



Mounting the Router

This section describes the safety information, equipment, and procedures required to mount the Cisco 1240 Connected Grid Router (CGR 1240 or router) on a vertical pole or streetlight.

These topics are discussed:

- [Mounting Kits Overview, page 45](#)
- [General Safety Information for Mounting, page 46](#)
- [Contents of the Mounting Kits, page 46](#)
- [Materials and Tools You Supply, page 50](#)
- [Mounting Instructions, page 50](#)
- [Simple Mounting Bracket for Pole Mounting of CGR1240, page 59](#)
- [Grounding Instructions, page 70](#)
- [Bracket Dimensions, page 72](#)

Mounting Kits Overview

You will need some or all of the kits described in this section to install the router on a pole. Your installation environment and requirements determine the kits you need.

For a detailed description of each kit, see [Contents of the Mounting Kits, page 46](#).

Cisco Product ID (PID)	Name	Description
-	Mounting Bracket Kit, page 47	Use this kit if your installation requires a Cisco mounting bracket to mount the router. This kit is included within the router accessory kit, and is used with the pole kit and includes the hardware required to attach the mounting bracket to the mounting plate.
CGR-PMK1000	Pole Mount Kit, page 46	This kit is required for all pole or streetlight installations and includes a mounting plate and the hardware required to attach the mounting plate to a pole.
CGR-PMK-BAND	Band Strap Kit, page 48	This kit includes two steel straps for mounting the router on poles larger than 4.5 inches (11.4 cm) in diameter. This kit is used together with the Pole Mount Kit, page 46 . A BAND-IT Tool is required to install the steel straps on a pole.
AIR-BAND-INST-TL=	Strap Tool Kit, page 49	This kit includes a BAND-IT tool that is required when using steel straps to install the router on poles larger than 4.5 inches (11.4 cm) in diameter.

General Safety Information for Mounting

Read the safety warnings in this section and in [Installation Safety and Site Preparation, page 3](#).

One person is required to properly and safely mount the router.

Caution: All mounting methods at any location are subject to the acceptance of local jurisdiction.

Caution: The mounting surface, attaching screws, and optional wall anchors must be able to support a 50 pound (22.7 kg) static weight.

Caution: Personnel mounting the router must understand grounding methods.

Warning: Do not locate the antenna near overhead power lines or other electric light or power circuits, or where it can come into contact with such circuits. When installing the antenna, take extreme care not to come into contact with such circuits, as they may cause serious injury or death. For proper installation and grounding of the antenna, please refer to national and local codes (for example, U.S.:NFPA 70, National Electrical Code, Article 810, Canada: Canadian Electrical Code, Section 54). Statement 1052

Contents of the Mounting Kits

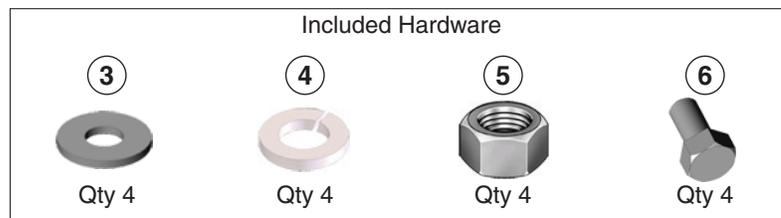
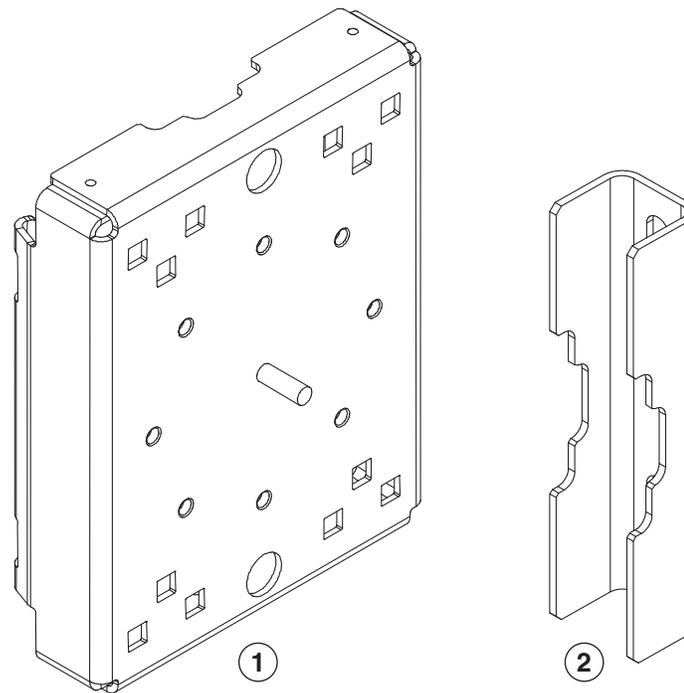
This section describes the contents of the mounting kits available for the router and when you should use each kit.

Pole Mount Kit

Use the Cisco pole mount kit to install the mounting plate on any pole or streetlight. The kit supports poles that meet the following criteria:

- **Size**—2 to 16 inch diameter poles
- **Material**—Metal, wood, or fiberglass poles

Figure 23 Pole Mount Kit Contents



3009002

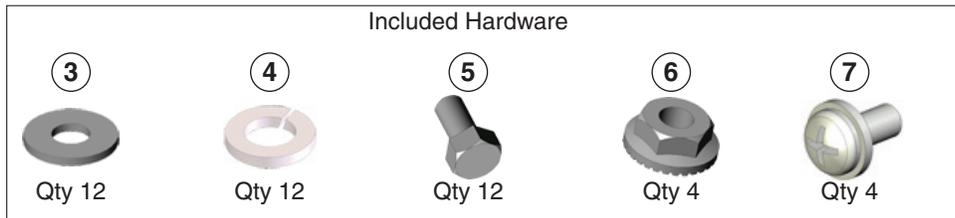
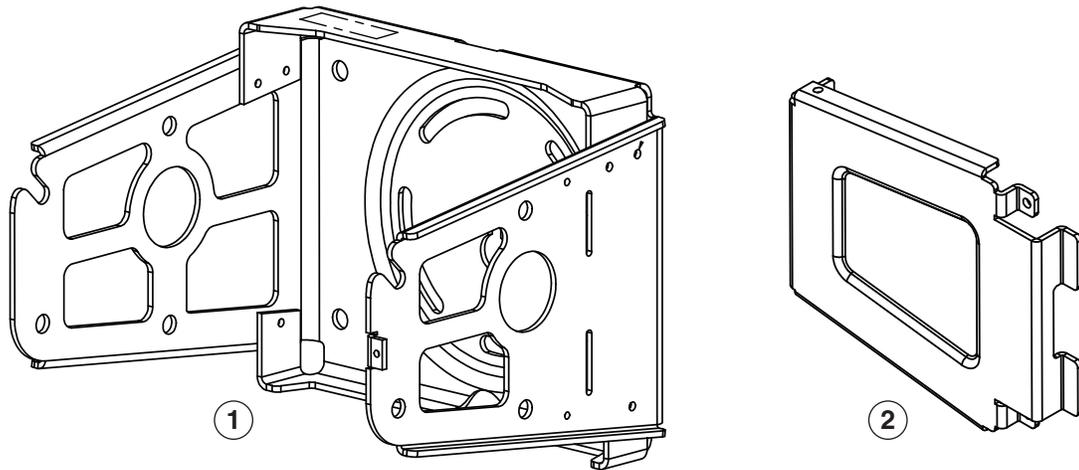
Item	Name	Qty.	Description
1	Mounting plate	1	Install mounting plate on pole. Mounting bracket attaches to mounting plate.
2	Clamp brackets	2	Use the clamp brackets to install the mounting plate on a pole.
Included Hardware			
3	Washer (3/8 inch)	4	Use the included hardware to attach the mounting plate to the pole, as described in Install the Mounting Plate onto a Pole, page 50 .
4	Split lock washer (3/8 inch)	4	
5	Nut (3/8-16)	4	
6	Carriage bolt (3/8-16 x 7 inches)	4	

Mounting Bracket Kit

Use the mounting bracket kit if you require a Cisco mounting bracket. The mounting bracket attaches to the mounting plate, and then the router is installed on the mounting bracket.

Note: You can optionally use any compatible mounting bracket with the Cisco pole mount kit. Check with your authorized Cisco reseller for compatible mounting brackets. See [Pole Mount Kit, page 46](#)

Figure 24 Mounting Bracket Kit Contents—Required Parts



Item	Name	Qty.	Description
1	Mounting bracket	1	Mounts router to mounting plate, which is installed on pole.
2	Mounting bracket security panel (optional)	1	Optional bracket feature, which prevents the unauthorized users from removing the router from the mounting bracket.
Included Hardware			
3	Washer (M8)	12	Use this hardware to attach the mounting bracket to the mounting plate, and the router to the mounting bracket. Assemble the washer, split lock washer, and bolt as described in Assemble Bracket Hardware , page 55.
4	Split lock washer (M8)	12	
5	Bolt (M8 x 1.25)	12	
6	Serrated nut (M8 x 1.25)	1	
7	Security panel screws (8-32)	3	Use these screws to attach the security panel to the mounting bracket.

Band Strap Kit

Use the straps in the Band Strap Kit when you mount the router on a pole larger than 4.5 inches (11.4 cm) in diameter. This installation also requires the pole mount kit and strap tool kit. See [Pole Mount Kit](#), page 46 and [Strap Tool Kit](#), page 49.

Figure 25 Band Strap Kit Contents



Item	Description
1	Steel straps (2)

Strap Tool Kit

Use the tool in the Strap Tool Kit to attach the steel straps included in the band strap kit. Steel straps are required to install the mounting plate on poles larger than 4.5 inches (11.4 cm) in diameter. See [Band Strap Kit, page 48](#).

