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27014400 Indoor 2.4 GHz & 5 GHz Single-Polarized Omnidirectional Antenna (H360 V110 G3&H360 V110 G5)

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50.1 27014400 Technical Specifications

Appearance and Structure

Figure 50-1 Appearance of the 27014400 Indoor 2.4 GHz & 5 GHz Single-Polarized Omnidirectional Antenna (H360 V110 G3 & H360 V110 G5)

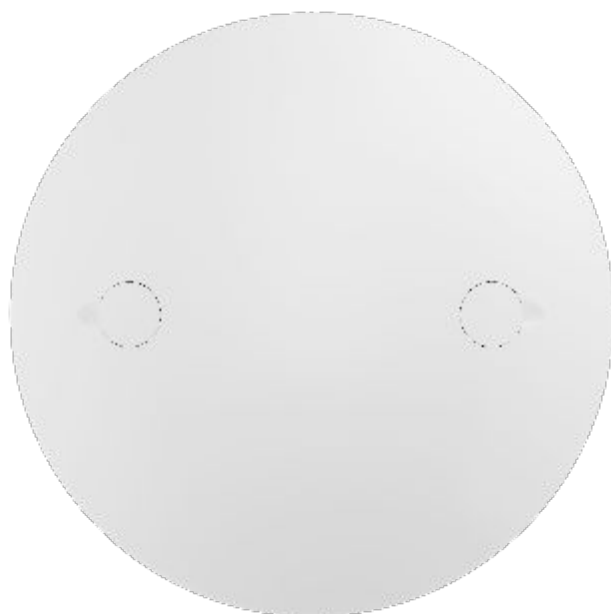


Figure 50-2 Structure of the 27014400 Indoor 2.4 GHz & 5 GHz Single-Polarized Omnidirectional Antenna (H360 V110 G3 & H360 V110 G5)



Technical Specifications

Table 50-1 Technical specifications of the 27014400 Indoor 2.4 GHz & 5 GHz Single-Polarized Omnidirectional Antenna (H360 V110 G3 & H360 V110 G5)

Item	Details
Part Number	27014400
Model	ANTDG0405A1SR
Description	Omni-directional Antenna, 2400-2500MHz&5150MHz-5850MHz, 3dBi&5dBi,linear,omni,5W,SMA-K,with bracket,with bracket
Frequency [MHz]	2.4G: 2400-2500 5G: 5150-5850
Antenna gain [dBi]	2.4G: 3 5G: 5
Horizontal beamwidth [degrees]	360 degrees
Vertical beamwidth [degrees]	110 degrees
Standing wave ratio (SWR)	≤ 2
Polarization	Linear polarization
Antenna connector	SMA-K
Antenna dimensions [mm(in.)]	Diameter x Height: 104 mm x 19 mm (4.09 in. x 0.75 in.)
Weight without packaging [kg(lb)]	0.07 kg (0.15 lb)
Installation type	• Ceiling • Wall
Antenna note	The gain and lobe width are typical values. The actual values are within a range. For details about the specifications, see the data sheet.

Antenna's Radiation Pattern

Figure 50-3 Antenna Pattern1 of the 27014400 Indoor 2.4 GHz & 5 GHz Single-Polarized Omnidirectional Antenna (H360 V110 G3 & H360 V110 G5)

