



Appendix - Mounting and Grounding Access Points

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About Mounting

These mounting instructions describe the steps for mounting supported Cisco Business Wireless series Access Points in several configurations, including on a suspended ceiling, on a hard ceiling or wall, and above a suspended ceiling. The Mesh Extender can only be plugged into an AC outlet.

Preparing the AP for Installation

Before you mount and deploy your Access Point, we recommend that you perform a site survey (or use the site planning tool) to determine the best location to install your Access Point.

You should have the following information about your wireless network available:

- Access Point locations.
- Access Point mounting options: on a wall or a ceiling only.



Note You can mount the Access Point above a suspended ceiling but you must purchase additional mounting hardware. For additional information, see mounting and grounding sections for individual Access Point models in the later sections.

Access Points mounted in a building's environmental airspace must be powered using PoE to comply with safety regulations.

The CBW150AX Access Point model is powered through PoE and the CBW151AXM model is plugged directly into an AC source.

Cisco recommends that you make a site map showing Access Point locations so that you can record the device MAC addresses from each location and return them to the person who is planning or managing your wireless network.

Mounting the CBW150AX

The Cisco Business Wireless 150AX Access Point Access Points can be mounted in several configurations; on a suspended ceiling, on a hard ceiling or wall, or in the plenum air space above a suspended ceiling.



Note When mounting the Access Point in the plenum air space or above a suspended ceiling, it should be mounted on a vertical wall or with the face of the Access Point (having the status LED) directed downwards.

Mounting the Hardware

Mounting hardware for access points consists of brackets, which connect to the bottom of the Access Point, and ceiling grid clips, which connect the bracket to a suspended ceiling. The bracket that you need depends on the mounting location for the Access Point. The ceiling grid clip that you need depends on the type of suspended ceiling where you need to install the Access Point. You don't need ceiling grid clips if you are mounting the Access Point to a hard-surface ceiling or a wall.

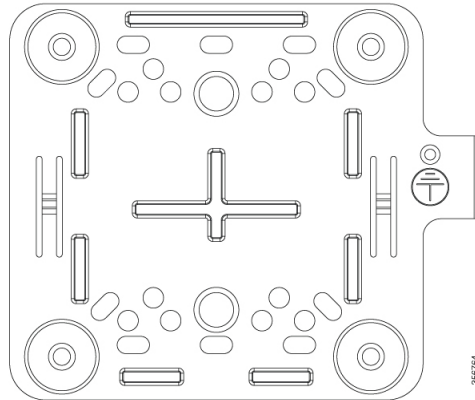


Note The ceiling grid clip is not included in the original packaging and must be ordered separately.

Mounting Brackets

The standard mounting hardware supported by the Access Point is a mounting bracket (Part #74-123953-01) for ceiling and wall with 4 expansion screws. You can fasten the bracket to the wall or ceiling using these screws.

Figure 1: Low-profile bracket installed on an Access Point



Mounting an Access Point on a Hard Ceiling or a Wall

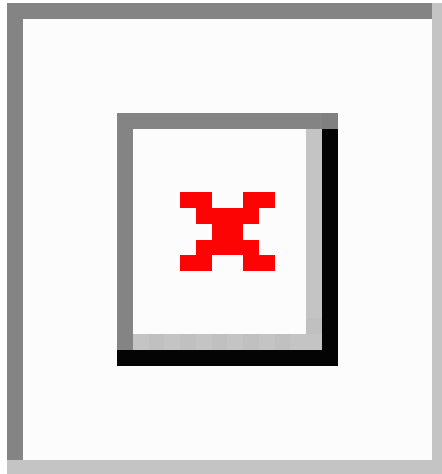
This section describes the steps required to mount the Access Point on a ceiling or wall constructed of 3/4-in (19.05-mm) or thicker plywood using #8 fasteners using the mounting bracket.



Note Access points with integrated antennas perform best when the Access Point is mounted on horizontal surfaces such as a table top or ceiling. For advanced features such as voice, location, and rogue Access Point detection, ceiling mounting is strongly recommended. However, for smaller areas such as conference rooms, kiosks, transportation environments, or hot-spot usage where data coverage is the primary concern, the unit may be wall mounted using wall anchors or screws.