Note: The tool in the Strap Tool Kit is manufactured and supported by BAND-IT. For more information about the tool, see www.band-it-idex.com.

Figure 26 Strap Tool Kit Contents



Item	Description
1	Strap tool
2	Strap tool documentation (not shown)

Materials and Tools You Supply

You must supply some or all of these items to mount the router on a pole. The items you supply depends on the installation procedure that you use.

Item	Required for These Procedures
13-mm box-end wrench or socket set	Install the Mounting Plate—Poles Up to 4.5 Inches in Diameter, page 51 Install the Mounting Plate—Through-Pole Mounting (Optional), page 54 Attach the Mounting Bracket to the Mounting Plate, page 55
Bolt, standard washer, fender washer, and nut, 5/8 inch (2 sets)—Bolt length depends on the size of the pole used in the installation.	Install the Mounting Plate—Through-Pole Mounting (Optional), page 54
Drill and drill bit	Install the Mounting Plate—Through-Pole Mounting (Optional), page 54
Phillips screwdriver, or other screwdriver for cross-recessed screws	Ground the Router, page 71
Crimping tool or pliers	Ground the Router, page 71

Mounting Instructions

This section includes all the procedures required to mount the router on any supported pole type.

This section covers the following procedures:

- [Router Orientation, page 50](#)
- [Install the Mounting Plate onto a Pole, page 50](#)
- [Attach the Mounting Bracket to the Mounting Plate, page 55](#)
- [Install the Router onto the Mounting Bracket, page 58](#)
- [Mounting the Router onto a Wall, page 67](#)

Router Orientation

When mounting the router on a pole, ensure that:

- The router is oriented with the chassis cabling openings pointing down so the router cables can be correctly connected through the openings and so the router door opens correctly, as shown in [Figure 35 on page 58](#).
- The router is mounted with the hinged access cover facing out.

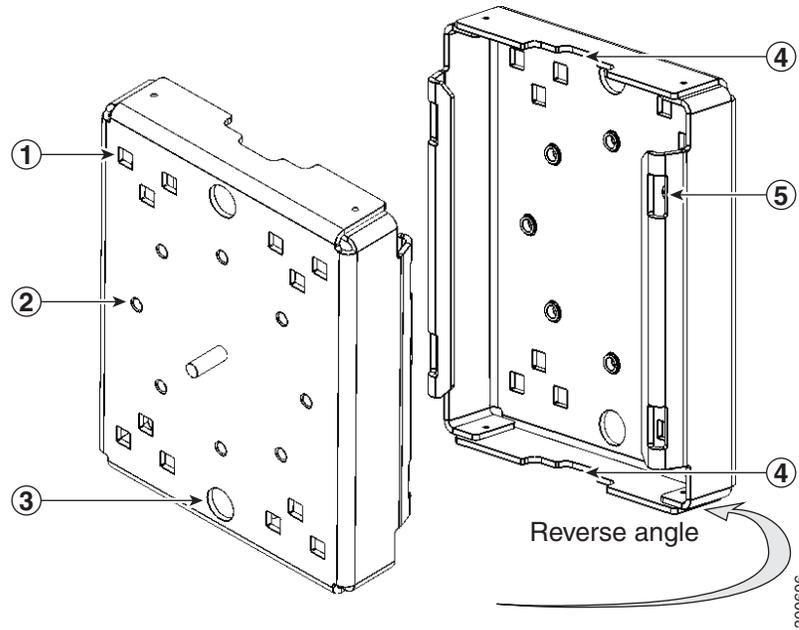
Install the Mounting Plate onto a Pole

This section describes three different procedures for installing the mounting plate on a pole. Follow the instructions for the pole type used in your installation.

The instructions in these section refer to the mounting plate features shown in [Figure 27 on page 51](#).

- [Install the Mounting Plate—Poles Up to 4.5 Inches in Diameter, page 51](#)
- [Install the Mounting Plate—Poles Larger than 4.5 Inches in Diameter, page 53](#)
- [Install the Mounting Plate—Through-Pole Mounting \(Optional\), page 54](#)

Figure 27 Mounting Plate Details



Item	Description	Qty.
1	Carriage bolt holes	4
2	Bracket mount holes	8
3	Clearance holes, 3/4 in.	2
4	Pole clamp notches	2
5	Steel band strap slots	4

Install the Mounting Plate—Poles Up to 4.5 Inches in Diameter

Required Materials

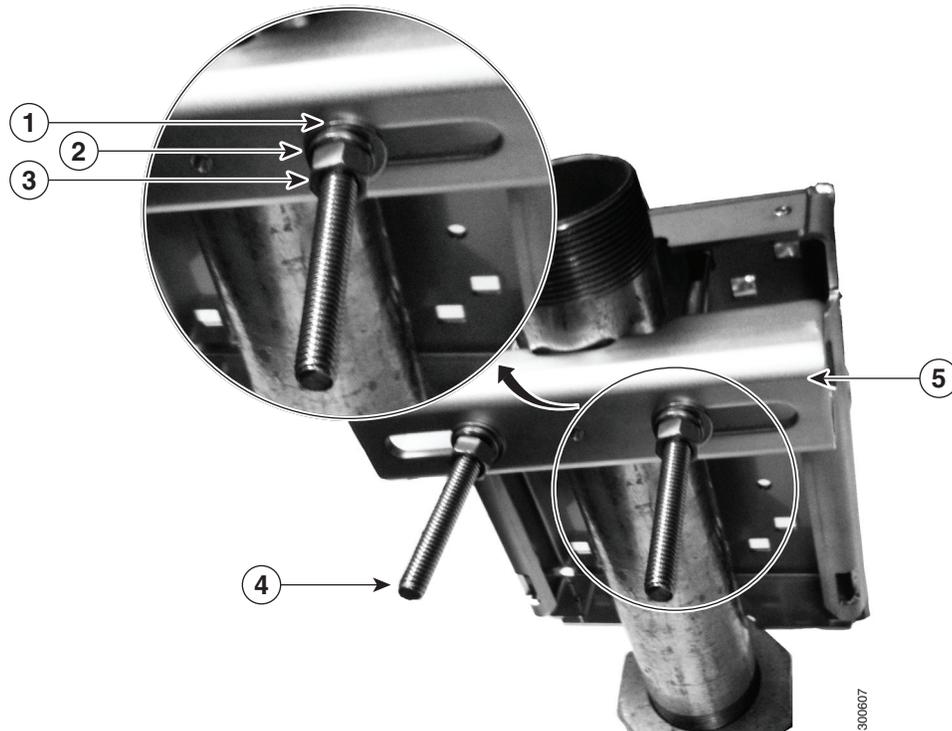
- Mounting plate, carriage bolts, and clamp brackets included in [Pole Mount Kit, page 46](#).
- 13-mm box-end socket wrench

To install the mounting plate on a vertical pole up to 4.5 inches (11.4 cm) in diameter (refer to [Figure 28 on page 52](#) and [Figure 29 on page 53](#)):

1. Select a mounting location on the pole and place the top and bottom pole clamp bracket (1) notches against the pole.
2. Place one of the clamp brackets on the opposite side of the pole, aligning the clamp bracket holes with the top two carriage bolt holes on the mounting plate.

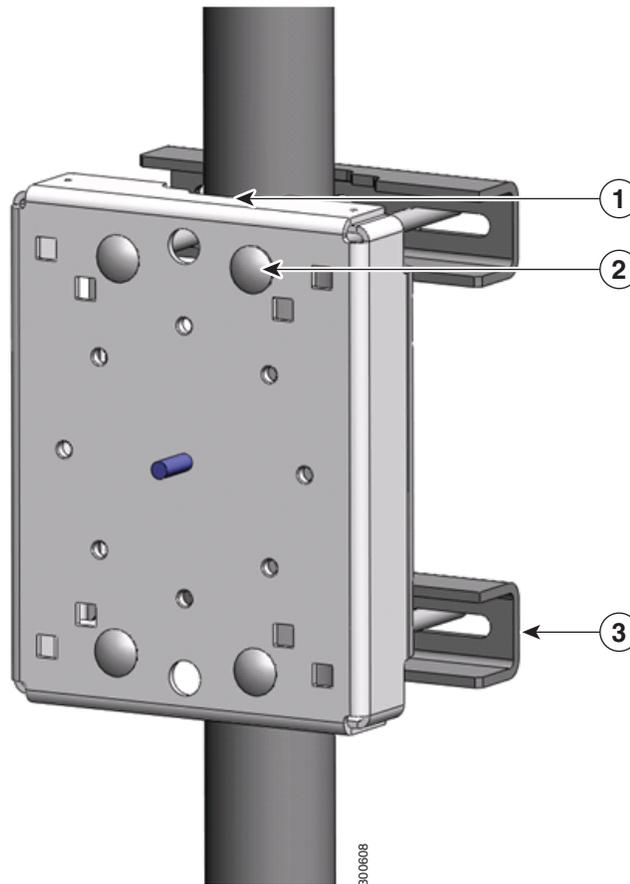
3. Insert a carriage bolt (5) through each of the top two carriage bolt holes on the mounting plate and through the holes in the clamp brackets.
4. Position the each bolt in the clamp so that the bolt is next to the pole, as shown in [Figure 28 on page 52](#).
5. To place the bracket hardware on each carriage bolt (see [Figure 28 on page 52](#)):
 - a. Place the washer (2) and then the split lock washer (3) on the back of each carriage bolt (5).
 - b. Thread the hex nut (4) on each carriage bolt. Place the split-lock washer between the washer and the nut.

Figure 28 Carriage Bolt Hardware Assembly Details



6. Hand tighten the hex nuts (do not overtighten).
7. Repeat Step 3 through Step 6, installing the two bottom carriage bolts and the second clamp bracket at the bottom of the mounting plate.
8. Position the mounting plate and clamp brackets on the pole as needed before further tightening the carriage bolts.
9. Use a socket wrench to evenly tighten all four carriage bolts to finish installing the mounting plate on the pole.

