Cisco Beacon Point Module

Overview of Cisco Beacon Point Module

About Cisco Beacon Point Module

Cisco Beacon Point Module (AIR-RM-VBLE2-K9=) is a Bluetooth Low Energy beacon module that is mounted on supported access points. The APs now has the ability to provide Wi-Fi access as well as act as BLE Beacons for Bluetooth-integrated clients. With Cisco Beacon Point Module, smart client devices can receive different signal strengths from the multiple integrated beacon to improve location calculations.

Deploying Bluetooth-integrated APs is similar to Wi-Fi location based service solution. The recommended density for deploying the Bluetooth-integrated APs is one per 1500-to-2500 sq.ft. The optimum height for a Bluetooth-integrated APs is 13 to 15 ft (3.9 to 4.6m). Cisco Beacon Center requires the correct physical orientation, position, and height of Bluetooth-integrated APs for providing clients with indoor navigation, turn-by-turn guidance and proximity messaging for best indoor navigation experience.

Bluetooth-integrated APs connect with Cisco Beacon Center over the internet using secure HTTPS protocol. Bluetooth-integrated APs, each have a unique IP address just like any enterprise grade networking device. Bluetooth-integrated APs should connect with Cisco Beacon Center for management and control. For Bluetooth-integrated APs to communicate with the Cisco Beacon Center, outbound communications from Cisco Beacon Point Module to the cloud service using port 80 (TCP) and 443 (TCP) must be possible.

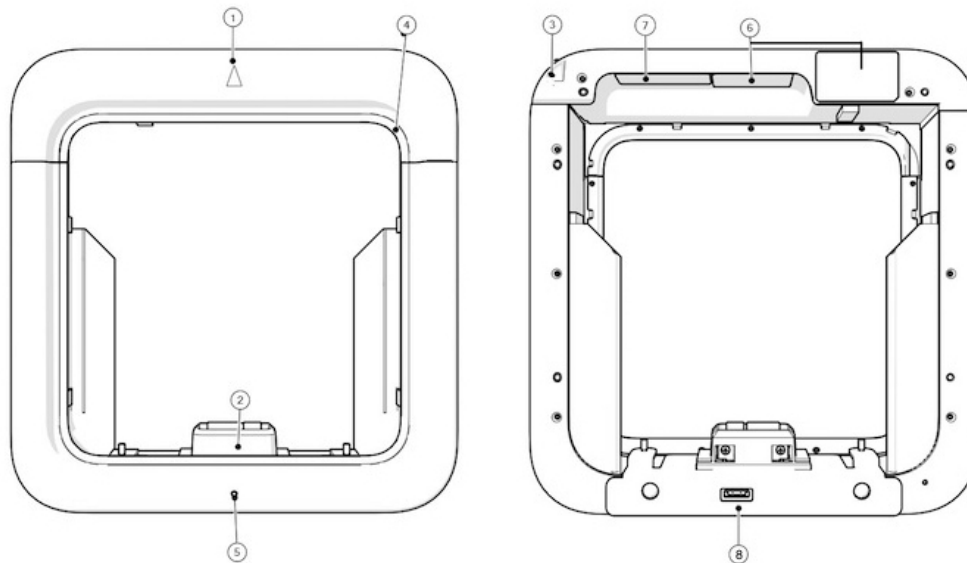*Figure 1: Cisco Beacon Point Module Front View (AIR-RM-VBLE2-K9=)*

Table 1:

Number	Description
1	Cisco Beacon Point Module pointing direction.
2	Host interface connector to access point. Draws power from the host bus interface with the access point.
3	Cisco Beacon Point Module swing arm latch screw.
4	Decorative gasket: • Retain the gasket when Cisco Beacon Point Module is attached to AP3802I • Remove and discard the gasket when Cisco Beacon Point Module is attached to AP3802E.
5	LED status indicator. A multicolor system status LED on the front-face of the unit. Note that you can vary (dim) the strength of this LED from the cloud settings.
6	Serial Number, MAC, Claim code labels
7	Regulatory labels
8	Console port (covered with mylar label at manufacturing).

