMENIA	ARM	Pitney Bowes
AUSTRALIA	AUS	GeoNames
AUSTRIA	AUT	TomTom
AZERBAIJAN	AZE	Pitney Bowes
BAHRAIN	BHR	Pitney Bowes
BANGLADESH	BGD	GeoNames
BELARUS	BLR	Pitney Bowes
BELGIUM	BEL	TomTom
BERMUDA	BMU	Pitney Bowes
BOSNIA AND HERZEGOVINA	BIH	Pitney Bowes
BRAZIL	BRA	TomTom
BRITISH INDIAN OCEAN TERRITORY	IOT	Pitney Bowes
BRUNEI DARUSSALAM	BRN	Pitney Bowes
BULGARIA	BGR	GeoNames

Country Name	ISO 3166 Country Code	Data Source
CAMBODIA	KHM	Pitney Bowes
CANADA	CAN	TomTom
CAPE VERDE	CPV	Pitney Bowes
CHILE	CHL	Pitney Bowes
CHINA	CHN	Pitney Bowes
CHRISTMAS ISLAND	CXR	Pitney Bowes
COCOS (KEELING) ISLANDS	CCK	Pitney Bowes
COSTA RICA	CRI	Pitney Bowes
CROATIA (LOCAL NAME: HRVATSKA)	HRV	GeoNames
CUBA	CUB	Pitney Bowes
CYPRUS	CYP	Pitney Bowes
CZECH REPUBLIC	CZE	TomTom
DENMARK	DNK	GeoNames
DOMINICAN REPUBLIC	DOM	GeoNames

Country Name	ISO 3166 Country Code	Data Source
ECUADOR	ECU	Pitney Bowes
EGYPT	EGY	Pitney Bowes
EL SALVADOR	SLV	Pitney Bowes
ESTONIA	EST	TomTom
ETHIOPIA	ETH	Pitney Bowes
FALKLAND ISLANDS (MALVINAS)	FLK	Pitney Bowes
FAROE ISLANDS	FRO	GeoNames
FINLAND	FIN	TomTom
FRANCE	FRA	TomTom
FRENCH GUIANA	GUF	GeoNames
FRENCH POLYNESIA	PYF	Pitney Bowes
GEORGIA	GEO	Pitney Bowes
GERMANY	DEU	TomTom
GREECE	GRC	TomTom

Country Name	ISO 3166 Country Code	Data Source
GREENLAND	GRL	GeoNames
GUADELOUPE	GLP	GeoNames
GUAM	GUM	GeoNames
GUATEMALA	GTM	GeoNames
GUERNSEY	GGY	GeoNames
GUINEA	GIN	Pitney Bowes
GUINEA-BISSAU	GNB	Pitney Bowes
HAITI	HTI	Pitney Bowes
HONDURAS	HND	Pitney Bowes
HUNGARY	HUN	GeoNames
ICELAND	ISL	GeoNames
INDIA	IND	GeoNames
INDONESIA	IDN	TomTom
IRAN (ISLAMIC REPUBLIC OF)	IRN	Pitney Bowes

Country Name	ISO 3166 Country Code	Data Source
IRAQ	IRQ	Pitney Bowes
IRELAND	IRL	Pitney Bowes
ISLE OF MAN	IMN	GeoNames
ISRAEL	ISR	Pitney Bowes
ITALY	ITA	TomTom
JAMAICA	JAM	Pitney Bowes
JAPAN	JPN	GeoNames
JERSEY	JEY	GeoNames
JORDAN	JOR	Pitney Bowes
KAZAKHSTAN	KAZ	Pitney Bowes
KENYA	KEN	Pitney Bowes
KOREA, REPUBLIC OF	KOR	Pitney Bowes
KUWAIT	KWT	Pitney Bowes
KYRGYZSTAN	KGZ	Pitney Bowes

Country Name	ISO 3166 Country Code	Data Source
LAO PEOPLE'S DEMOCRATIC REPUBLIC	LAO	Pitney Bowes
LATVIA	LVA	TomTom
LEBANON	LBN	Pitney Bowes
LESOTHO	LSO	Pitney Bowes
LIBERIA	LBR	Pitney Bowes
LIECHTENSTEIN	LIE	GeoNames
LITHUANIA	LTU	TomTom
LUXEMBOURG	LUX	GeoNames
MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF	MKD	GeoNames
MADAGASCAR	MDG	Pitney Bowes
MALAYSIA	MYS	GeoNames
MALDIVES	MDV	Pitney Bowes
MALTA	MLT	Pitney Bowes
MARSHALL ISLANDS	MHL	GeoNames

Country Name	ISO 3166 Country Code	Data Source
MARTINIQUE	MTQ	GeoNames
MAYOTTE	MYT	GeoNames
MEXICO	MEX	TomTom
MICRONESIA, FEDERATED STATES OF	FSM	Pitney Bowes
MOLDOVA, REPUBLIC OF	MDA	GeoNames
MONACO	MCO	GeoNames
MONGOLIA	MNG	Pitney Bowes
MOROCCO	MAR	TomTom
MOZAMBIQUE	MOZ	Pitney Bowes
MYANMAR	MMR	Pitney Bowes
NEPAL	NPL	Pitney Bowes
NETHERLANDS	NLD	TomTom
NEW CALEDONIA	NCL	Pitney Bowes
NEW ZEALAND	NZL	GeoNames

Country Name	ISO 3166 Country Code	Data Source
NICARAGUA	NIC	Pitney Bowes
NIGER	NER	Pitney Bowes
NIGERIA	NGA	Pitney Bowes
NORFOLK ISLAND	NFK	Pitney Bowes
NORTHERN MARIANA ISLANDS	MNP	GeoNames
NORWAY	NOR	TomTom
OMAN	OMN	Pitney Bowes
PAKISTAN	PAK	GeoNames
PALAU	PLW	Pitney Bowes
PAPUA NEW GUINEA	PNG	Pitney Bowes
PARAGUAY	PRY	Pitney Bowes
PHILIPPINES	PHL	GeoNames
PITCAIRN	PCN	Pitney Bowes
POLAND	POL	TomTom