Figure 29 Mounting Plate Installed on Pole with Clamp Brackets



Item	Description
1	Pole clamp notch
2	Carriage bolts (4)
3	Pole clamps (2)

Install the Mounting Plate—Poles Larger than 4.5 Inches in Diameter

Required Materials

- Mounting plate and steel straps included in [Pole Mount Kit, page 46](#).
- BAND-IT tool included in [Strap Tool Kit, page 49](#)
- Torque wrench

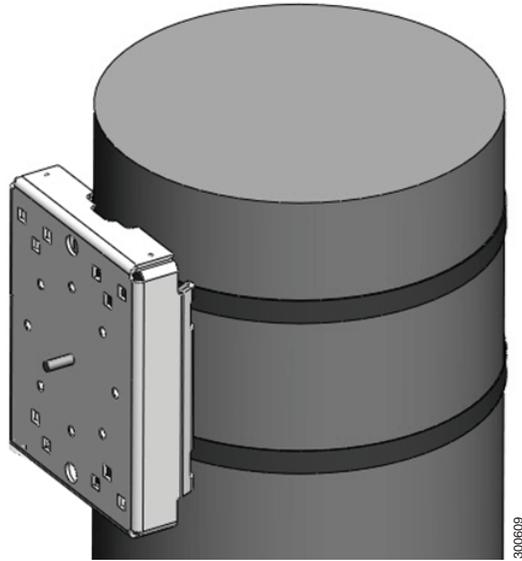
To install the mounting plate on a vertical pole that is larger than 4.5 inches (11.4 cm) in diameter (refer to [Figure 30 on page 54](#)):

1. Assemble the straps and the mounting plate by threading the two steel straps through the band strap slots on the mounting plate.
2. Select a mounting location on the pole.

3. Position the mounting plate on the pole as needed and tighten the straps around the pole.
4. Use the BAND-IT strap tool to tighten the metal bands around the pole, following the instructions in the box with the tool. Ensure the metal bands are as tight as possible (approximately 7 ft-lbs).

Note: When the metal bands are tightened to the full tension, the mounting plate cannot be adjusted unless the metal bands are disassembled or cut.

Figure 30 Mounting Plate Installed on Pole with Steel Straps



Install the Mounting Plate—Through-Pole Mounting (Optional)

If the pole used in your installation is made of wood, you can optionally install the mounting plate using the procedure described in this section. This is an alternate mounting method to the following two mounting methods, which can also be used when mounting the router on a wood pole:

- [Install the Mounting Plate—Poles Up to 4.5 Inches in Diameter, page 51](#)
- [Install the Mounting Plate—Poles Larger than 4.5 Inches in Diameter, page 53](#)

Required Materials

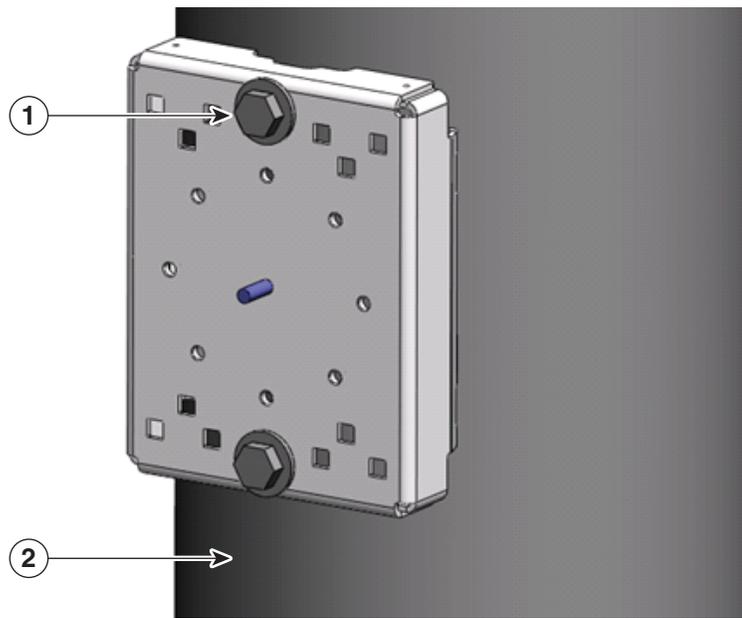
- Mounting plate included in [Pole Mount Kit, page 46](#).
- Hardware that you supply: 5/8-in. carriage bolt (length depends on the pole size in your installation), standard washer, fender washer, nut (2 sets)
- Tools that you supply: Drill, drill bit (for 5/8-in. through bolts), and 13-mm box-end socket wrench

To mount the router on a wood pole:

1. Place the mounting plate on the selected mounting location on the pole.
2. Mark the drilling locations on the pole through the clearance holes and remove the mounting plate.
3. Drill holes completely through the pole at the points you marked in Step 2.
4. Position the mounting plate over the drilled holes. Align the clearance holes on the mounting plate with the drilled holes.

5. Place a standard washer against one of the clearance holes on the mounting plate, then feed the bolt through the washer, clearance hole, and drilled hole. Push the bolt all the way through the pole. See [Figure 27 on page 51](#).
6. Follow these steps on the opposite side of the pole:
 - a. Place a fender washer on the end of the bolt, and then a nut.
 - b. Hand tighten the nut.
7. Repeat Step 5 and Step 6 for the second bolt.
8. Use a socket wrench to evenly tighten both bolts to finish installing the mounting plate on the wooden pole.

Figure 31 Mounting Plate Installed on Wooden Pole with Through Bolts



Item	Description
1	Wood pole
2	5/8-in. through bolts (2)

Attach the Mounting Bracket to the Mounting Plate

This section describes how to attach the mounting bracket to the mounting plate.

Assemble Bracket Hardware

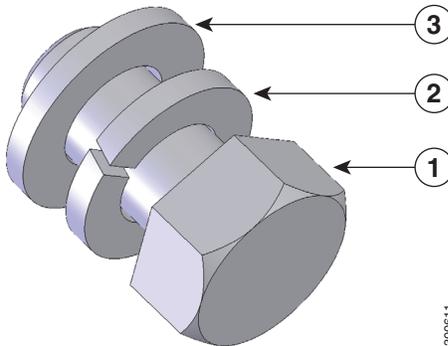
Several of the procedures in this section require you to assemble the bracket hardware before installing the bracket. A bracket hardware set consists of one bolt, one washer, one split lock washer, and one nut.

To assemble the bracket hardware:

1. Slide the split lock washer (2) on the bolt (1).
2. Slide the regular washer (3) on the bolt (1).

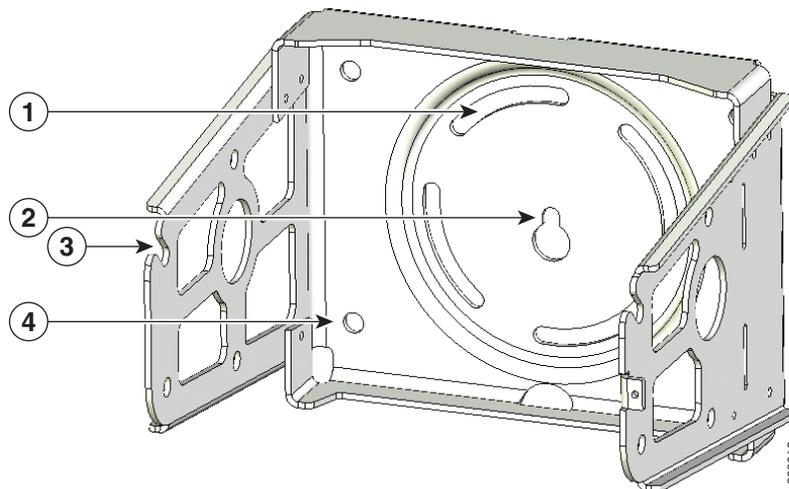
Place the split-lock washer between the regular washer and the bolt as shown in [Figure 32 on page 56](#).

Figure 32 Assemble Bracket Hardware Sets



The instructions for the procedures in this section refer to the mounting plate features shown in [Figure 33 on page 56](#).

Figure 33 Mounting Bracket Details



Item	Description
1	Pivot grooves (4)
2	Quick hang notch
3	Quick hang slots (2)
4	Optional wall-mount holes (4)

Note: The mounting plate must be installed as described in [Install the Mounting Plate onto a Pole, page 50](#).

To attach the mounting bracket to the mounting plate (refer to [Figure 34 on page 57](#)):

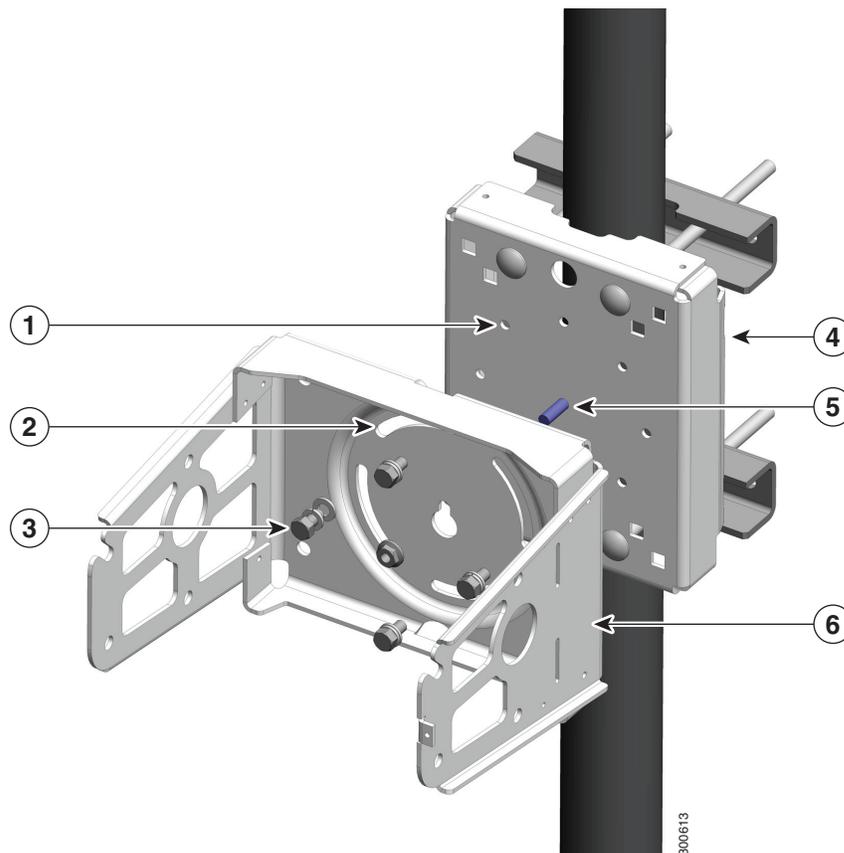
Required Materials

- Mounting bracket and hardware included in the [Mounting Bracket Kit, page 47](#)
- 13-mm box-end socket wrench

1. Assemble four sets of bracket hardware (washer, split lock washer, and bolt) as shown in [Assemble Bracket Hardware, page 55](#).