Supported Access Points

The Cisco Beacon Point Module can be attached to the following APs:

- AP3802I

- AP3802E

Cisco Beacon Point Module Features

Cisco Beacon Point Module comes with the following features:

Table 2: Hardware Feature Summary

Feature	Description
LED indicators	A multicolor system status LED on the front-face of the unit. Note that you can vary (dim) the strength of this LED from the cloud settings.
Power Options	Draws power from the PCIe bus interface with the access point.

Technical Specifications

Table 3: Technical Specifications of Cisco Beacon Point Module

Feature	Description
Dimensions (of APs with Cisco Beacon Point Module)	285 mm x 275 mm x 61 mm 11.2 in. x 10.8 in. x 2.4 in.
Weight	1.4 kg (3.0 lbs)
Environmental	Fanless operation; passive cooling Nonoperating (storage) temperature: – 30 to 70℃ (– 22 to 158℉) Operating temperature: 0 to 40℃ (32 to 104℉) Operating humidity: 10 to 90% (noncondensing) Operating altitude: 10,000 ft (3048 m)
Power Dissipation	Less than 6 W

Cisco Beacon Point Module Model Number

Cisco Beacon Point Module is available in the following model:

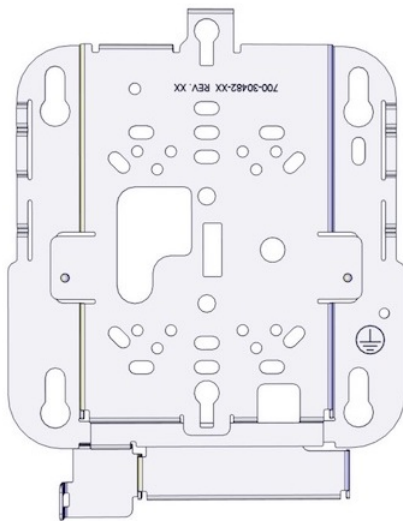*Table 4: Cisco Beacon Point Module Model Number*

Product ID	Description
AIR-RM-VBLE2-K9=	Cisco Beacon Point Module can be mounted on supported APs. Note that while the Cisco Beacon Point Module must be attached to supported APs, the Cisco Beacon Point itself is a standalone device.

Installing a Cisco Beacon Point
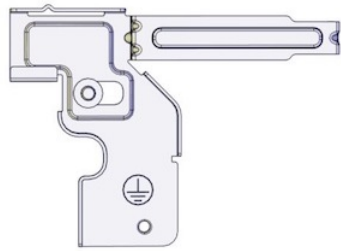
Unpacking the Cisco Beacon Point Module

Step 1   Unpack and remove Cisco Beacon Point Module and accessories from the shipping box.

Step 2   Return the packing material to the shipping and save it for future use.

Step 3   Record the Serial Number, MAC address and Claim code of the Cisco Beacon Point Module. You will need this information later to claim the Cisco Beacon Point Module from Cisco Beacon Center.

Step 4   Verify that you have received the following items. If an item is missing or is damaged, contact your Cisco representative or reseller for further instructions.

- Cisco Beacon Point Module

- AIR-AP-BRACKET-2—There is no need to replace an existing bracket with the one in the packaging.
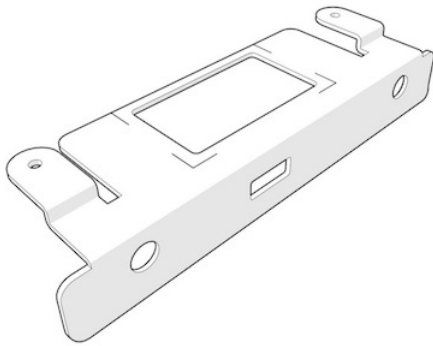
Figure 2: AIR-AP-BRACKET-2

- Locking Lever—Designed to lock the AP to AIR-AP-BRACKET-2 when the Cisco BPM is being pushed into the AP.

Figure 3: Locking Lever

• Strength Bracket with two screws.