Country Name	ISO 3166 Country Code	Data Source
PORTUGAL	PRT	TomTom
PUERTO RICO	PRI	GeoNames
REUNION	REU	GeoNames
ROMANIA	ROU	Pitney Bowes
RUSSIAN FEDERATION	RUS	TomTom
SAINT HELENA, ASCENSION AND TRISTAN DA CUNHA	SHN	Pitney Bowes
SAINT PIERRE AND MIQUELON	SPM	GeoNames
SAN MARINO	SMR	TomTom
SAUDI ARABIA	SAU	Pitney Bowes
SENEGAL	SEN	Pitney Bowes
SINGAPORE	SGP	TomTom
SLOVAKIA (SLOVAK REPUBLIC)	SVK	TomTom
SLOVENIA	SVN	TomTom
SOUTH AFRICA	ZAF	GeoNames

Country Name	ISO 3166 Country Code	Data Source
SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS	SGS	Pitney Bowes
SPAIN	ESP	TomTom
SRI LANKA	LKA	GeoNames
SUDAN	SDN	Pitney Bowes
SWAZILAND	SWZ	Pitney Bowes
SWEDEN	SWE	GeoNames
SWITZERLAND	CHE	TomTom
TAIWAN	TWN	TomTom
TAJIKISTAN	TJK	Pitney Bowes
THAILAND	THA	TomTom
TIMOR-LESTE	TLS	Pitney Bowes
TUNISIA	TUN	Pitney Bowes
TURKEY	TUR	TomTom
TURKMENISTAN	TKM	Pitney Bowes

Country Name	ISO 3166 Country Code	Data Source
TURKS AND CAICOS ISLANDS	TCA	Pitney Bowes
UKRAINE	UKR	Pitney Bowes
UNITED ARAB EMIRATES	ARE	Pitney Bowes
UNITED KINGDOM	GBR	TomTom
UNITED STATES	USA	TomTom
URUGUAY	URY	Pitney Bowes
UZBEKISTAN	UZB	Pitney Bowes
VATICAN CITY STATE (HOLY SEE)	VAT	TomTom
VENEZUELA	VEN	Pitney Bowes
VIET NAM	VNM	Pitney Bowes
VIRGIN ISLANDS (U.S.)	VIR	GeoNames
WALLIS AND FUTUNA ISLANDS	WLF	Pitney Bowes
WESTERN SAHARA	ESH	Pitney Bowes
ZAMBIA	ZMB	Pitney Bowes

Republic of Yemen (YEM)

This section defines the supported geocoding datasets, operations, and input and output field information for the Republic of Yemen.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for the Republic of Yemen.

Note: Custom User Dictionaries are not supported.

Database	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom Arabic, English	Yes	Yes	Yes	Yes	No	No	No

Supported Operations

The following operations are supported for the Republic of Yemen:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 15, Hadah Street **Sana'a**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city, town or locality. Optional.
areaName4	String	Not used.
postalCode	String	Not used - the Republic of Yemen does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For the Republic of Yemen, the country code is YEM. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to the Republic of Yemen.

Parsed AddressOutput Fields

The following table lists the parsed address fields returned for a candidate located in the Republic of Yemen.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city, town or locality.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For the Republic of Yemen, the country code is YEM.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	The Republic of Yemen does not have any custom output fields.

Zambia (ZMB)

This section defines the supported geocoding datasets, operations, and input and output field information for Zambia.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Zambia.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Zambia:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 25 Chisokone Rd. **10101 Ndola**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Optional.
areaName4	String	Not used.
postalCode	String	Specifies the 5-digit postal code. The first two digits indicate the routing province, the third the routing area, the fourth the delivery area and the final digit indicates the method of delivery. Optional.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Zambia, the country code is ZMB. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][postal_code][area]

Where:

- *[address_number]* is optional.

- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[postal_code]* is the postal code.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality.
- Either the *[area]* or *[postal_code]* is required.

For best results, put a comma between the street information and the last address line information.

Custom Options

There are no options specific to Zambia.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Zambia.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

> **Note:** The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	The 5-digit postal code.

Field Name	Description
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Zambia, the country code is ZMB.
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Zambia does not have any custom output fields.

Zimbabwe (ZWE)

This section defines the supported geocoding datasets, operations, and input and output field information for Zimbabwe.

Supported Geocoding Datasets

The following table lists the supported geocoding dataset(s) with the available geocoding levels for Zimbabwe.

Note: Custom User Dictionaries are not supported.

Geocoding Dataset	City Centroid	Suburb/Village Centroid	Postal Centroid	Street Centroid	Interpolated Street Address	Point-level Address	Point of Interest
TomTom English	Yes	Yes	No	Yes	No	No	No

Supported Operations

The following operations are supported for Zimbabwe:

- **Geocoding**—Takes one or more addresses as input and returns latitude/longitude coordinates and other information.
- **Reverse Geocoding**—Takes one or more latitude and longitude coordinates as input and returns the address of the location.

Input Fields

The input address may contain some or all of the following address elements.

Field Name	Type	Description
PlaceName	String	Specifies the building name, place name, Point of Interest (POI), company or firm name associated with the input address. Optional.

Field Name	Type	Description
MainAddressLine	String	**Single Line Input**—If no other address field is populated, then the `MainAddressLine` entry will be treated as a single line input. Single line input can consist of multiple input address fields; these should be entered in the typical address order for the country. For more details, refer to the section "Single Line Input" below. **Street Address**—If the post address components (city, postalCode, etc.) are provided separately or in the lastLine field, then the contents of `MainAddressLinemainAddress` will be treated as the street address part and can include company name, house number, building names and street names. Optional. **Street Intersection Input**—To enter an intersection, specify the two street names separated by a double ampersand (&&).
lastLine	String	The last line of the address. Optional. For example: 2 Manchester Rd **Harare**
areaName1	String	Not used.
areaName2	String	Not used.
areaName3	String	Specifies the city or town. Required.
areaName4	String	Not used.
postalCode	String	Not used - Zimbabwe does not have a postal code system.
country	String	The three-letter ISO 3166-1 Alpha-3 country code. For Zimbabwe, the country code is ZWE. Required for forward geocoding.