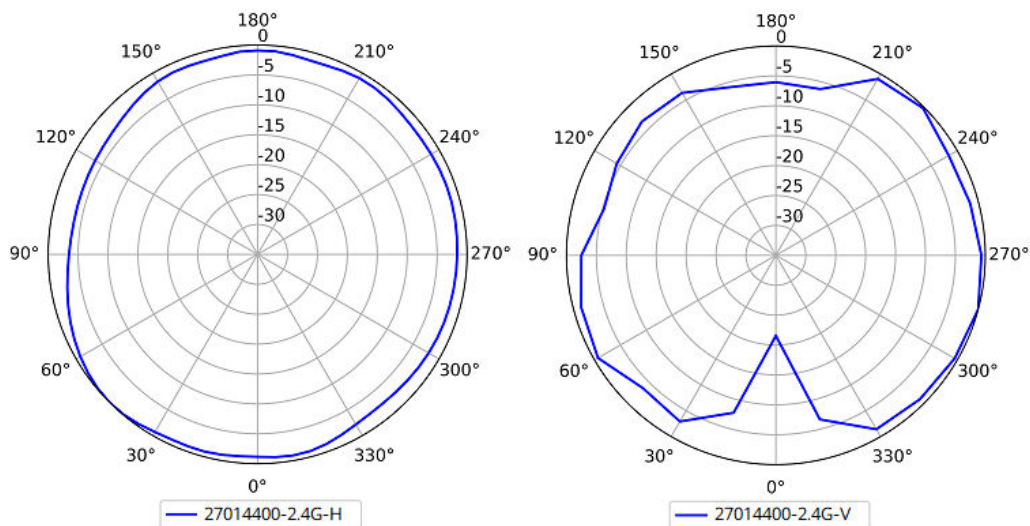
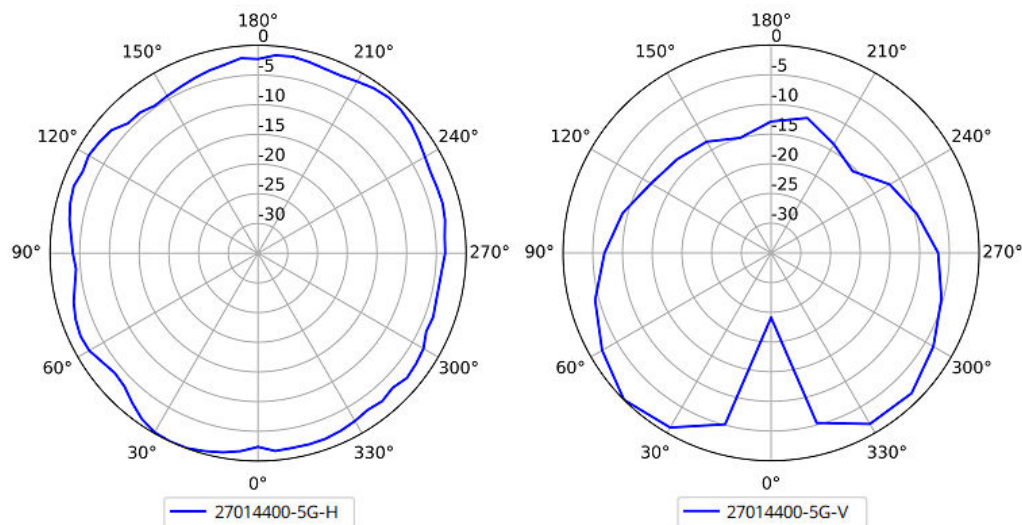


Figure 50-4 Antenna Pattern2 of the 27014400 Indoor 2.4 GHz & 5 GHz Single-Polarized Omnidirectional Antenna (H360 V110 G3 & H360 V110 G5)



50.2 27014400 Antenna Installation

The 27014400 antenna is a distributed antenna and applies to zero-roaming distributed scenarios.

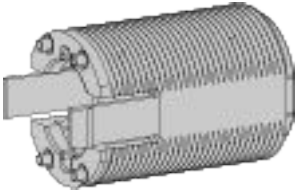
50.2.1 (Recommended) Ceiling Mounting

Background

It is recommended that you install an AU on the ceiling by using a nut plate and a stud. If the RF feeder is long enough and the construction conditions permit,

ceiling mount the AU in the center of the room to achieve better coverage. Keep the excess of feeders on the AU side.

The following table lists the required auxiliary materials.

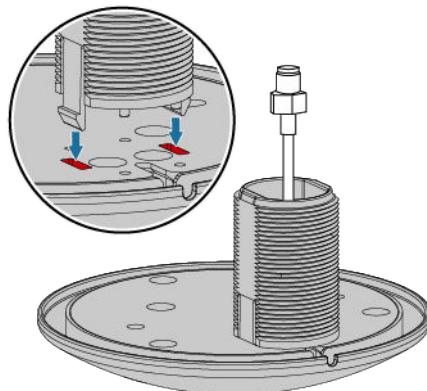
Name	Quantity	Description
Stud (diameter: 28 mm) 	1	Clamped to the rear of the AU and put through the ceiling.
Nut plate 	1	Used to clamp the AU to the ceiling.

If it is inconvenient to tighten the nut plate on the ceiling, prepare two sets of hollow wall anchors or toggle bolts and install the AU on the ceiling. For details, see [50.2.3 Description of Mounting an AU on a Plasterboard Ceiling](#).

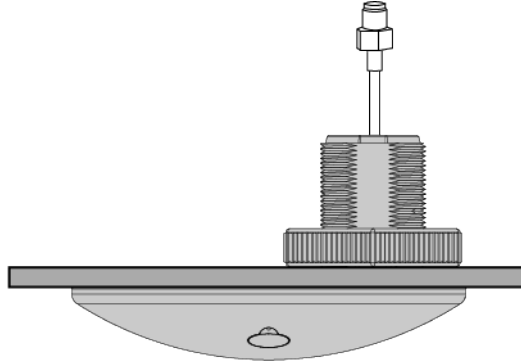


Procedure

- Step 1** Lead the RF feeder at the rear of the AU through the stud, and then fasten the stud to the AU.

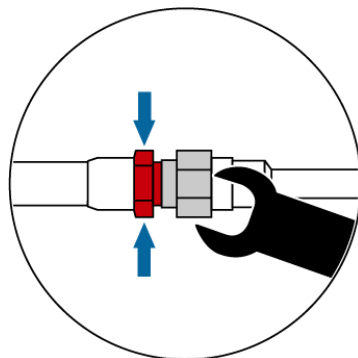


- Step 2** In the selected installation position, use a hole driller to drill a hole with a diameter of 30 mm on the ceiling.
- Step 3** Lead the stud fastened to the AU through the hole in the ceiling, and then use a nut plate to tighten the stud on the back of the ceiling.