Figure 4: Strength Bracket
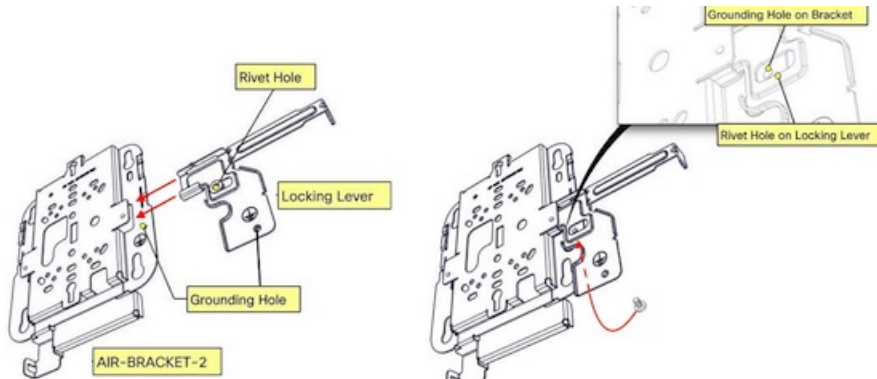

Attaching Locking lever to AIR-AP-BRACKET-2

• If the AIR-AP-BRACKET-2 is already attached to the ceiling and has an AP installed, uninstall the AP and remove ethernet cables.

• If AIR-AP-BRACKET-1 has been used, it must be detached and replaced with AIR-AP-BRACKET-2.

• If this is a fresh installation of an AP, follow these instructions to attach the locking lever to the AIR-AP-BRACKET-2 before installing it on to the ceiling.

Before you begin

You will need:

• Locking lever and supplied screw

• Philips screwdriver

• AIR-AP-BRACKET-2

Align and slide the Locking lever with the AIR-AP-BRACKET-2 until the grounding hole of the AIR-AP-BRACKET-2 aligns with the rivet hole of the Locking lever. Now using the screw supplied, attach the Locking lever to the AIR-AP-BRACKET-2.
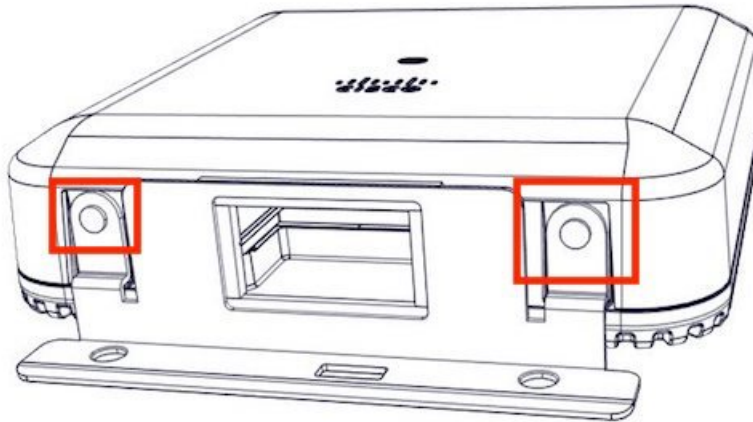

Installing Cisco Beacon Point Module and APs Separately
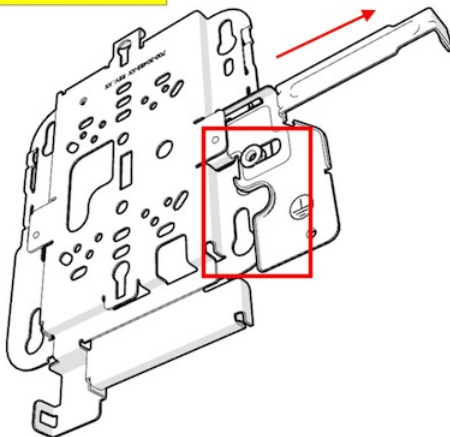
Before you begin

Ensure that the Locking lever is attached to the AIR-AP-BRACKET-2 as per the instructions in *Preparing AIR-BRACKET-2 for Cisco Beacon Point Module*. Remove the gasket piece when installing the Cisco AP 3802E.