Single Line Input

Instead of entering each address component in separate fields, you can enter the entire address in the `mainAddress` input field with the address elements ordered as follows:

[address_number][street_info][area]

Where:

- *[address_number]* is optional.
- *[street_info]* consists of the street name, street type and any pre- or post-directional information (e.g. East, West, etc.). Optional.
- *[area]* is the city only, or city plus supporting information, such as state, province, locality. Required.

For best results, put a comma between the street information and the area information.

Custom Options

There are no options specific to Zimbabwe.

Parsed Address Output Fields

The following table lists the parsed address fields returned for a candidate located in Zimbabwe.

To return the Parsed Address fields using Management Console, select one of the following options:

- To return the Parsed Address fields: In the **Country Filters** dropdown menu, select **Global Defaults**. Then, on the **Return Values** tab, select **Parsed Address**.
- To return all output fields: In the **Country Filters** dropdown, select **Global Defaults**. Then, on the **Return Values** tab, select **Return all available information**.

  Note: The `placeName, addressNumber, unitType` and `unitValue` field values are only returned when a geocoding dataset that supports street address interpolation is installed.

Field Name	Description
mainAddressLine	The street address which may include company name, house number, building names and street names.
addressLastLine	The last line of the address.
placeName	The building name, place name, Point of Interest (POI), company or firm name associated with the address.
areaName1	Not used.
areaName2	Not used.
areaName3	The city or town.
areaName4	Not used.
postCode1	Not used.
postCode2	Not used.
country	The three-letter ISO 3166-1 Alpha-3 country code. For Zimbabwe, the country code is ZWE.

Field Name	Description
addressNumber	The address number.
streetName	The street or road name.
unitType	The unit type such as APT, STE, etc.
unitValue	The unit value/number, such as "3B".
customFields	Zimbabwe does not have any custom output fields.

B - Result Codes

In this section

Match and Location Codes for USA 682
Global Result Codes 708

Match and Location Codes for USA

Match Codes

The geocoder returns match codes indicating the address portions that matched or did not match to the database.

If the geocoder cannot make a match, the match code begins with "E" and the remaining digits indicate why the address did not match. For a description of the "Ennn" codes, see **"Ennn" Match Codes for No Match** on page 687. The digits do not specifically refer to which address elements did not match, but rather why the address did not match.

The following table contains the match code values. For a description of the hex digits for the match codes, see **Match Hex Digits** on page 685.

Code	Description
Ahh	Same as "Shh", but indicates match to an alias name record or an alternate record.
Chh	The street address did not match, but the geocoder located a street segment based on the input ZIP Code or city.
D00	Matched to a small town with P.O. Box or General Delivery only.
Gxx	Matched to an Auxiliary file.
Hhh	The house number was changed.
Jhh	Matched to a user-defined dictionary.

Code	Description
Nxx	Matched to the nearest address. Used with reverse geocoding. The following are the only values for N: **NS0** Nearest street center match (nearest street segment interpolated) **NS1** Nearest unranged street segment **NP0** Nearest point address **NX0** Nearest intersection
P	Successful reverse APN lookup.
Qhh	Matched to USPS range records with unique ZIP Codes. CASS rules prohibit altering an input ZIP if it matches a unique ZIP Code value.
Rhh	Matched to a ranged address.
Shh	Matched to USPS data. This is considered the best address match, because it matched directly against the USPS list of addresses. "S" is returned for a small number of addresses when the matched address has a blank ZIP + 4.
Thh	Matched to a street segment record. Street segment records do not contain ZIP Code information. If you enter a ZIP Code, the application returns the ZIP Code you entered. If the input city and state has only one ZIP Code, the application returns that ZIP Code.
Uhh	Matched to USPS data but cannot resolve the ZIP + 4 code without the firm name or other information. CASS mode returns an "E023" (multiple match) error code.
Xhhh	Matched to an intersection of two streets, for example, "Clay St & Michigan Ave." The first hex digit refers to the last line information, the second hex digit refers to the first street in the intersection, and the third hex digit refers to the second street in the intersection. **Note:** The USPS does not allow intersections as a valid deliverable address.
Yhhh	Same as "Xhhh", but an alias name record was used for one or both streets.

Code	Description
Z[1]	No address given, but verified the provided ZIP Code .

[1] Zh may be returned if **Output corrected last line** is enabled.

Match Hex Digits

The following table contains the description of the hex digits for the match code values.

Code	In first hex position means:	In second and third hex position means:
0	No change in last line.	No change in address line.
1	ZIP Code changed.	Street type changed.
2	City changed.	Predirectional changed.
3	City and ZIP Code changed.	Street type and predirectional changed.
4	State changed.	Postdirectional changed.
5	State and ZIP Code changed.	Street type and postdirectional changed.
6	State and City changed.	Predirectional and postdirectional changed.
7	State, City, and ZIP Code changed.	Street type, predirectional, and postdirectional changed.
8	ZIP + 4 changed.	Street name changed.
9	ZIP and ZIP + 4 changed.	Street name and street type changed.
A	City and ZIP + 4 changed.	Street name and predirectional changed.
B	City, ZIP, and ZIP + 4 changed.	Street name, street type, and predirectional changed.
C	State and ZIP + 4 changed.	Street name and postdirectional changed.

Code	In first hex position means:	In second and third hex position means:
D	State, ZIP, and ZIP + 4 changed.	Street name, street type, and postdirectional changed.
E	State, City, and ZIP + 4 changed.	Street name, predirectional, and postdirectional changed.
F	State, City, ZIP, and ZIP + 4 changed.	Street name, street type, predirectional, and postdirectional changed.

"Ennn" Match Codes for No Match

The following table describes the values returned when the application cannot find a match or an error occurs.