2. Place the mounting bracket against the mounting plate by inserting the bracket quick hang notch over the mounting plate quick hang stud (4).
3. Thread the serrated nut onto the quick mount stud (4) and hand tighten (do not overtighten).
4. Align the pivot grooves (2) on the bracket with four of the bracket mount holes (1) on the mounting plate. Follow these guidelines:
 - Each of the four pivot grooves on the bracket must be attached to at least one bracket mount hole on the mounting plate.
 - The final desired orientation of the mounting plate and router determine which bracket mount holes are used.
 - Mount the router as described in [Router Orientation, page 50](#).
5. Insert one bolt assembly (3) through one of the pivot grooves (2) on the bracket and then through the corresponding bracket mount hole on the mounting plate.
6. Repeat Step 5 for the remaining bolt assemblies.
7. Position the mounting bracket onto the mounting plate as needed before further tightening the bolts.
8. Use a socket wrench to evenly tighten all four bolts and the serrated nut to finish installing the bracket on the plate. Use a torque of 6-7 foot-pounds when tightening the bolts and nut.

Figure 34 Mounting Bracket Attached to Mounting Plate



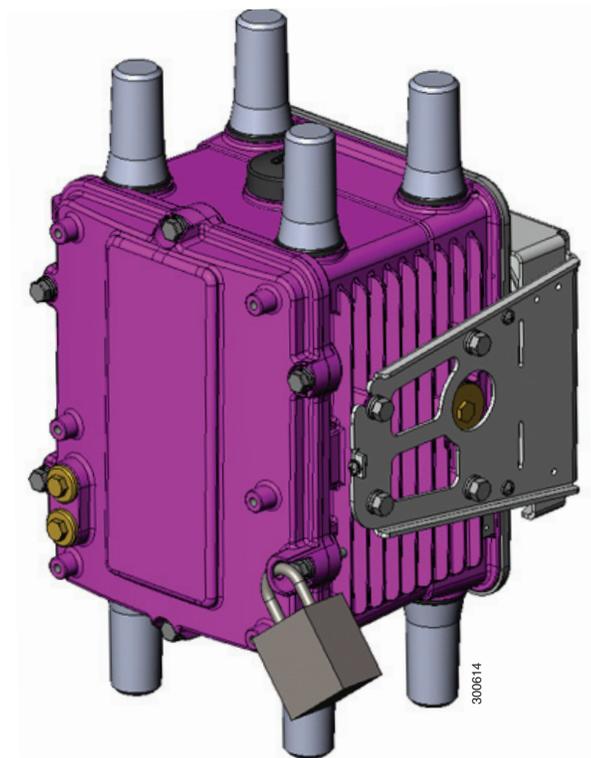
Install the Router onto the Mounting Bracket

This section describes how to attach the router to the mounting bracket. The mounting bracket is installed on the mounting plate (included in the Cisco pole mount kit), which is installed on a supported pole type. See [Pole Mount Kit, page 46](#).

The instructions for the procedures in this section refer to the mounting bracket kit contents shown in [Figure 24 on page 48](#) and the bracket features described in [Figure 33 on page 56](#).

Note: Refer to [Install the Optional Security Panel, page 64](#) for how to install the optional security panel on the bracket.

Figure 35 Router Installed in Mounting Bracket



Required Materials

- Mounting bracket and hardware included in [Mounting Bracket Kit, page 47](#).
- Socket wrench that you supply.

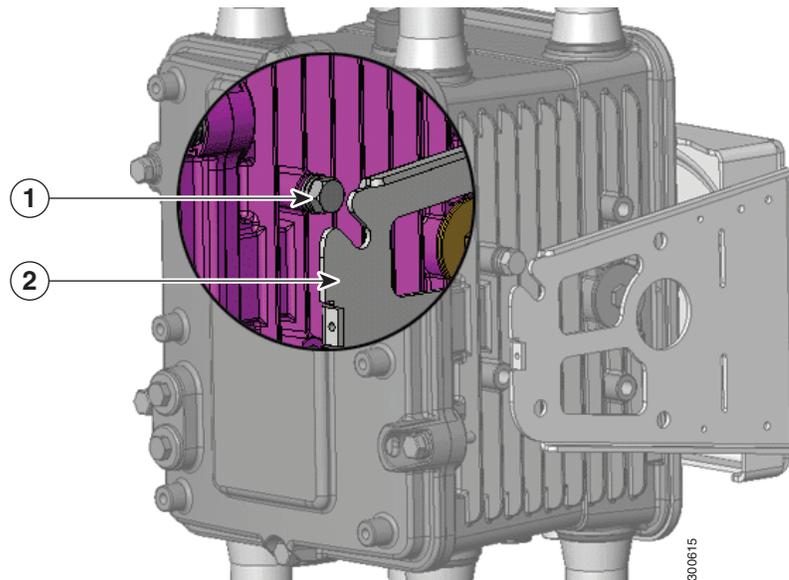
To mount the router on the bracket (refer to [Figure 36 on page 59](#) and [Figure 37 on page 59](#)):

1. Assemble eight sets of bracket hardware (washer, split lock washer, and bolt) as shown in [Assemble Bracket Hardware, page 55](#).
2. Attach one set of hinge bolt hardware to the mounting bracket connector shown in [Figure 37 on page 59](#) (1).

Do not tighten the hardware until Step 6. There must be enough space between the washer and the router to slide the router onto the bracket.

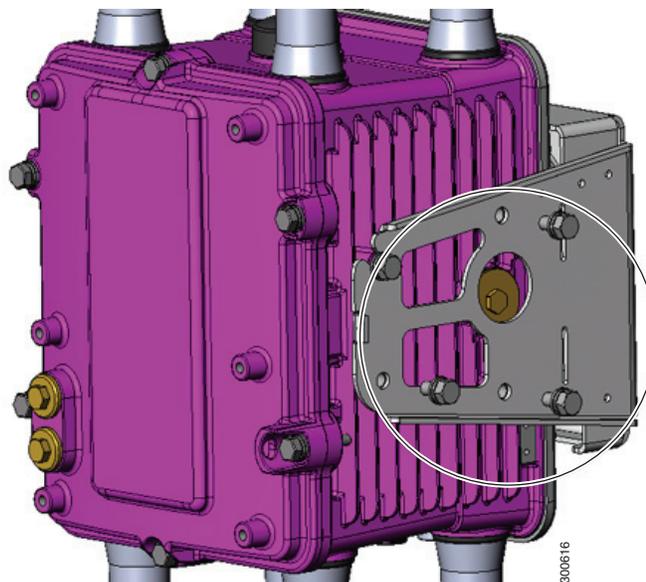
3. Repeat Step 2 on the other side of the router.
4. Slide the router onto the bracket by inserting the hinge bolts you attached in Step 2 into the bracket quick hang slots (2).

Figure 36 Attach One Hinge Bolt to Each Side of the Router



5. Attach the six remaining sets of hardware to each side of the bracket and router (3 sets on each side), as shown in [Figure 37 on page 59](#).
6. Use a socket wrench to evenly tighten all four bolts, using 6-7 foot-pounds of torque.