Step 1 Attach the Strength bracket to the AP with the two screws provided. Ensure that you use the appropriate screw driver size so as to not to strip the cross grooves. Apply enough pressure to the screws to drive them all the way into the AP until the bracket is firmly attached to the AP.
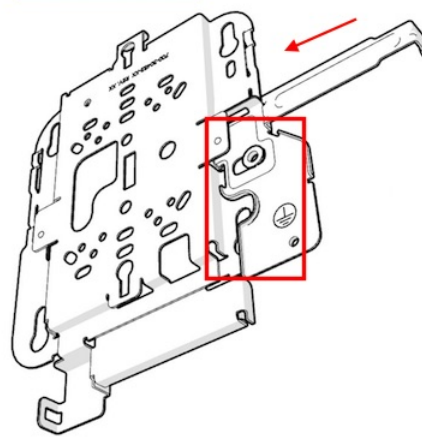
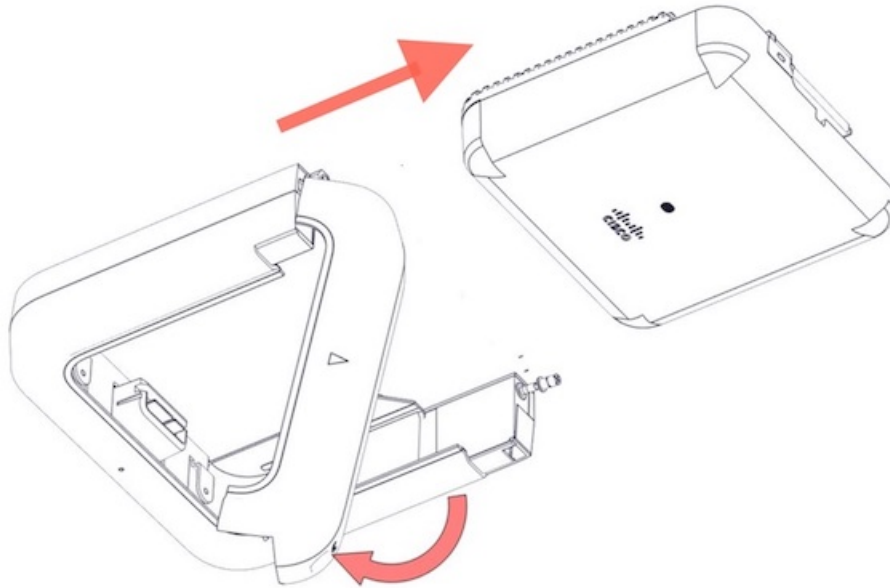**Step 2**   Leave the locking lever in the unlocked position.

Step 3   Now install the AP to the AIR-AP-BRACKET-2 as usual, ensuring that the AP snaps into the four holes of the bracket.

Step 4   Push the locking lever into the locked position to secure the unit. This secures and locks the AP in position during the installation of the Cisco Beacon Point Module in the next step.

Step 5   Now install the Cisco Beacon Point Module onto the AP. Loosen the captive screw on the Cisco Beacon Point Module handle and swing it open clockwise and all the way to the six-o-clock position. Slide the Cisco Beacon Point Module on to the AP until it snaps firmly on to the AP bracket, with the two dimples on Cisco Beacon Point Module snapping into the middle of the two bracket holes.
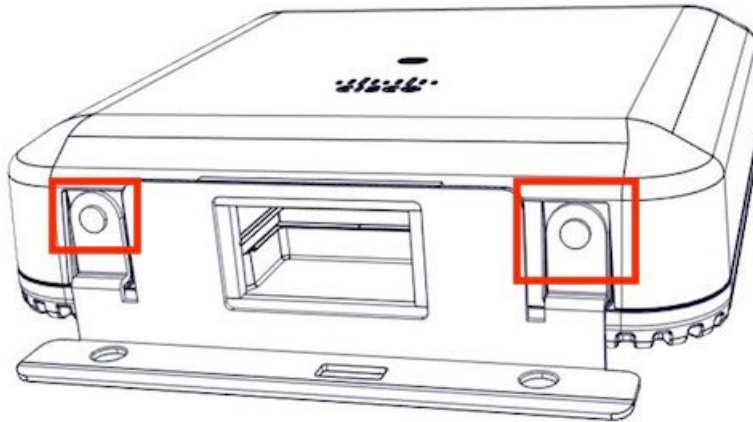
Step 6   Close the hinged door of the Cisco Beacon Point Module.