Code	"nnn" Value	Description
Ennn[2]		Indicates an error, or no match. This can occur when the address entered does not exist in the database, or the address is badly formed and cannot be parsed correctly. The last three digits of an error code indicate which parts of an address the application could not match to the database.
	nnn = 000	No match made.
	nnn = 001	Low level error.
	nnn = 002	Could not find data file.
	nnn = 003	Incorrect GSD file signature or version ID.
	nnn = 004	GSD file out of date. Only occurs in CASS mode.
	nnn = 010	No city and state or ZIP Code found.
	nnn = 011	Input ZIP not in the directory.
	nnn = 012	Input city not in the directory.
	nnn = 013	Input city not unique in the directory.
	nnn = 014	Out of licensed area. Only occurs if using Group1 licensing technology.
	nnn = 015	Record count is depleted and license has expired.
	nnn = 020	No matching streets found in directory.
	nnn = 021	No matching cross streets for an intersection match.
	nnn = 022	No matching segments.

Code	"nnn" Value	Description
	nnn = 023	Unresolved match.
	nnn = 024	No matching segments. (Same as 022.)
	nnn = 025	Too many possible cross streets for intersection matching.
	nnn = 026	No address found when attempting a multiline match.
	nnn = 027	Invalid directional attempted.
	nnn = 028	Record also matched EWS data, therefore the application denied the match.
	nnn = 029	No matching range, single street segment found.
	nnn = 030	No matching range, multiple street segments found.

Correct Lastline Match Codes

As mentioned in **Correct Lastline** on page 590, when enabled, **Output corrected last line** corrects elements of the output lastline, providing a good ZIP Code or close match on the soundex even if the address would not match or was non-existent.

Code	Value	Description
Zh		No address given, but verified the provided ZIP Code.
	h = 0	No change in lastline.
	h = 1	ZIP Code changed.
	h = 2	City changed.
	h = 3	City and ZIP Code changed.
	h = 4	State changed.

[2] Ennn may be returned if **Output corrected last line** is enabled. For more information, see **Correct Lastline Match Codes** on page 688.

Code	Value	Description
	h = 5	State and ZIP Code changed.
	h = 6	State and City changed.
	h = 7	State, City, and ZIP Code changed.
	h = 8	ZIP + 4 changed.
	h = 9	ZIP and ZIP + 4 changed.
	h = A	City and ZIP + 4 changed.
	h = B	City, ZIP, and ZIP + 4 changed.
	h = C	State and ZIP + 4 changed.
	h = D	State, ZIP, and ZIP + 4 changed.
	h = E	State, City, and ZIP + 4 changed.
Ehnn		Indicates an error, or no match. This can occur when the address entered does not exist in the database, or the address is badly formed and cannot be parsed correctly. The second digit of the error code is a hex digit which details the changes that were made to the last line information to correct the lastline. The last two digits of an error code indicate which parts of an address the application could not match to the database.
	h = 0	No change in lastline.
	h = 1	ZIP Code changed.
	h = 2	City changed.
	h = 3	Record also matched EWS data, therefore the application denied the match.
	h = 4	State changed.
	h = 5	State and ZIP Code changed.

Code	Value	Description
	`h = 6`	State and City changed.
	`h = 7`	State, City, and ZIP Code changed.
	`h = 8`	ZIP + 4 changed.
	`h = 9`	ZIP and ZIP + 4 changed.
	`h = A`	City and ZIP + 4 changed.
	`h = B`	City, ZIP, and ZIP + 4 changed.
	`h = C`	State and ZIP + 4 changed.
	`h = D`	State, ZIP, and ZIP + 4 changed.
	`h = E`	State, City, and ZIP + 4 changed.
	`nn = 00`	No match made.
	`nn = 01`	Low level error.
	`nn = 02`	Could not find data file.
	`nn = 03`	Incorrect GSD file signature or version ID.
	`nn = 04`	GSD file out of date. Only occurs in CASS mode.
	`nn = 10`	No city and state or ZIP Code found.
	`nn = 11`	Input ZIP Code not in the directory.
	`nn = 12`	Input city not in the directory.
	`nn = 13`	Input city not unique in the directory.
	`nn = 14`	Out of licensed area. Only occurs if using Group1 licensing technology.

Code	Value	Description
	nn = 15	Record count is depleted and license has expired.
	nn = 20	No matching streets found in directory.
	nn = 21	No matching cross streets for an intersection match.
	nn = 22	No matching segments.
	nn = 23	Unresolved match.
	nn = 24	No matching segments. (Same as 022.)
	nn = 25	Too many possible cross streets for intersection matching.
	nn = 26	No address found when attempting a multiline match.
	nn = 27	Invalid directional attempted.
	nn = 28	Record also matched EWS data, therefore the application denied the match.
	nn = 29	No matching range, single street segment found
	nn = 30	No matching range, multiple street segments found

Location Codes

Location codes indicate the locational accuracy of the assigned geocode. Note that an accurately placed candidate is not necessarily an ideal candidate. Examine the match codes and/or result codes in addition to location codes to best evaluate the overall quality of the candidate.

Address Location Codes

Location codes that begin with an "A" are address location codes. Address location codes indicate a geocode made directly to a street network segment (or two segments, in the case of an intersection).

An address location code has the following characters.

1st character	Always an "A" indicating an address location.	
2nd character	May be one of the following	
	C	Interpolated address point location
	G	Auxiliary file data location
	I	Application infers the correct segment from the candidate records
	P	Point-level data location
	R	Location represents a ranged address
	S	Location on a street range
	X	Location on an intersection of two streets
3rd and 4th character	Digit indicating other qualities about the location.	

Address Location Code Descriptions

Code		Description
AGn		Indicates an auxiliary file for a geocode match where "n" is one of the following values:
	n = 0	The geocode represents the center of a parcel or building.
	n = 1	The geocode is an interpolated address along a segment.
	n = 2	The geocode is an interpolated address along a segment, and the side of the street cannot be determined from the data provided in the auxiliary file record.
	n = 3	The geocode is the midpoint of the street segment.
APnn		Indicates a point-level geocode match representing the center of a parcel or building, where "nn" is one of the following values:
	nn = 00	User Dictionary centroid. Geocode returned by a User Dictionary.
	nn = 02	Parcel centroid Indicates the center of an accessor's parcel (tract or lot) polygon. When the center of an irregularly shaped parcel falls outside of its polygon, the centroid is manually repositioned to fall inside the polygon as closely as possible to the actual center.
	nn = 04	Address points Represents field-collected GPS points with field-collected address data.