Figure 37 Attach Remaining Bolts to Bracket and Router



Simple Mounting Bracket for Pole Mounting of CGR1240

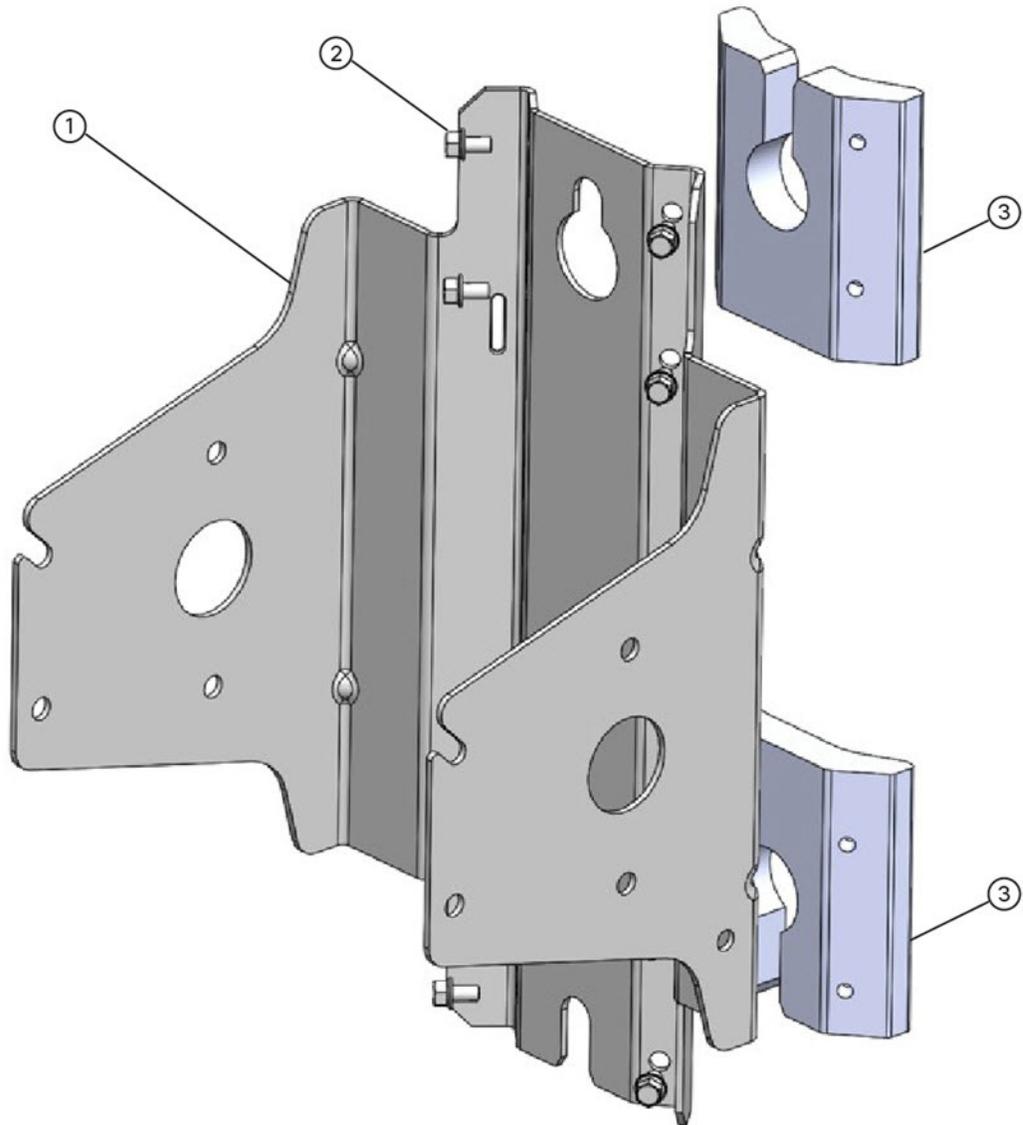
Required Materials

- Simple Mounting Bracket and hardware that is included in the kit (see [Figure 38](#)) which includes:

-
- (2) Adapters
 - (1) Bracket
 - (8) 1/4" Bolt

1. Attach the two (2) adapters to the bracket using 1/4 inch bolts as shown in [Figure 38 Constructing the Mounting Bracket \(CISCO-CGR-PM-BRKT\)](#), page 61. Be sure to attach the adapters to the brackets as illustrated.

Figure 38 Constructing the Mounting Bracket (CISCO-CGR-PM-BRKT)

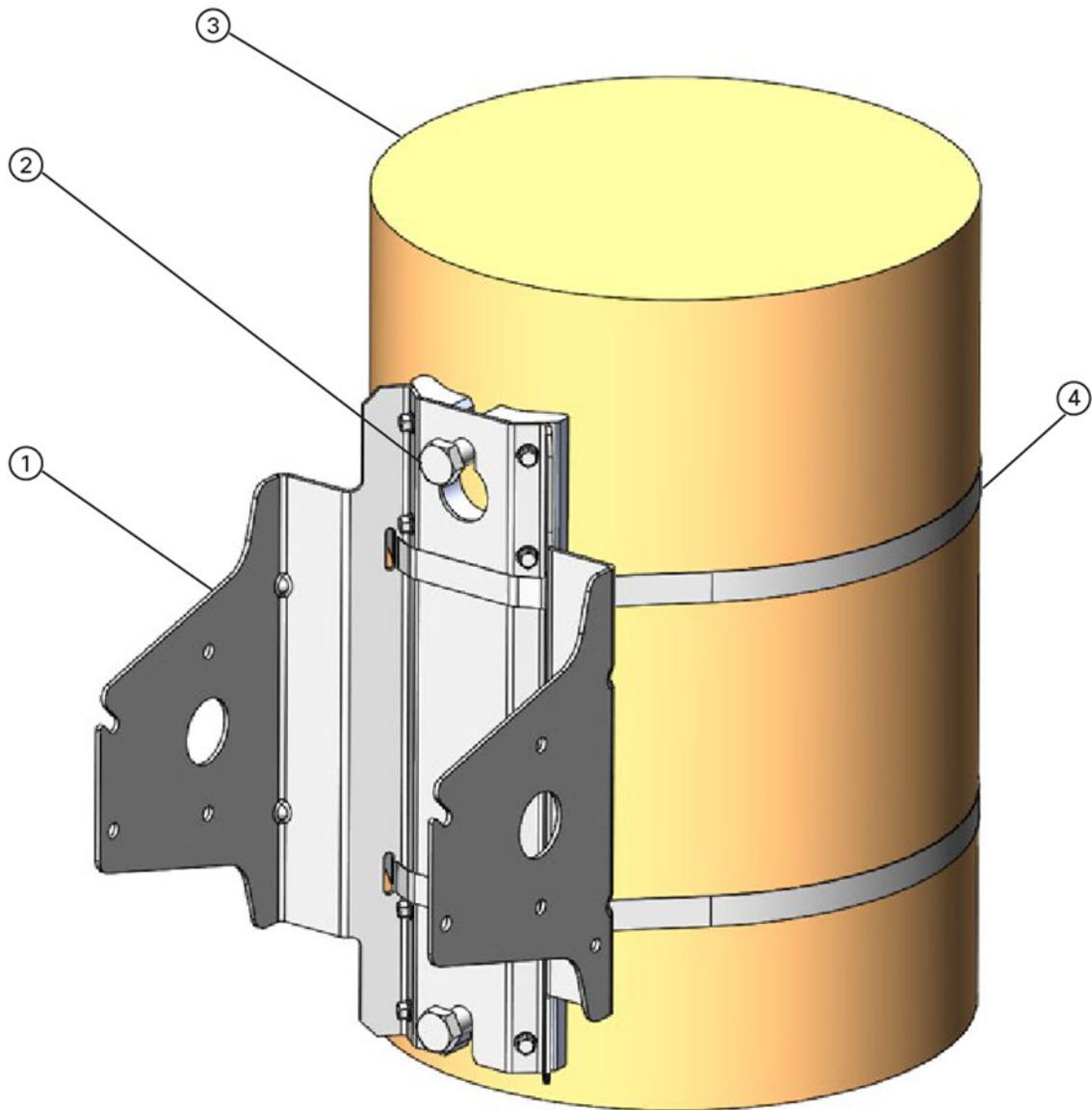


Item Number	Description
1	Mounting Bracket (CISCO-CGR-PM-BRKT)
2	1 1/4" Bolt (quantity of 8)
3	Adapter (quantity) of two

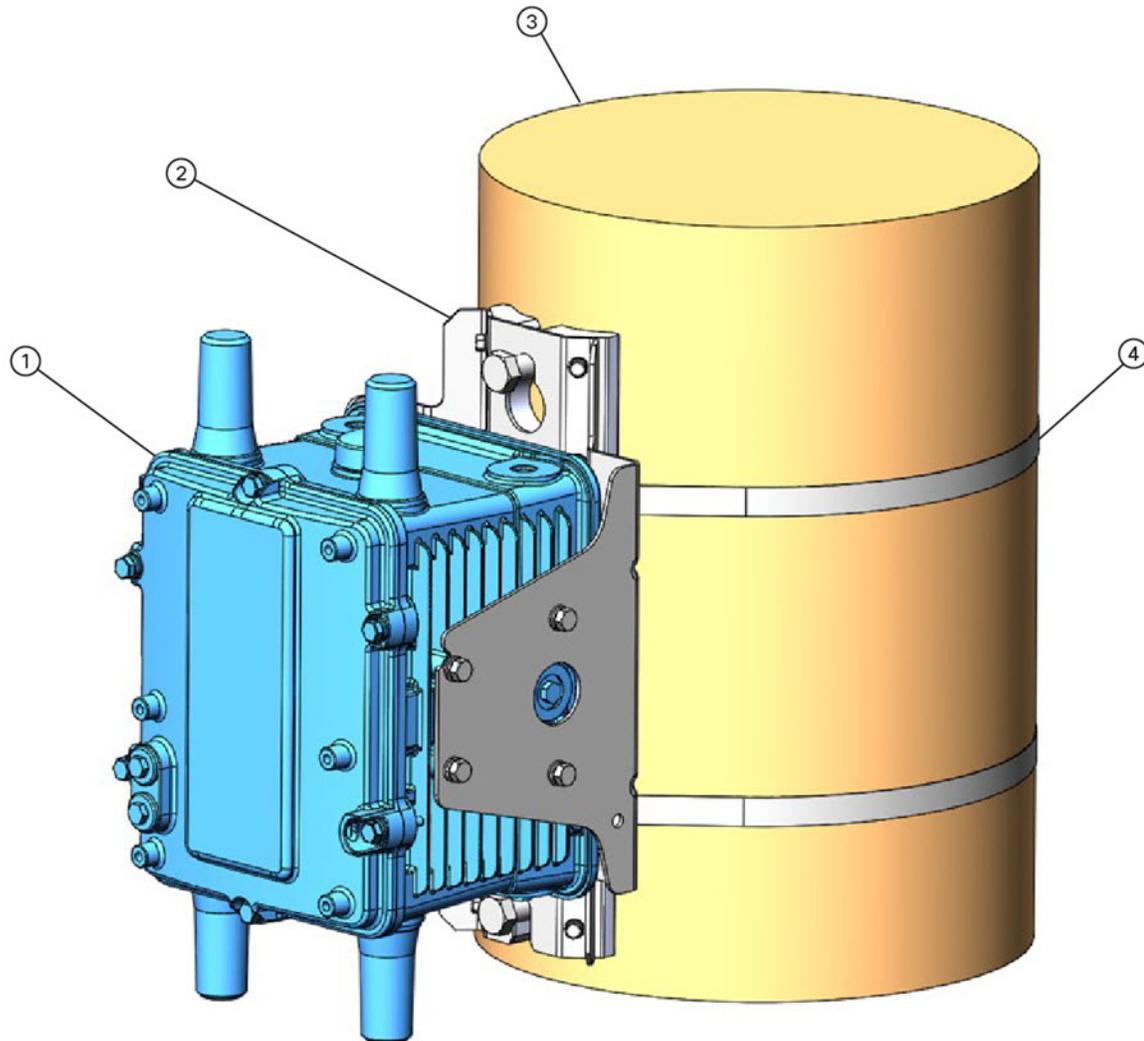
2. Attach the Mounting Bracket to a pole (wooden or metal) by following the pole-specific instructions below:
 - To attach the bracket to a Wooden Pole, you will need to attach the bracket using two (2) 5/8 inch bolts specified for wooden poles. In addition, you can also use Band-it strips on the wooden poles, if desired.