Step 7   Screw in the inset screw on the Cisco Beacon Point Module to secure the hinged door to the rest of the module.

Step 8   Claim the Cisco Beacon Point Module on the Cisco Beacon Center. You can observe the orientation of the Cisco Beacon Point Module on the Cisco Beacon Center. See the Cisco Beacon Center Configuration Guide.

Installing the Cisco Beacon Point Module to the AP and Mounting as a Combined Unit
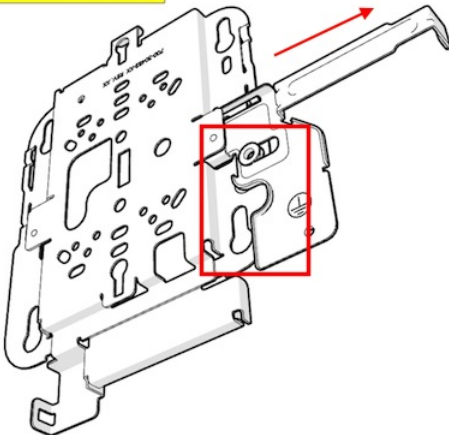
Before you begin

Ensure that the Locking lever is attached to the AIR-AP-BRACKET-2 as per the instructions in *Preparing AIR-BRACKET-2 for Cisco Beacon Point Module.* Remove the gasket piece when installing the Cisco AP 3802E.

Step 1   Attach the Strength bracket to the AP with the two screws provided. Ensure that you use the appropriate screw driver size so as to not strip the cross grooves. Apply enough pressure to the screws to drive them all the way into the AP until the bracket is firmly attached to the AP.
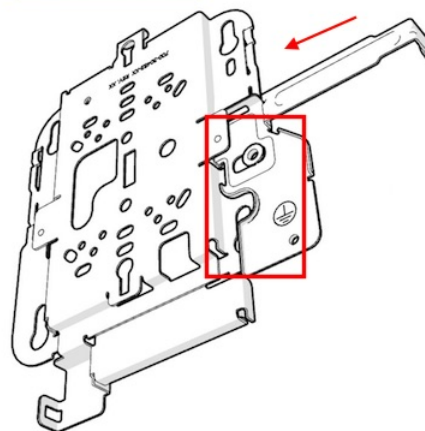
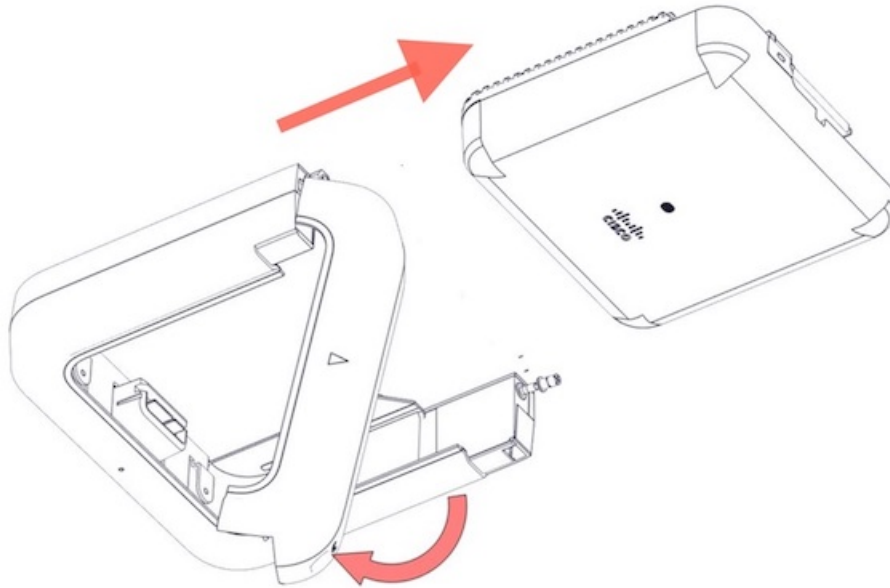**Step 2**   Leave the Locking lever in the unlocked position

Step 3   Now install the Cisco Beacon Point Module onto the unmounted AP. Loosen the captive screw on the Cisco Beacon Point Module handle and swing it open clockwise and all the way to the six-o-clock position. Slide the Cisco Beacon Point Module into the AP until it snaps firmly on to the AP bracket, with the two dimples on Cisco Beacon Point Module snapping into the middle of the two bracket holes.