Code	Description
nn = 05	Structure centroid Indicates the center of a building footprint polygon, where the building receives mail or has telephone service. Usually a residential address consists of a single building. For houses with outbuildings (detached garages, shed, barns, etc.), only the residences have a structure point. Condominiums and duplexes have multiple points for each building. Larger buildings, such as apartment complexes, typically receive mail at one address for each building and therefore individual apartments are not represented as discrete structure points. Shopping malls, industrial complexes, and academic or medical center campuses where one building accepts mail for the entire complex are represented as one point. When addresses are assigned to multiple buildings within one complex, each addressed structure is represented by a point. If the center of a structure falls outside of its polygon, the center is manually repositioned to fall inside the polygon.
nn = 07	Manually placed Address points are manually placed to coincide with the midpoint of a parcel's street frontage at a distance from the center line.
nn = 08	Front door point Represents the designated primary entrance to a building. If a building has multiple entrances and there is no designated primary entrance or the primary entrance cannot readily be determined, the primary entrance is chosen based on proximity to the main access street and availability of parking.
nn = 09	Driveway offset point Represents a point located on the primary access road (most commonly a driveway) at a perpendicular distance of between 33-98 feet (10-30 meters) from the main roadway.

Code	Description
nn = 10	Street access point Represents the primary point of access from the street network. This address point type is located where the driveway or other access road intersects the main roadway.
nn = 21	Base parcel point When unable to match to an input unit number, or when the unit number is missing from an address location with multiple units, the "base" parcel information is returned, the address is not standardized to a unit number, and additional information, such as an Assessor's Parcel Number, is not returned.
nn = 22	Backfill address point The precise parcel centroid is unknown. The address location assigned is based on two known parcel centroids.
nn = 23	Virtual address point The precise parcel centroid is unknown. The address location assigned is relative to a known parcel centroid and a street segment end point.
nn = 24	Interpolated address point The precise parcel centroid is unknown. The address location assigned is based on street segment end points.
AIn	The correct segment is inferred from the candidate records at match time.
ASn	House range address geocode. This is the most accurate geocode available.
AIn and ASn, and ACnh share the same values for the 3rd character "n" as follows:	
n = 0	Best location.

Code		Description
	`n = 1`	Street side is unknown. The Census FIPS Block ID is assigned from the left side; however, there is no assigned offset and the point is placed directly on the street.
	`n = 2`	Indicates one or both of the following: • The address is interpolated onto a TIGER segment that did not initially contain address ranges. • The original segment name changed to match the USPS spelling. This specifically refers to street type, predirectional, and postdirectional. **Note:** Only the second case is valid for non-TIGER data because segment range interpolation is only completed for TIGER data.
	`n = 3`	Both 1 and 2.
	`n = 7`	Placeholder. Used when starting and ending points of segments contain the same value and shape data is not available.
`ACnh`		Indicates a point-level geocode that is interpolated between 2 parcel centroids (points), a parcel centroid and a street segment endpoint, or 2 street segment endpoints.
	The `ACnh` 4th character "h" values are as follows:	
	`h = 0`	Represents the interpolation between two points, both coming from User Dictionaries.
	`h = 1`	Represents the interpolation between two points. The low boundary came from a User Dictionary and the high boundary, from a non-User Dictionary.
	`h = 2`	Represents the interpolation between one point and one street segment end point, both coming from User Dictionaries.

Code	Description
h = 3	Represents the interpolation between one point (low boundary) and one street segment end point (high boundary). The low boundary came from a User Dictionary and the high boundary from a non-User Dictionary.
h = 4	Represents the interpolation between two points. The low boundary came from a non-User Dictionary and the high boundary from a User Dictionary.
h = 5	Represents the interpolation between two points, both coming from non-User Dictionaries.
h = 6	Represents the interpolation between one point (low boundary) and one street segment end point (high boundary). The low boundary came from a non-User Dictionary and the high boundary from a User Dictionary.
h = 7	Represents the interpolation between one point and one street segment end point and both came from non-User Dictionaries.
h = 8	Represents the interpolation between one street segment end point andone point, both coming from User Dictionaries.
h = 9	Represents the interpolation between one street segment end point (low boundary) andone point (high boundary). The low boundary came from a User Dictionary and the high boundary from a non-User Dictionary.
h = A	Represents the interpolation between two street segment end points, both coming from User Dictionaries.
h = B	Represents the interpolation between two street segment end points. The low boundary came from a User Dictionary and the high boundary from a non-User Dictionary.

Code		Description
	h = C	Represents the interpolation between one street segment end point (low boundary) and one point (high boundary). The low boundary came from a non-User Dictionary and the high boundary from a User Dictionary.
	h = D	Represents the interpolation between one street segment end point and one point, both coming from non-User Dictionary.
	h = E	Represents the interpolation between two street segment end points. The low boundary came from a non-User Dictionary and the high boundary from a User Dictionary.
	h = F	Represents the interpolation between two street segment end points, both coming from non-User Dictionaries.
ARn		Ranged address geocode, where "n" is one of the following:
	n = 1	The geocode is placed along a single street segment, midway between the interpolated location of the first and second input house numbers in the range.
	n = 2	The geocode is placed along a single street segment, midway between the interpolated location of the first and second input house numbers in the range, and the side of the street is unknown. The Census FIPS Block ID is assigned from the left side; however, there is no assigned offset and the point is placed directly on the street.
	n = 4	The input range spans multiple USPS segments. The geocode is placed on the endpoint of the segment which corresponds to the first input house number, closest to the end nearest the second input house number.
	n = 7	Placeholder. Used when the starting and ending points of the matched segment contain the same value and shape data is not available.

Code	Description
AXn	Intersection geocode, where "n" is one of the following:
n = 3	Standard single-point intersection computed from the center lines of street segments.
n = 8	Interpolated (divided-road) intersection geocode. Attempts to return a centroid for the intersection.

Street Centroid Location Codes

Location codes that begin with "C" are street centroid location codes. Street centroid location codes indicate the Census ID accuracy and the position of the geocode on the returned street segment. Street centroids may be returned if the street centroid fallback option is enabled and an address-level geocode could not be determined.

