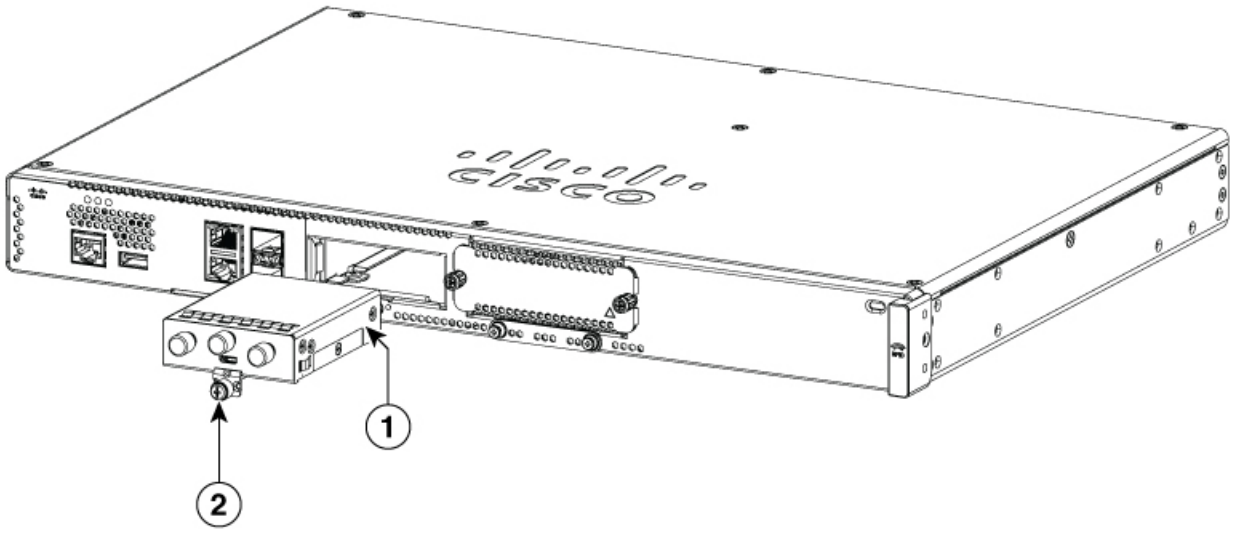


Cisco Catalyst Pluggable Interface Module

This section provides information before and during the installation of Cisco Catalyst Pluggable Interface Module (PIM) on the Cisco Catalyst 8200 Series Edge Platforms.

For additional information on the supported PIMs, see the Cisco Catalyst 8200 Series Edge Platforms' datasheet on cisco.com for a list of supported PIMs on the platforms.

Figure 1: Pluggable Interface Module in a Cisco 8200 Series Chassis



1	Pluggable interface module (PIM)
2	Screw

- Safety Recommendations, on page 2
- Tools and Equipment Required During Installation, on page 2
- Remove Cisco Catalyst Pluggable Interface Module, on page 2
- Install a Cisco Catalyst Pluggable Interface Module, on page 3
- Configuring a Pluggable Interface Module, on page 4
- RF Band Mapping for Antenna Ports (For P-5GS6-GL only), on page 5
- Attaching the Antennas, on page 6

Safety Recommendations

To prevent hazardous conditions, follow these safety recommendations while working with this equipment:

- Keep tools away from walk areas where you or others could fall over them.
- Do not wear loose clothing around the router. Fasten your tie or scarf and roll up your sleeves to prevent clothing from being caught in the chassis.
- Wear safety glasses when working under any conditions that might be hazardous to your eyes.
- Locate the emergency power-off switch in the room before you start working. If an electrical accident occurs, shut the power off.
- Before working on the router, turn off the power and unplug the power cord.
- Disconnect all power sources before doing the following:
  - Installing or removing a router chassis
  - Working near power supplies
- Do not work alone if potentially hazardous conditions exist.
- Always check that power is disconnected from a circuit.
- Remove possible hazards from your work area, such as damp floors, ungrounded power extension cables, or missing safety grounds.
- If an electrical accident occurs, proceed as follows:
  - Use caution; do not become a victim yourself.
  - Turn off power to the room using the emergency power-off switch.
  - Determine the condition of the victim and send another person to get medical aid or call for help.
  - Determine if the person needs rescue breathing or external cardiac compressions; then take appropriate action.