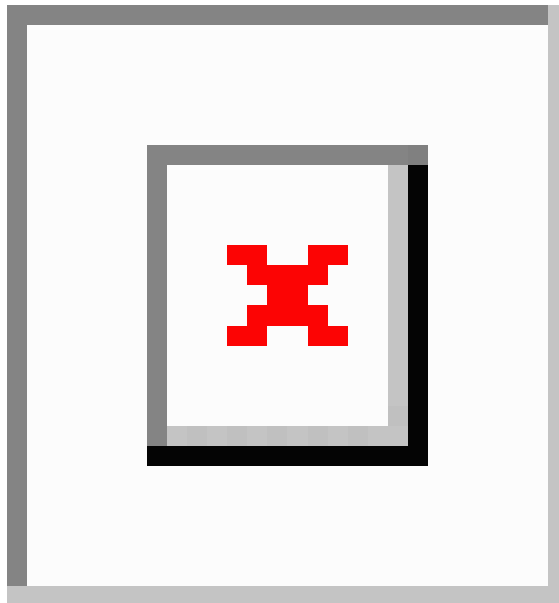
To mount the Access Point on a solid ceiling or wall, follow the steps below.

1. Use the mounting bracket as a template to mark the locations of the mounting holes on the bracket.
 - Be sure to mark all four locations. To ensure a safe and secure installation, make sure you are using adequate fasteners and mount the Access Point using no less than four fasteners.
 - Do not use plastic wall anchors or the keyhole slots on the mounting bracket for ceiling installations. When mounting the Access Point on a hard ceiling, use four fasteners capable of maintaining a minimum pullout force of 20 lbs (9 kgs).
2. Use a #29 drill (0.1360-in. [3.4772 mm]) bit to drill a pilot hole at the mounting hole locations you marked.



The pilot hole size varies according to the material and thickness you are fastening. Cisco recommends that you test the material to determine the ideal hole size for your mounting application.

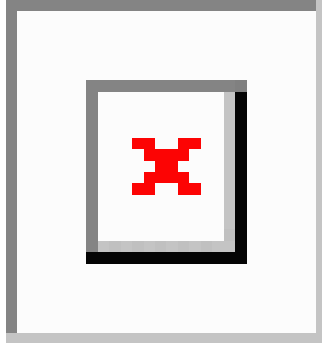
3. (Optional) Drill or cut a cable access hole large enough for the Ethernet cable and the building ground wire.
4. (Optional) Use the ground screw to attach the building ground wire to the mounting bracket. See [Grounding an Access Point, on page 7](#) for general grounding instructions.
5. Position the mounting bracket mounting holes (with indents down) over the pilot holes.
6. Insert a fastener into each mounting hole and tighten.
7. Connect the Ethernet cable to the Access Point.
8. Align the bracket feet over the keyhole mounting slots on the Access Point.



9. Gently slide the Access Point onto the mounting bracket keyhole slots until it clicks into place.



10. Fasten the Access Point to the bracket using the M2 x 5.5mm Torx security screw. Cover it with the mylar label.



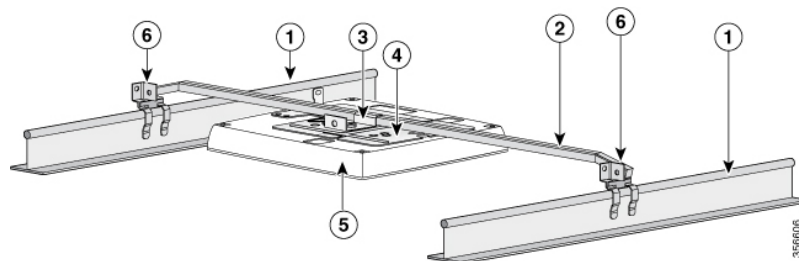
Mounting an Access Point Above a Suspended Ceiling

Using third-party accessories (not offered by Cisco) you can mount an Access Point above a suspended ceiling.



- Note** Install access points above ceiling tiles only when mounting below the ceiling is not an option. Mounting access points above the ceiling can interfere with advanced wireless LAN features that depend on uniform coverage, such as voice and location.

