



Installation and Configuration

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Prerequisites for Cisco USB GNSS Dongle Installation

- Your network must include a Cisco Wireless Controller and the supported Cisco APs. These APs must be associated with the controller.

Installation Guidelines

The following is a list of installation guidelines pertaining to Cisco USB GNSS dongle:

- The dongle can be plugged into a supporting AP's USB port without removing the AP from the ceiling.
- Use caution when placing the dongle near equipment and antennas operating on cellular LTE frequencies such as repeaters and amplifiers. This equipment may interfere with GNSS frequencies.
- When installing the external antenna, position the antenna in the desired location and perform any cable management tasks before inserting the connector into the dongle to reduce mechanical stress.

Installing Cisco USB GNSS Dongle

Step 1 Plug the Cisco USB GNSS dongle into the USB port of the AP.

Note Avoid excessive insertion and removal of the USB dongle to ensure mechanical stability of the USB connector.

Step 2 Log in to the controller GUI.

Step 3 Choose **Configuration > Tags & Profiles > AP Join Profile > General**.

Select the AP Join profile.

Step 4 In the **General** section, check the **USB Enable** checkbox to enable the USB port.

Step 5 Choose **Configuration > Wireless > Access Points > All APs**.

Step 6 Select the AP with the Cisco USB GNSS dongle installed.

Step 7 Click the **Inventory** tab.

Step 8 In the **USB Module Inventory** section, verify the USB module details.

We recommend that you perform the USB module verification for all the APs with Cisco USB GNSS dongle.

LED Status

The following table lists Cisco USB GNSS dongle LED status.

Table 1: LED Status

LED Color	Status
Red	Not ready with satellite fix
Green	Ready with satellite fix
Blinking green	Acquiring satellite signal/fix



Note LED brightness control (dimming) and multicolor status is not supported.

Configurations

Configure External Antenna Cable Length

The GNSS external antenna cable length is configured per AP and the AP retains the value even after the AP is rebooted. You must manually configure the cable length when the antenna cable exceeds the 10 meter length cable provided with the external antenna.

Procedure

	Command or Action	Purpose
Step 1	enable Example: Device# enable	Enables privileged EXEC mode. Enter your password if prompted.
Step 2	ap name <i>ap-name</i> geolocation gnss antenna external cable-length <i>cable-length</i>	Configures the cable length in meters. The range is between 1 and 100 meters.

	Command or Action	Purpose
	Example: <pre>Device# ap name test-ap geolocation gnss antenna external cable-length 15 Device# ap name test-ap no geolocation gnss antenna external cable-length</pre>	Use the no form of this command to remove the manually configured cable length and reset the cable length to default value.

Configure Pressure Sensor Parameters

This task configures the pressure sensor parameters.

Procedure

	Command or Action	Purpose
Step 1	configure terminal Example: <pre>Device# configure terminal</pre>	Enters global configuration mode.
Step 2	ap profile <i>ap-profile-name</i> Example: <pre>Device(config)# ap profile ap-profile-name</pre>	Configures an AP profile and enters AP profile configuration mode.
Step 3	sensor environment pressure mode disabled Example: <pre>Device(config-ap-profile)# sensor environment pressure mode disabled</pre>	This command disables the pressure sensor. By default, the sensor is set to auto.
Step 4	end Example: <pre>Device(config-ap-profile)# end</pre>	Exits configuration mode and returns to privileged EXEC mode.

Geolocation Parameters

Configure Above Ground Level Geolocation Parameters

You can configure the above ground level (AGL) in meters for the AP manually. You can configure the height using this option when the AP is not receiving the height values. The configured value is retained in the AP, reported to the controller during rejoin and it persists across AP reloads.

Procedure

	Command or Action	Purpose
Step 1	enable Example:	Enables privileged EXEC mode. Enter your password if prompted.

	Command or Action	Purpose
	Device# enable	
Step 2	ap name <i>ap-name</i> geolocation height <i>ap-height</i> Example: Device# ap name <i>ap-name</i> geolocation height 350 Device# ap name <i>ap-name</i> no geolocation height	Enter AP above ground level (AGL) height in meters. The range is between -100–1000 meters. Use the no form of this command to remove the AGL value manually configured for a particular AP.

Configure Clear Derived Geolocation Parameters

The following commands clear the derived geolocation information. You can clear the values from a specific AP, all APs, or using the MAC address of the AP.

Procedure

- **clear ap name *ap-name* geolocation derivation**

Example:

```
Device# clear ap name test-ap geolocation derivation
```

This CLI clears the derived geolocation values from the memory of a particular AP.

- **clear geolocation derivation**

Example:

```
Device# clear geolocation derivation
```

This CLI clears the derived geolocation values from the memory of all APs associated with the controller.

- **clear ap mac-address *ap-mac-addr* geolocation derivation**

Example:

```
Device# clear ap mac-address ap-mac-addr geolocation derivation
```

This CLI clears the derived geolocation values from the memory of a particular AP identified by its MAC-address.