Tools and Equipment Required During Installation

You will need the following tools and equipment while working with the Cisco C-NIM-1X NIM:

- Number 1 Phillips screwdriver or a small flat-blade screwdriver
- ESD-preventive wrist strap

Remove Cisco Catalyst Pluggable Interface Module

To remove a PIM, perform these steps:

Procedure

Step 1 Read the Safety Warnings before you perform any task.

Step 2 Power down the unit and remove power from the power supplies.

Step 3 Loosen the Phillips head screw on the module faceplate, and then pull out the module by gripping the screw.

Install a Cisco Catalyst Pluggable Interface Module

To install a PIM, perform these steps:

Procedure

Step 1 Read the Safety Warnings before you perform any task.

Step 2 Power down the unit and remove power from the power supplies.

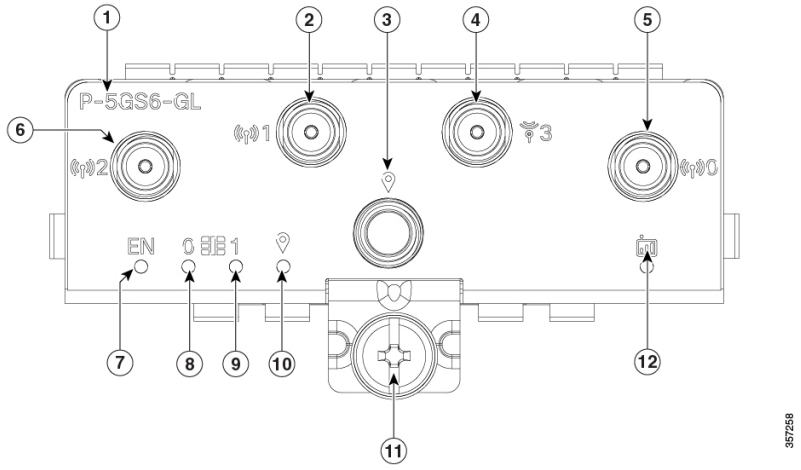
Step 3 If there is a filler faceplate blank in the PIM slot, loosen the Phillips head screw and remove the blank.

Step 4 Push the module into the slot until you feel the edge connector seat into the connector on the backplane. The module faceplate should contact the chassis panel.

Step 5 Tighten the Phillips head screw on the module faceplate.

Step 6 The device may now be powered on.

Figure 2: 5G Pluggable Interface Module - P-5GS6-GL



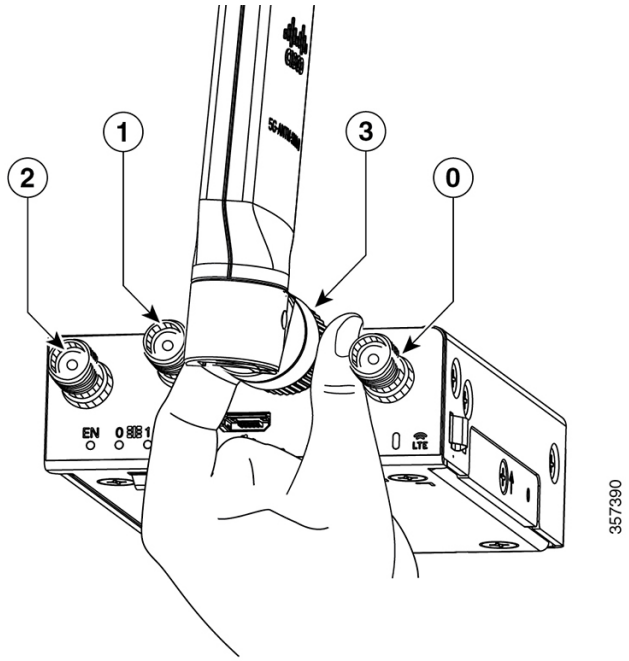
1	PID
2	Antenna 1 (SMA)

3	GPS (SMA)
4	Antenna 3 (SMA, reception only)
5	Antenna 0 (SMA)
6	Antenna 2 (SMA)
7	Enable LED
8	SIM 0 LED
9	SIM 1 LED
10	GPS LED
11	M3.5 thumb-screw
12	Service LED