Figure 2: T-Bar Grid Mounting Bracket Parts



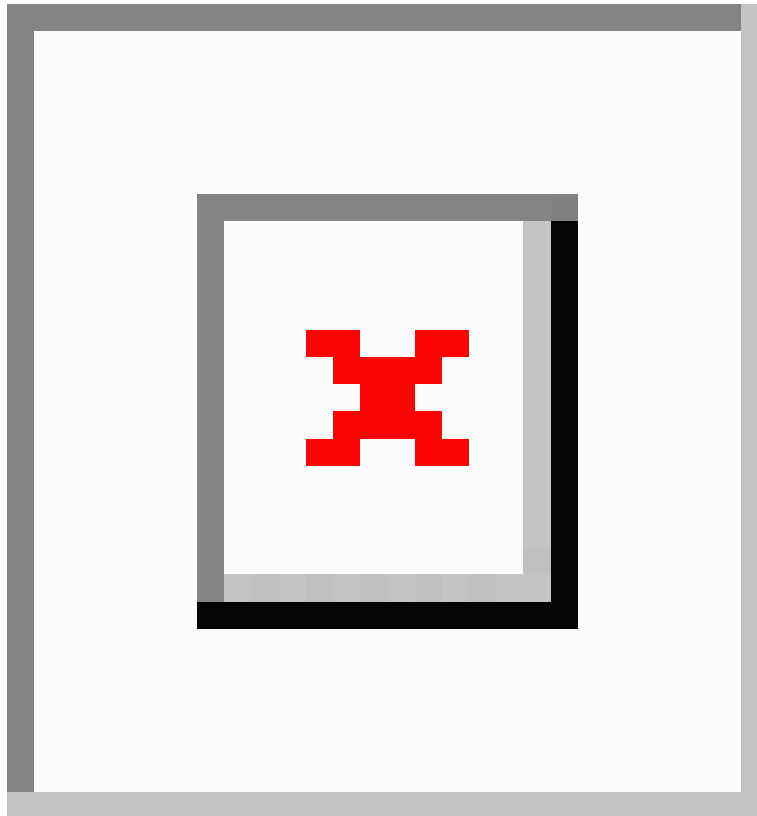
1. Suspended ceiling T-rail
2. Box hanger
3. Box hanger clip
4. Mounting bracket
5. Access Point
6. T-rail clip

To mount the Access Point above a suspended ceiling, follow the steps below.

1. Remove a ceiling tile next to the mounting location.

2. Fasten the Access Point mounting bracket to the box hanger using the clip or screws provided with the box hanger kit.
3. Connect the Ethernet cable to the Access Point.
4. Align the bracket feet over the keyhole mounting slots on the Access Point.
5. Slide the Access Point onto the mounting bracket until it clicks into place.
6. Attach the T-rail clips on each end of the T-bar box hanger to the ceiling rails. Make sure the clips are securely attached to the T-rails.
7. Fasten the Access Point to the bracket using the M2 x 5.5mm Torx security screw. Cover it with the mylar label.
8. Replace the ceiling tile.

Mounting the CBW151AXM



CBW151AXM Mesh Extender can be directly plugged into AC power wall socket power outlet, providing 120~240V AC, 50~60Hz power.

Grounding an Access Point

Grounding is not always required for indoor installations because Cisco Business Access Points are classified as low-voltage devices and do not contain internal power supplies. We recommend that you check your local and national electrical codes to see if grounding is a requirement.

Although grounding is not mandatory for indoor Access Points, it is required in certain scenarios. It has been observed that an ungrounded indoor Access Point that is mounted too close to an electromagnetic source of interference (such as a fluorescent light that is on) may reboot suddenly or suffer hardware damage. This occurs even if the indoor AP is in close proximity to the electromagnetic source of interference, and not touching the source. Grounding the corresponding Access Point or the mounting bracket helps prevent this issue from occurring. We recommend that a certified electrical technician verify whether your installation requires grounding.

If grounding is required in your area or you wish to ground your Access Point, do the following:

SUMMARY STEPS

1. Find a suitable building grounding point as close to the Access Point as possible.
2. Connect a user-supplied ground wire to the building grounding point. The wire should be a minimum of #14AWG assuming a circuit length of 25 ft (30.5 cm). Consult your local electrical codes for additional information.
3. Route the ground wire to the Access Point.
4. Attach the wire to a suitable grounding O-ring lug.
5. Crimp or solder the wire to the lug.
6. Insert the grounding post screw into the O-ring lug and install it on the mounting bracket as shown in the figure above.
7. Use a Phillips screwdriver to tighten the ground screw.

DETAILED STEPS

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|---------------|---|
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| Step 5 | Crimp or solder the wire to the lug. |
| Step 6 | Insert the grounding post screw into the O-ring lug and install it on the mounting bracket as shown in the figure above. |
| Step 7 | Use a Phillips screwdriver to tighten the ground screw. |
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