A street centroid location code has the following characters.

1st character	Always "C" indicating a location derived from a street segment.
2nd character	Census ID accuracy based on the search area used to obtain matching Street Segment.
3rd character	Location of geocode on the returned street segment.

The following table contains the values and descriptions for the location codes.

Character position	Code	Description
2nd Character		
	B	Block Group accuracy (most accurate). Based on input ZIP Code.
	T	Census Tract accuracy. Based on input ZIP Code.
	C	Unclassified Census accuracy. Normally accurate to at least the County level. Based on input ZIP Code.
	F	Unknown Census accuracy. Based on Finance area.
	P	Unknown Census accuracy. Based on input City.
3rd Character		
	C	Segment Centroid.

Character position	Code	Description
	L	Segment low-range end point.
	H	Segment high-range end point.

ZIP + 4 Centroid Location Codes

Location codes that begin with a "Z" are ZIP + 4 centroid location codes. ZIP + 4 centroids indicate a geocode could not be determined for the address, so the location of the center of the address's ZIP + 4 was returned instead. ZIP + 4 centroid location codes indicate the quality of two location attributes: Census ID accuracy and positional accuracy.

A ZIP + 4 centroid location code has the following characters.

1st character	Always "Z" indicating a location derived from a ZIP centroid.
2nd character	Census ID accuracy.
3rd character	Location type.
4th character	How the location and Census ID was defined. Provided for completeness, but may not be useful for most applications.

Character Position	Code	Description
2nd Character		
	B	Block Group accuracy (most accurate).
	T	Census Tract accuracy.
	C	Unclassified Census accuracy. Normally accurate to at least the County level.
3rd Character		
	5	Location of the Post Office that delivers mail to the address, a 5-digit ZIP Code centroid, or a location based upon locale (city). See the 4th character for a precise indication of locational accuracy.

Character Position	Code	Description
	7	Location based upon a ZIP + 2 centroid. These locations can represent a multiple block area in urban locations, or a slightly larger area in rural settings.
	9	Location based upon a ZIP + 4 centroid. These are the most accurate centroids and normally place the location on the correct block face. For a small number of records, the location may be the middle of the entire street on which the ZIP + 4 falls. See the 4th character for a precise indication of locational accuracy.
4th Character		
	A	Address matched to a single segment. Location assigned in the middle of the matched street segment, offset to the proper side of the street.
	a	Address matched to a single segment, but the correct side of the street is unknown. Location assigned in the middle of the matched street segment, offset to the left side of the street, as address ranges increase.
	B	Address matched to multiple segments, all segments have the same Block Group. Location assigned to the middle of the matched street segment with the most house number ranges within this ZIP + 4. Location offset to the proper side of the street.
	b	Same as methodology "B" except the correct side of the street is unknown. Location assigned in the middle of the matched street segment, offset to the left side of the street, as address ranges increase.

Character Position	Code	Description
	C	Address matched to multiple segments, with all segments having the same Census Tract. Returns the Block Group representing the most households in this ZIP + 4. Location assigned to t he middle of the matched street segment with the most house number ranges within this ZIP + 4. Location offset to the proper side of the street.
	c	Same as methodology "C" except the correct side of the street is unknown. Location assigned in the middle of the matched street segment, offset to the left side of the street, as address ranges increase.
	D	Address matched to multiple segments, with all segments having the same County. Returns the Block Group representing the most households in this ZIP + 4. Location assigned to the middle of the matched street segment with the most house number ranges within this ZIP + 4. Location offset to the proper side of the street.
	d	Same as methodology "D" except the correct side of the street is unknown. Location assigned in the middle of the matched street segment, offset to the left side of the street, as address ranges increase.
	E	Street name matched; no house ranges available. All matched segments have the same Block Group. Location placed on the segment closest to the center of the matched segments. In most cases, this is on the mid-point of the entire street.

Character Position	Code	Description
	F	Street name matched; no house ranges available. All matched segments have the same Census Tract. Location placed on the segment closest to the center of the matched segments. In most cases, this is on the mid-point of the entire street.
	G	Street name matched (no house ranges available). All matched segments have the same County. Location placed on the segment closest to the center of the matched segments. In most cases, this is on the mid-point of the entire street.
	H	Same as methodology "G", but some segments are not in the same County. Used for less than .05% of the centroids.
	I	Created ZIP + 2 cluster centroid as defined by methodologies "A", "a", "B", and "b". All centroids in this ZIP + 2 cluster have the same Block Group. Location assigned to the ZIP + 2 centroid.
	J	Created ZIP + 2 cluster centroid as defined by methodologies "A", "a", "B", "b", "C", and "c". All centroids in this ZIP + 2 cluster have the same Census Tract. Location assigned to the ZIP + 2 centroid.
	K	Created ZIP + 2 cluster centroid as defined by methodologies "A", "a", "B", "b", "C", "c", "D", and "d". Location assigned to the ZIP + 2 centroid.
	L	Created ZIP + 2 cluster centroid as defined by methodology "E". All centroids in this ZIP + 2 cluster have the same Block Group. Location assigned to the ZIP + 2 centroid.

Character Position	Code	Description
	M	Created ZIP+2 cluster centroid as defined by methodologies "E" and "F". All centroids in this ZIP + 2 cluster have the same Census Tract. Location assigned to the ZIP + 2 centroid.
	N	Created ZIP + 2 cluster centroid as defined by methodologies "E", "F", "G", and "H". Location assigned to the ZIP + 2 centroid.
	O	ZIP Code is obsolete and not currently used by the USPS. Historic location assigned.
	V	Over 95% of addresses in this ZIP Code are in a single Census Tract. Location assigned to the ZIP Code centroid.
	W	Over 80% of addresses in this ZIP Code are in a single Census Tract. Reasonable Census Tract accuracy. Location assigned to the ZIP Code centroid.
	X	Less than 80% of addresses in this ZIP Code are in a single Census Tract. Census ID is uncertain. Location assigned to the ZIP Code centroid.
	Y	Rural or sparsely populated area. Census code is uncertain. Location based upon the USGS places file.
	Z	P.O. Box or General Delivery addresses. Census code is uncertain. Location based upon the Post Office location that delivers the mail to that address.