Configuring a Pluggable Interface Module

To insert the antenna in the Pluggable Interface Module, perform the below steps:

Figure 3: Attaching the Antennas



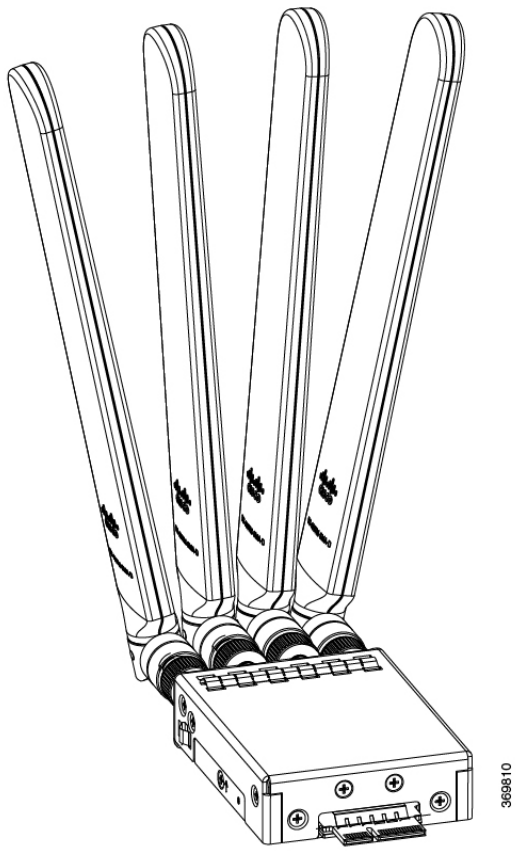
Procedure

Step 1 Use your thumb and index finger to insert and tighten antenna 1 and antenna 3 in the middle antenna attachment slots as indicated in the figure.

Note
While installing the antennas, first install antenna 1 and antenna 3 (this instruction is for the two antenna attachments present in the middle) and secure it completely. If you install antenna 2 and antenna 0 first (this refers to the first and the last antenna attachments), there will be less space to insert your thumb and index finger and therefore you may not be able to secure antenna 1 and 3.

Step 2 Insert antenna 2 and antenna 0 in the first and last antenna attachment slots.

Step 3 After installing the antennas, adjust the antenna orientation by spacing out each of them equally until they are spread out. This is important as it helps in getting higher RF performance.



RF Band Mapping for Antenna Ports (For P-5GS6-GL only)

The following table lists the RF band mapping for antenna ports.

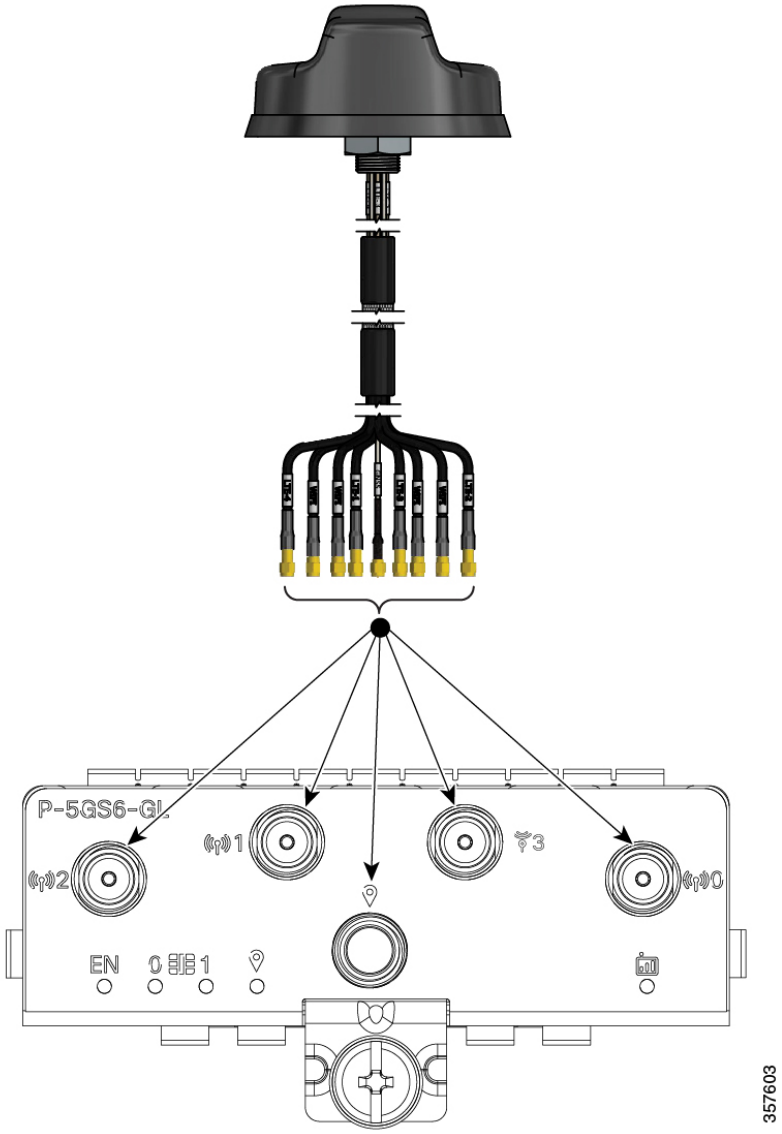
RF Band Mapping for Antenna Ports:

Antenna Port	Technology	TX	RX
ANT 0	3G WDCMA	B1, B2, B3, B4, B5, B6, B8, B9, B19	B1, B2, B3, B4, B5, B6, B8, B9, B19
	LTE	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B30, B34, B38, B39, B40, B41, B66, B71	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B43, B46, B48, B66, B71
	5G NR FR1	n1, n2, n3, n5, n7, n8, n12, n20, n28, n38, n40, n41, n66, n71	n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79
ANT 1	3G WDCMA	-	B1, B2, B3, B4, B5, B6, B8, B9, B19
	LTE	B5, B20, B42, B43, B48, B71	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B43, B46, B48, B66, B71
	5G NR FR1	n5, n48, n77, n78, n79	n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79
ANT 2	3G WDCMA	-	-
	LTE	B1, B2, B3, B4, B7, B41, B66	B1, B2, B3, B4, B7, B25, B30, B32, B34, B38, B39, B40, B41, B42, B43, B46, B48, B66
	5G NR FR1	n1, n2, n3, n7, n25, n41, n66, n77, n78, n79	n1, n2, n3, n7, n25, n38, n40, n41, n48, n66, n77, n78, n79
ANT 3	3G WDCMA	-	-
	LTE	-	B1, B2, B3, B4, B7, B25, B30, B32, B34, B38, B39, B40, B41, B42, B43, B46, B48, B66
	5G NR FR1	-	n1, n2, n3, n7, n25, n38, n40, n41, n48, n66, n77, n78, n79

Attaching the Antennas

To attach the antenna in the Pluggable Interface Module, perform the below steps:

Figure 4: Attaching 5G NR Antenna (5G-ANTM-04-B) to P-5GS6-GL PIM



Note 5G NR Antenna (5G-ANTM-04-B) is supported on both P-LTEAP18-GL and P-5GS6-GL PIMs.

1. Attach each SMA cable to the ports as indicated in the table mappings.
2. Ensure that you tighten and secure each SMA cable into the SMA connector on the PIM.

Table 1: Port Mappings for 5G-ANTM-0-4-B on P-5GS6-GL and P-LTEAP18-GL PIMs

5G-ANTM-O-4-B	P-LTEAP18-GL	P-5GS6-GL
MAIN 0 (LTE1)	Main 0	ANT 0
MAIN 1 (LTE3)	Main 1	ANT 1
DIV 0 (LTE2)	DIV 0	ANT 2
DIV 1 (LTE4)	DIV 1	ANT 3
GNSS	No connection	GPS

The following link contains the antenna specifications and installation instructions for 5G NR (5G-ANTM-O-4-B):

https://www.cisco.com/c/en/us/td/docs/routers/connectedgrid/antennas/installing-combined/b-cisco-industrial-routers-and-industrial-wireless-access-points-antenna-guide/m-5g-antm-04b.html#Cisco_Generic_Topic.dita_e780a6fe-fa46-4a00-bd9d-1c6a98b7bcb9