-
- To attach the bracket to a Metal Pole, use Band-it Straps as shown in [Figure 39 Attach the CGR1240 Custom, Simple Mounting Bracket to Wooden or Metal Pole](#), page 63.

Figure 39 Attach the CGR1240 Custom, Simple Mounting Bracket to Wooden or Metal Pole



Item Number	Description
1	Bracket Assembly
2	5/8" Bolts for wooden poles (Quantity of 2)
3	Pole (metal or wooden)
4	Band-it straps for metal or wooden pole



Item Number	Description
1	CGR 1240
2	Bracket Assembly with 5/8" Bolts for wooden poles (Quantity of 2 Bolts)
3	Pole (metal or wooden)
4	Band-it straps for metal or wooden pole

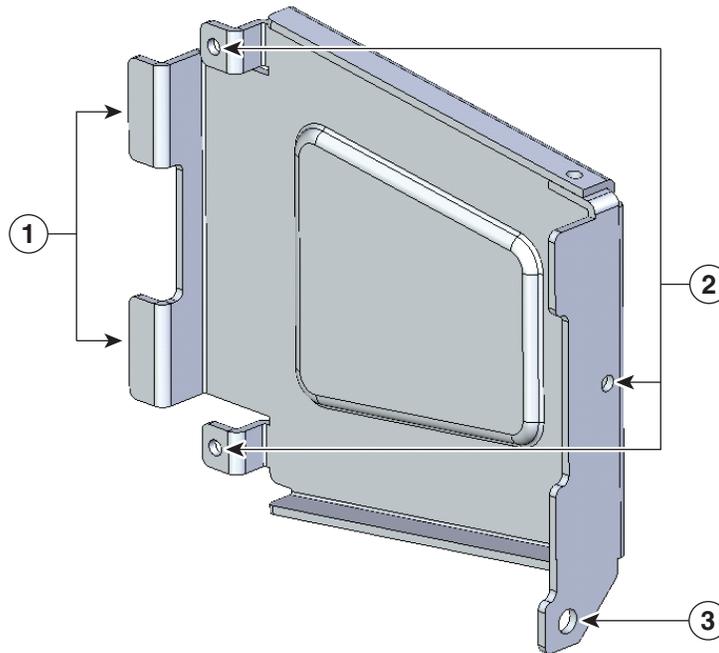
Install the Optional Security Panel

The Cisco includes an optional security panel. See [Mounting Bracket Kit, page 47](#). The security panel prevents unauthorized users from removing the router from the mounting bracket, and also prevents unauthorized access to the SD Card Slot (see [SD Card Slot Access for Bracket-Mounted Routers, page 69](#)).

Required Materials

- Security panel and the hardware (three 8-32 PNH screws) included in the mounting bracket kit.
- Phillips screwdriver

Figure 40 Security Panel Details



Item	Description
------	-------------

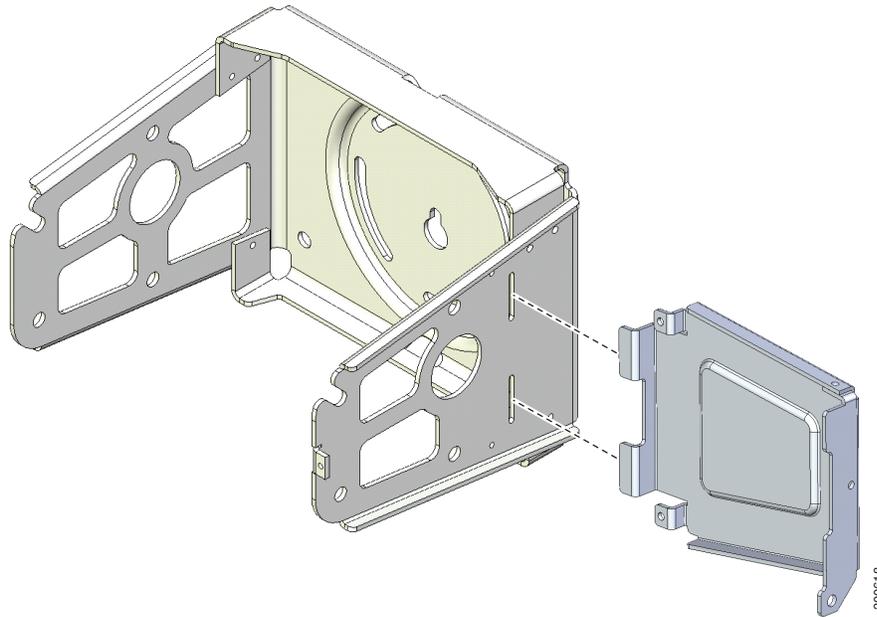
- | | |
|---|---|
| 1 | Insert the security panel tabs into the corresponding notches on the mounting bracket. |
| 2 | Secure the security panel to the bracket at these locations, using the screws included in the Mounting Bracket Kit, page 47 . |
| 3 | Insert the captive screw located in the router door lock block through this hole when closing the router door. |

To install and secure the security panel to the bracket and router:

1. Loosen the captive bolt that is located inside router door lock post. For lock post location, see [Figure 59 on page 82](#).
2. Install the security panel on the bracket by inserting the security panel tabs into the corresponding slots on the bracket as shown in [Figure 41 on page 66](#).

Note: For clarity, the router is not shown here. During this procedure, the router is mounted in the bracket.

Figure 41 Assemble Bracket and Security Panel

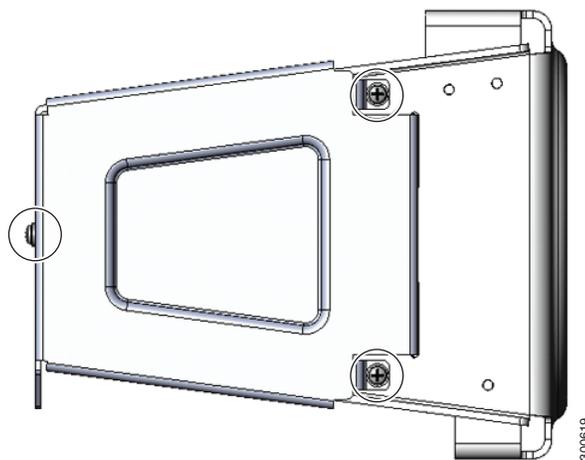


3. Swing the panel shut over the bracket, aligning the three screw holes on the panel with the corresponding holes on the bracket.
4. Insert the three security panel screws (included in the mounting bracket kit) and tighten using the Phillips screw driver (see [Figure 42 on page 66](#)).

The router door captive bolt inside the door lock post is aligned over the bracket hole as shown in [Figure 43 on page 67](#).

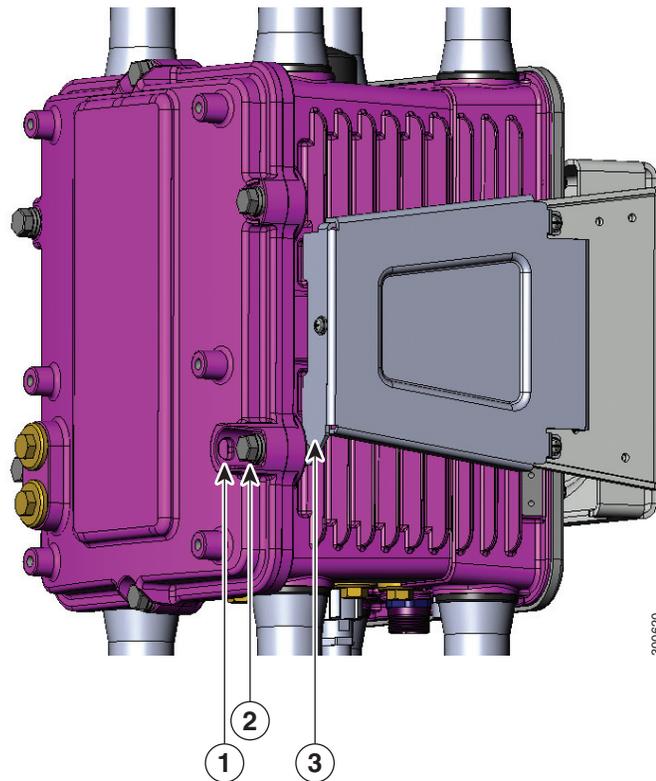
Note: For clarity, the router is not shown here. During this procedure, the router is mounted in the bracket.