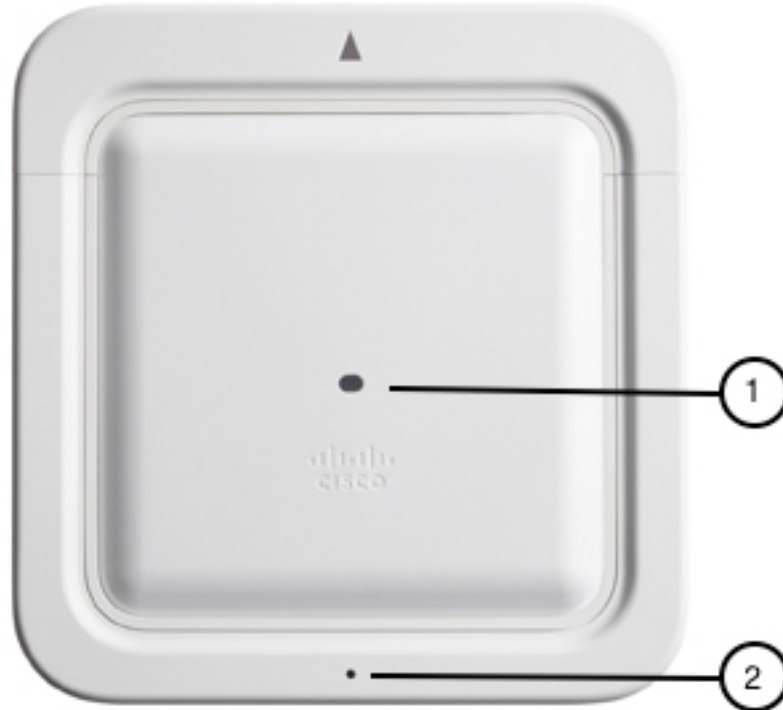**Step 4**   Close the hinged door of the Cisco Beacon Point Module.

Step 5   Screw in the inset screw on the Cisco Beacon Point Module to secure the hinged door to the rest of the module.

Step 6   Install the AP (installed with the Cisco BPM) on to the AIR-AP-BRACKET-2 as you would normally do, that is, align the screws at the base of the AP with the key holes of AIR-AP-BRACKET-2 and slide the AP onto the slots until it snaps into place.

Step 7   Push in the locking lever into the locked position to secure the unit. This will ensure safety during future unmouting.

Step 8   Claim the Cisco Beacon Point Module on the Cisco Beacon Center. You can observe the orientation of the Cisco Beacon Point Module on the Cisco Beacon Center. See the Cisco Beacon Center Configuration Guide

Uninstalling Cisco Beacon Point Module

- To uninstall the AP, unlock the locking lever, and then pull the AP out of the bracket.

- To remove the Cisco Beacon Point Module and keep the AP, ensure that the Locking lever remains in the locked position.

Cisco Beacon Point Module LEDs

Figure 5: Face of Cisco Beacon Point Module

1	Access Point Status LED
2	Cisco Beacon Point Module Status LED

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Note Small variations in color intensity and hue will be present from unit to unit. This is within the normal range of the LED manufacturer's specifications, and is not a defect.

Cisco Beacon Point status LED indicates various conditions, which are described in the table below:

Table 5: Cisco Beacon Point LED Status Indication

LED Color	Cisco Beacon Point LED Status
Blinking red	Module beginning a boot reset.
Alternating green and yellow	Module booting.
White	Module connecting to Cisco Beacon Center.
Green	Module configured by Cisco Beacon Center.

LED Color	Cisco Beacon Point LED Status
Blinking orange	Module upgrading software.
Alternating green and purple	Module being located on Cisco Beacon Center.
Solid red	Module failure mode.