Geographic Centroid Location Codes

Location codes that begin with "G" are geographic centroid location codes. Geographic centroids may be returned if the street centroid fallback option is enabled and an address-level geocode could not be determined. Geographic centroid location codes indicate the quality a city, county, or state centroid.

A geographic centroid location code has the following characters.

1st character	Always "G" indicating a location derived from a geographic centroid.
2nd character	Geographic area type. One of the following: **M** Municipality (for example, a city) **C** County **S** State

Global Result Codes

Forward Geocoding Result Codes

Result Code General Descriptions

The following table provides general descriptions for the returned result codes.

Result Code	Description
Street level geocoded candidates return a result code beginning with the letter **S**. The second character in the code indicates the positional accuracy of the resulting point for the geocoded record. For information on the specific S result codes supported for your country, see **Single Match 'S' Result Codes** on page 711.	
S8	Single match with the point located at either the single point associated with an address point candidate or at an address point candidate that shares the same house number. No interpolation is required.
S7	Single match with the point located at an interpolated point along a street segment. Both a point dictionary and a street segment dictionary must be available. Because known point data is available, the S7 interpolation is more accurate than an S5 result.
S6	Single match, point located at point ZIP centroid.
S5	Single match with the point located at a street address position. Because only street segment data is available, the interpolation is not as accurate as an S7 return The S5 code is followed by letters and dashes indicating match precision.
S4	Single match with the point located at a street centroid.
S3	Single match with the point located at a ZIP + 4® centroid. This is the same quality match as a Z3 result.
S2	Single match with the point located at a ZIP + 2 centroid. This is the same quality match as a Z2 result.
S1	Single match with the point located at a ZIP Code centroid. This is the same quality match as a Z1 result.

Result Code	Description
S0	Single match, however, no coordinates are available (this is a very rare occurrence).
SX	Single match with the point located at street intersection.
SC	Single match where the original point has been moved a specified distance (usually along a perpendicular line) toward or away from the associated street segment. This result code can be returned only when both a point dictionary and a street segment dictionary are available and when the centerline offset feature is used.

For **s** (street geocoded) result codes, eight additional characters describe how closely the address matches an address in the database. The characters appear in the order listed in the following table. Any non-matched components are represented by a dash.

For example, the result code S5--N-SCZA represents a single match that matched the street name, street suffix direction, town and postcode. The dashes indicate that there was no match on house number, street prefix direction, or thoroughfare type. The match came from the Street Range Address database. This record would be geocoded at the street address position of the match candidate.

H	House number match.
P	Street prefix (pre-directional). P is present if any of these conditions are satisfied: • The candidate pre-directional matches the input pre-directional. • The candidate post-directional matches the input pre-directional after pre- and post-directionals are swapped. • The input does not have a pre-directional.
N	Street name match.
T	Street/thoroughfare type match.
S	Street suffix (post-directional). S in result code is present if any of these conditions are satisfied: • The candidate post-directional matches the input post-directional. • The candidate pre-directional matches the input post-directional after pre- and post-directionals are swapped. • The input does not have a post-directional.
C	areaName3 match (this is usually the city or town).

Result Code	Description
Z	Postal code match.
A or U	Match to Address Dictionary or User Dictionary.

Matches in the **Z** category indicate that a match was made at the postcode level. A postcode match is returned in either of these cases:

- You specified to match to postal code centroids. The resulting point is located at the postal code centroid with the following possible accuracy levels.
- There is no street level match and you specified to fall back to postal code centroid.

Note: Refer to the section covering your country to locate the specific meanings of postCode1 & 2.

Z6	Z6 results are matched to a point ZIP centroid. Point ZIPs are 5-digit The Z6 code indicates that these special ZIPs are actual point locations, not an area. Point ZIPs include unique single sites, buildings, or organizations.
Z3	Z3 results are matched to ZIP + 4 or postCode2 centroid locations.
Z2	Z2 results are matched to ZIP + 2 or partial postCode2 centroid locations.
Z1	Z1 results are matched to ZIP Code or (postCode1) centroid locations.

Geographic level geocoded candidates return a result code beginning with the letter **G**. The numbers following the G in the result code provides more detailed information on the accuracy of the candidate.

Note: Refer to the section covering your country to locate the specific meanings of areaName1–4.

G1	State/Province (areaName1) match with the point located at the state centroid.
G2	County/Region (areaName2) match with the point located at the county centroid.
G3	City/Town (areaName3) match with the point located at the city centroid.
G4	Suburb/village (areaName4) match with the point located at the suburb/village centroid.

Single Match 'S' Result Codes

The following table shows the support for the S category result codes by country. For detailed descriptions of the 'S' result codes, see **Forward Geocoding Result Codes** on page 708. These descriptions apply to the vast majority of the countries. The exceptions are listed and described in the sections below the following table for:

- **Australia**
- **Canada**
- **United States**

A bullet "•" indicates the S code is supported. A blank cell indicates the S code is not supported.

Country Name	S8	S7	S6	S5	S4	S3	S2	S1	S0	SX	SC	SG
Australia (AUS)	•	•		•	•				•			•
Canada (CAN)	•	•		•	•	•		•	•		•	
Denmark (DNK)	•	•		•	•					•		
Germany (DEU)	•	•		•	•					•		
Great Britain (GBR)	•	•		•	•				•	•		
New Zealand (NZL)	•	•		•	•					•		
United States (USA)	•	•	•	•	•	•	•	•	•	•	•	
All other countries	•	•		•	•				•	•	•	

United States — 'S' Precision Code Descriptions

The following table provides 'S' precision code descriptions for the USA.