Figure 42 Security Panel Attached to Bracket with Included Screws



5. Tighten the captive bolt (using 6-7 ft-lbs of torque) located inside the router door lock post (**2** in [Figure 43 on page 67](#)), ensuring the bolt extends into the security bracket (**3** in [Figure 43 on page 67](#)).

Figure 43 Router Door Closed with Security Panel Installed



6. Insert a lock that you provide through the router door lock post (Item 1 in [Figure 43 on page 67](#)).

The SD card can be accessed only by users who have access to the router door lock. The router can be removed from the mounting bracket only by users who have access to the router door lock.

Mounting the Router onto a Wall

The mounting bracket has wall-mount holes that you can use to mount the router directly onto a wall.

To mount the router on a wall, you must provide the hardware and anchors that can be used with the wall material in the installation environment.

Caution: The wall material and hardware that you use to mount the router must be able to support the weight of the router with two modules installed: **approximately 23.0 pounds (10.4 Kg)**. The bolts must support a minimum of 150 in-lbs of pull out moment (FoS not included).

Router Orientation When Mounting

When mounting the router onto a wall, ensure that the router is oriented with the chassis cabling openings pointing downward so the router cable hangs down.

Caution: Never mount the router with the bottom (facing up) or to the side.

Wall-Mount Location

Identify an area on a wall that meets the safety, space, and environmental requirements described in [Site Requirements, page 5](#).

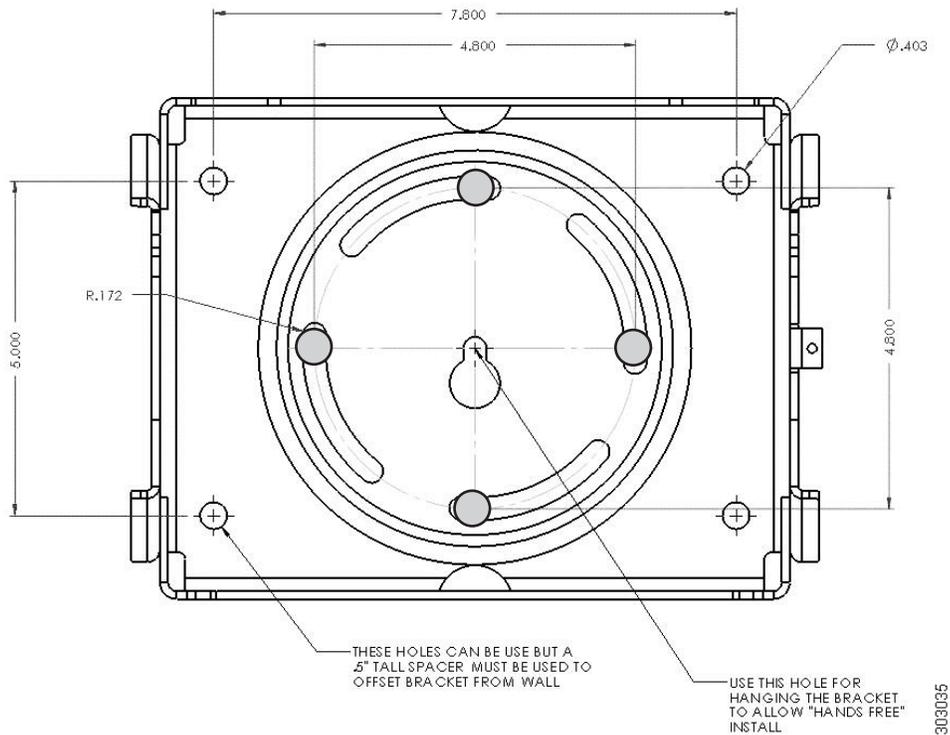
Wall-Mount Height

Mount the router at a height where you can view the top of the module-side panel, and at which the cables can be managed without adding stress to the router ports.

Wall-Mount Hardware Distance

Mount any reinforcement hardware that you provide to the wall the correct distance apart so that when the bolts are installed through the mounting bracket wall mount holes (Item 1, [Figure 44 on page 68](#)), they align with the holes in the wall.

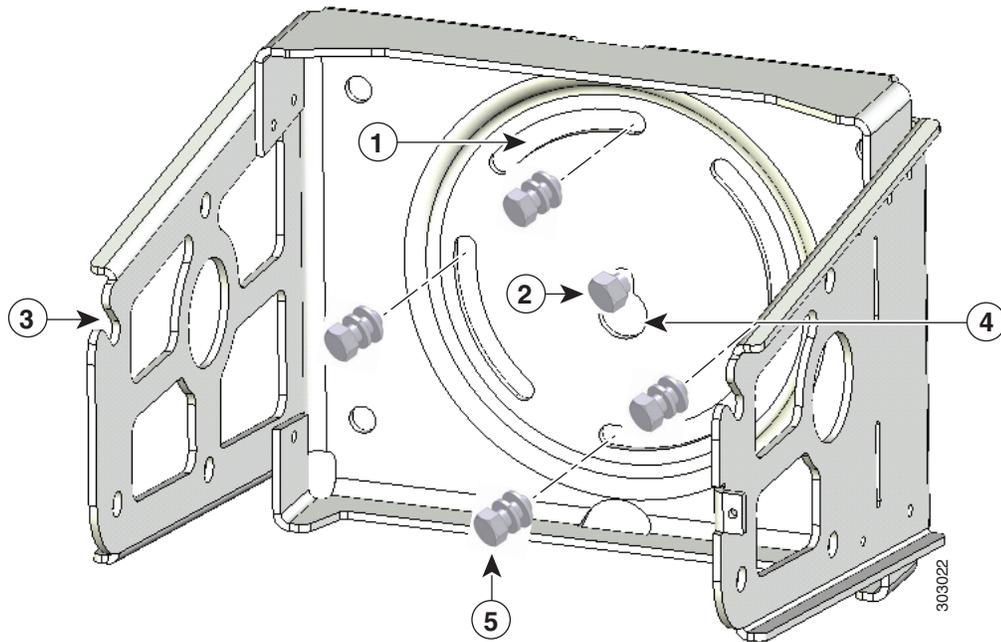
Figure 44 Distance for Wall-Mounting Hardware



Required Materials

- Mounting bracket. For bracket dimensions, see [Figure 44 on page 68](#) and [Figure 45 on page 69](#).
 - Socket wrench that you supply
 - 5/16th-in. or M8 bolts or equivalent (5) (customer supplied)
 - Bolt reinforcement hardware (for example, wall shoe anchor bolts) (5) (customer supplied)
1. Place the mounting bracket onto the location on the wall. Mark the locations of the four mounting holes and the one center hole.
 2. **(If Required)** Install the bolt reinforcement hardware onto the wall at the five hole locations.
 3. Install the bolt into the center hole location. Do not fully thread in; leave bolt extended about 1/4".
 4. Align the center hole of the mounting bracket over the previously installed bolt so that the bracket rests on the bolt.

Figure 45 Securing the Wall-mount Bracket to the Wall



Item	Description
1	Bracket: bolt holes (4)
2	Customer-supplied hardware: 5/16th-in. or M8 bolts or equivalent (1)
3	Mounting bracket (1)
4	Center mounting hole (1)
5	Customer-supplied hardware: 5/16th-in. or M8 bolts or equivalent (4) (same as #2 above)

5. Install the four mounting bolts through the bracket and into the wall.

Secure properly by hand-tightening in a star pattern order, beginning with the first bolt, tighten using the wrench. Torque based on hardware and wall material. Torque center bolt last.

6. Install the router onto the mounting bracket. See [Install the Router onto the Mounting Bracket, page 58](#).
7. Install the optional security panel.

SD Card Slot Access for Bracket-Mounted Routers

When the Cisco mounting bracket is attached the router according to the instructions in this section, the bracket blocks access to the SD card port slot the router exterior.

Note: You must open or remove the mounting bracket security panel to see or access the SD card port.

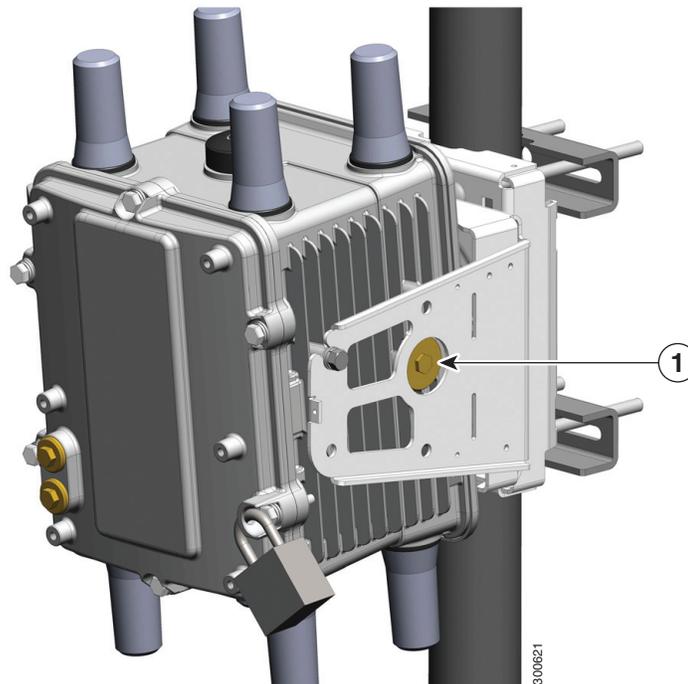
To access the SD card slot (1) without removing the router from the bracket or any mounting installation that uses the bracket (refer to [Figure 46 on page 70](#)):

1. On one side of the router, remove the three bolts shown in [Figure 37 on page 59](#).
2. Loosen but do not remove the fourth bolt that is inserted in the quick hang slot.

3. Repeat Step 1 through Step 2 on the other side of the router.
4. Tilt the bracket on the quick mount slot, as shown in [Figure 46 on page 70](#).

Caution: When you finish using the SD card slot, reinstall and tighten all eight bolts with 6-7 foot-pounds of torque. The router must be securely attached to the mounting bracket with four bolts on each side.

Figure 46 Tilt Mounting Bracket for SD Card Slot Access



Grounding Instructions

In all installations, after the router is mounted, you must properly ground the unit according to the instructions in this section before connecting network and power cables as described in the [Installing the Router, page 85](#).

Warning: This equipment must be externally grounded using a customer-supplied ground wire before power is applied. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 366

Warning: Installation of the equipment must comply with local and national electrical codes. Statement 1074

Grounding Hardware

The router is shipped with a grounding kit, shown in [Figure 47 on page 71](#).

Figure 47 Router Grounding Kit Contents



Item	Description	Qty.
1	Grounding lug	1
2	Screws	2

Materials You Supply

You must provide the tools listed in [Materials and Tools You Supply, page 50](#).

Ground the Router

Note: You can perform these steps when the mounting bracket security panel is installed.

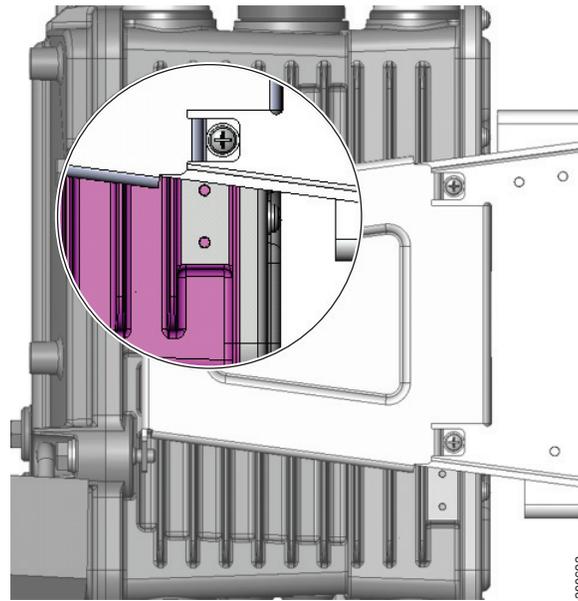
To ground the router:

1. Use the appropriate crimping tool or pliers to crimp the 6-gauge ground wire (included in the grounding kit) to the grounding lug.
2. Connect the grounding lug to the router chassis ground connection point shown in [Figure 48 on page 72](#) using the supplied grounding screws.

Note: Tighten the grounding screws to 20-24 in-lbs of torque. Do not overtighten!

3. If necessary, strip the other end of the ground wire and connect it to a reliable earth ground, such as a grounding rod or an appropriate grounding point on a pole that is grounded.

Figure 48 Grounding Lug Connectors (Chassis Ground Connection Point)



Bracket Dimensions

This section contains specifications for the Cisco mounting brackets used with the router, and includes:

- Mounting Bracket Dimensions, [Figure 49 on page 73](#)
- Mounting Bracket Security Panel Dimensions, [Figure 50 on page 73](#)
- Pole Plate Dimensions, [Figure 51 on page 74](#)
- Pole Mount Plate Clamp Dimensions, [Figure 52 on page 74](#)

Figure 49 Mounting Bracket Dimensions

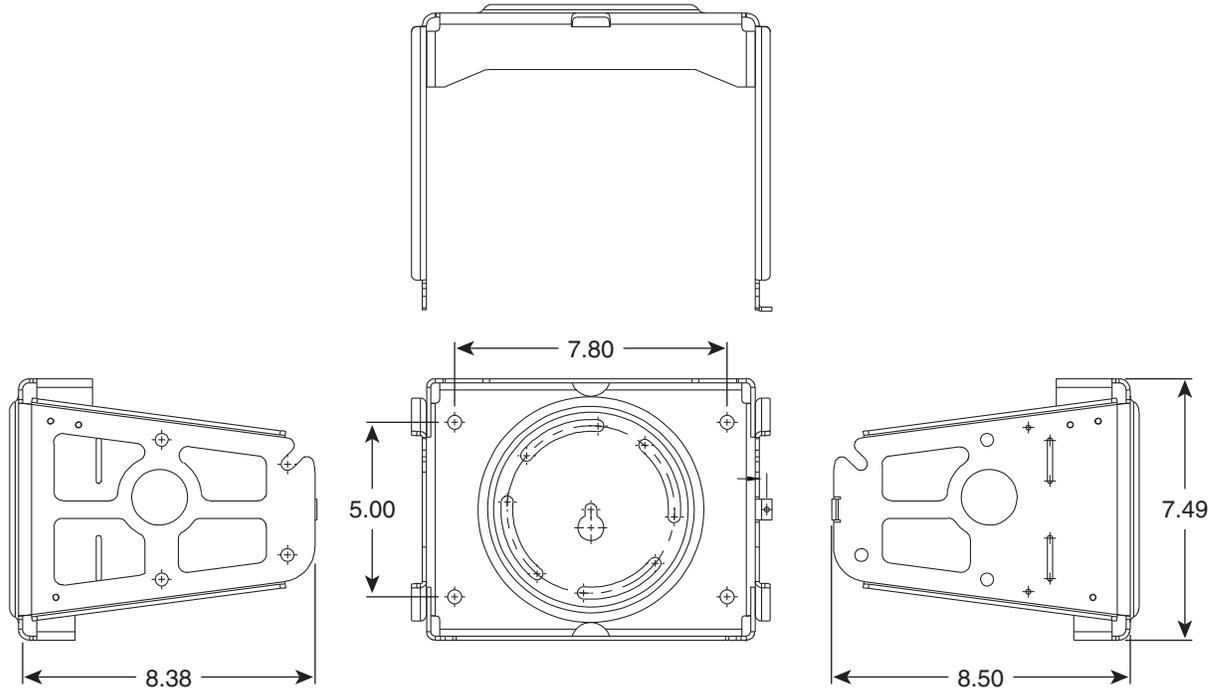


Figure 50 Mounting Bracket Security Panel Dimensions

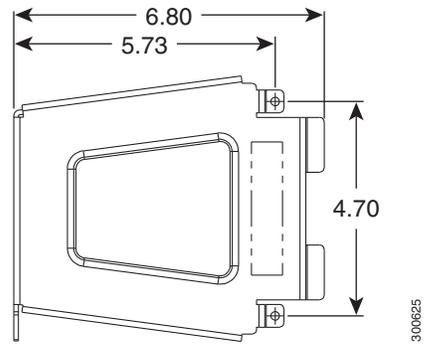
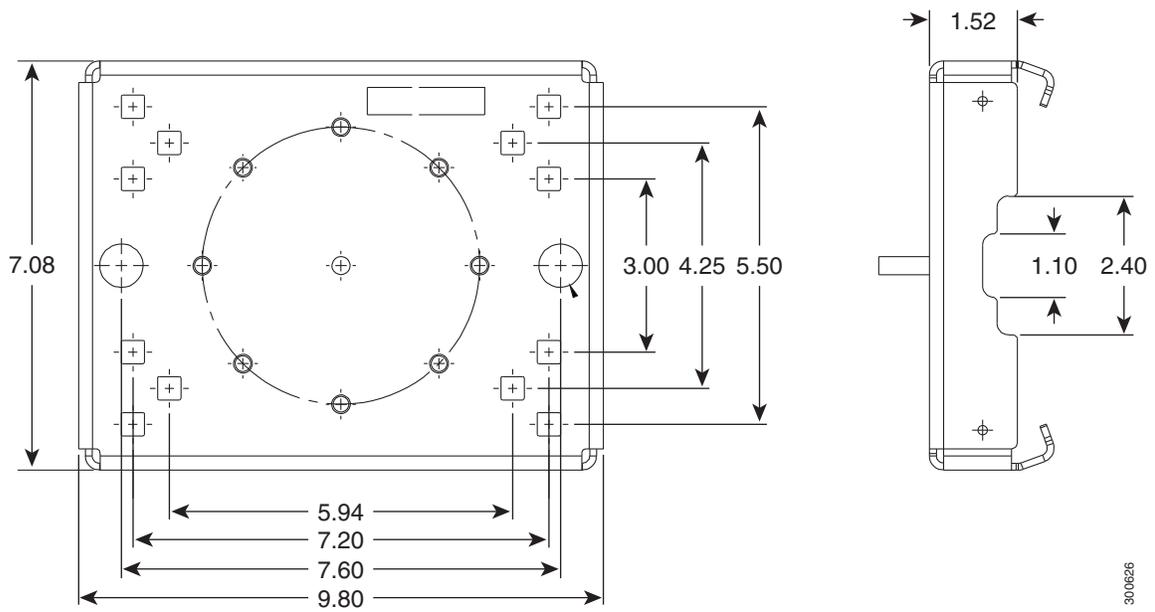
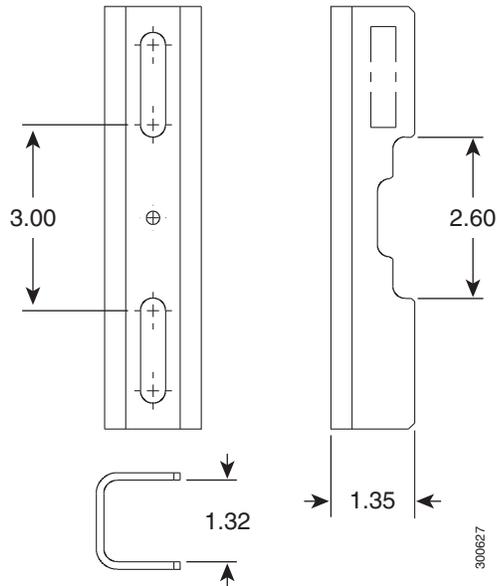


Figure 51 Pole Mount Plate Dimensions



300627

Figure 52 Pole Mount Plate Clamp Dimensions



300627