Precision Code	Description
Street level geocoded candidates return a Precision Code beginning with the letter S. The second character in the code indicates the positional accuracy of the resulting point for the geocoded record.	
S8	Single match, point located at either the single point associated with an address point candidate or at an address point candidate that shares the same house number. No interpolation is required.
S7	Single match, located at an interpolated point along a street segment. Both a point/parcel dictionary and a street segment dictionary must be available. Because known point data is available, the S7 interpolation is more accurate than an S5 result.
S6	Single match, point located at point ZIP centroid.
S5	Single match, point located at a street address position. Because only street segment data is available, the interpolation is not as accurate as an S7 return.
S4	Single match, point located at a street centroid..
S3	Single match, point located at ZIP + 4®. This is the same quality match as a Z3 result.
S2	Single match, point located at ZIP + 2 centroid. single match, point located at ZIP + 2 centroid. This is the same quality match as a Z2 result.
S1	Single match, point located at ZIP Code centroid. This is the same quality match as a Z1 result.
S0	Single match, however, no coordinates are available (this is a very rare occurrence).
SX	Single match, point located at street intersection.
SC	Single match where the original point has been moved a specified distance (usually along a perpendicular line) toward or away from the associated street segment. This result code can be returned only when both a point geocoding dataset and a street segment geocoding dataset are available and when the centerline offset feature is used.

Australia — 'S' Result Code Descriptions

The following table provides 'S' result code descriptions for Australia.

Result Code	Description
Street level geocoded candidates return a result code beginning with the letter S. The second character in the code indicates the positional accuracy of the resulting point for the geocoded record.	
S8	Single match, point located at either the single point associated with an address point candidate or at an address point candidate that shares the same house number. No interpolation is required.
S8.......G	The S8.......G result code is used for single matches with GNAF Reliability levels of 1or 2 (the highest level of GNAF Reliability.
S7	Single match, located at an interpolated point along the candidate's street segment. When the potential candidate is not an address point candidate and there are no exact house number matches among other address point candidates, the S7 result is returned using address point interpolation.
S7.......G	The S7.......G result code is used for single matches with GNAF Reliability level of 3.
S5	Single match, point located at a street address position.
S4	Single match, point located at the center of a shape point path (shape points define the shape of the street polyline).
S4.......G	The S4.......G result code is used for single matches with a GNAF Reliability level of 4 (associated with a unique road feature.)
S0	Single match, however, no coordinates are available (this is a very rare occurrence).
SX	Single match with the point located at street intersection.
SC	Single match where the original point has been moved a specified distance (usually along a perpendicular line) toward or away from the associated street segment. This result code can be returned only when both a point geocoding dataset and a street segment geocoding dataset are available and when the centerline offset feature is used.
SG	Single match with point at the centre of a locality (areaName3) or Locality level geocode derived from topographic feature. An SG result code is associated with GNAF Reliability Level 5 (locality or neighbourhood) or with Level 6 (unique region.)

Canada — 'S' Result Code Descriptions

The following table provides 'S' result code descriptions for Canada.

Result Code	Description
Street level geocoded candidates return a result code beginning with the letter S. The second character in the code indicates the positional accuracy of the resulting point for the geocoded record.	
S8	Single match, point located at either the single point associated with an address point candidate or at an address point candidate that shares the same house number. No interpolation is required.
S7	Single match, located at an interpolated point along the candidate's street segment. When the potential candidate is not an address point candidate and there are no exact house number matches among other address point candidates, the S7 result is returned using address point interpolation.
S5	Single match, point located at a street address position.
S4	Single match, point located at the center of a shape point path (shape points define the shape of the street polyline).
S3	Single match, point located at postal centroid of FSALDU
S1	Single match, point located at postal centroid of FSA
S0	Single match, however, no coordinates are available (this is a very rare occurrence).
SC	Single match where the original point has been moved a specified distance (usually along a perpendicular line) toward or away from the associated street segment. This result code can be returned only when both a point geocoding dataset and a street segment geocoding dataset are available and when the centerline offset feature is used.

Reverse Geocoding 'R' Result Codes

Matches in the `R` category indicate that the record was matched by reverse geocoding. The first three characters of the `R` result code indicate the type of match found. `R` geocode results include an additional letter to indicate the dictionary from which the match was made. This is always an `A`, indicating address dictionary; reverse geocoding is supported by the address dictionary only (not user dictionaries.)

Reverse Geocoding 'R' Result Code Descriptions

Reverse Geocoding Code	Description
`RS8A`	Point/parcel level precision for reverse geocoding. Candidate returned from address dictionary.
`RS5A`	Interpolated street candidate for reverse geocoding. Candidate returned from address dictionary.
`RS4A`	Street centroid candidate for reverse geocoding. Candidate returned from address dictionary.

C - Error Messages

In this section

Exception Codes 717

Exception Codes

If the server throws an exception, the REST web service will return the exception code and an accompanying exception message over the network to the client. The exception code provides a general error description; the exception message provides a more specific indication of the cause of the exception.

In the following example a GET request to the Geocode service contains "Line" which is an incorrect parameter.

```
GET http://endpoint/Geocode/rest/GeocodeService/geocode.json?
mainAddress=42%20Venus%20Drive&Line=Shrewsbury&country=USA HTTP/1.1
```

The server returns the following error:

```
HTTP/1.1 500 Internal Server Error
Server: Apache-Coyote/1.1
Date: Wed, 25 Feb 2015 20:52:18 GMT
exceptionCode: INVALID_CLIENT_INPUT
exceptionMsg: Unknown query parameter Line
Content-Length: 0
Connection: close
```

Exception Codes (datatype = String)	Description
REQUIRED_PARAMETER_MISSING	A required parameter is missing.
DATA_NOT_LICENSED	The license file for an address dictionary is not installed.
INTERNAL_ERROR	A general error occurred with the geocoding engine.
MAPMARKER_EXCEPTION	A general exception occurred in the MapMarker geocoding engine.
MAPMARKER_FATAL_EXCEPTION	A fatal exception occurred in the MapMarker geocoding engine.
INVALID_CLIENT_INPUT	An invalid input was encountered in the request.
NO_COUNTRY_SPECIFIED	The country field is missing from the request.

Exception Codes (datatype = String)	Description
COUNTRY_NOT_SUPPORTED	The requested operation is not supported for the specified country.
GEOSTAN_FATAL_EXCEPTION	A fatal exception occurred in the GeoStan geocoding engine.

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