- Step 4** Connect the RF feeder of the AU to the pre-routed RF feeder connected to an ORU.

Use a torque wrench to tighten the feeder connector with a torque of 1 N·m. Before tightening the torque wrench, secure the connector by referring to the following figure.



If the ORU is powered on, the white indicator for the RF port on the ORU is on after the AU is connected to the ORU, as shown in the following figure.



----End

50.2.2 Wall Mounting

Background

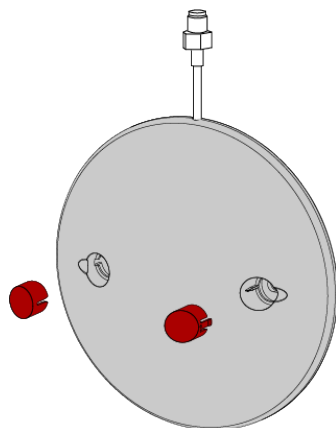
If the RF feeder is long enough and the construction conditions permit, deploy the AU in the center of the room to achieve better coverage. Keep the excess of feeders on the AU side.

The following table lists the required auxiliary materials.

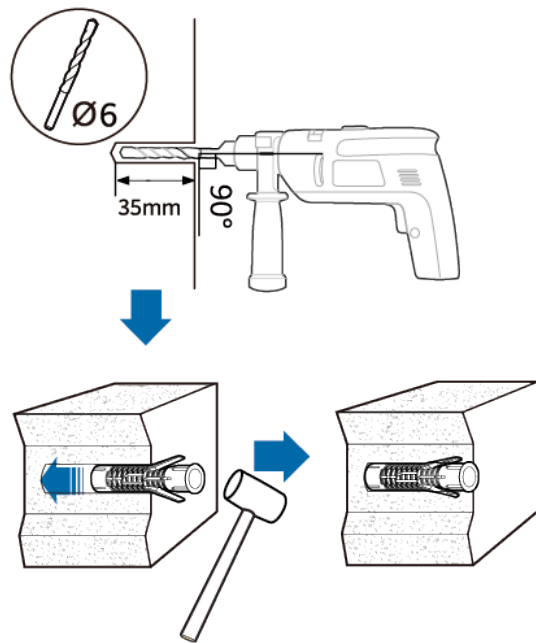
Name	Quantity	Description
ST3.5 expansion screw + expansion tube	2	Used to secure an AU to the wall.

Procedure

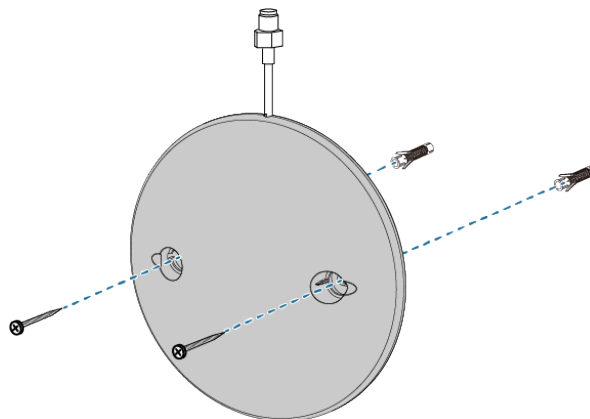
- Step 1** Use a tool, such as tweezers, to remove the caps from the two screw holes on an AU.



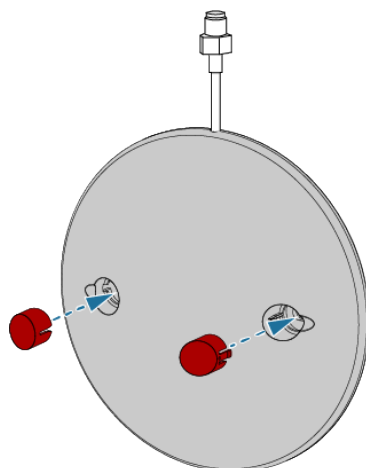
- Step 2** Place the AU against the wall according to the direction of the feeder, and then use a marker to mark the positions for drilling holes (with a horizontal spacing of 60 mm).
- Step 3** Drill holes at the marked positions. Hammer the expansion tubes into the holes until the expansion tubes are flush with the wall.



Step 4 Secure the AU to the wall using self-tapping screws.

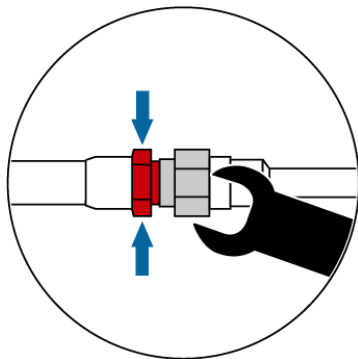


Step 5 Place caps on the screw holes.



Step 6 Connect the RF feeder of the AU to the pre-routed RF feeder connected to an ORU.

Use a torque wrench to tighten the feeder connector with a torque of 1 N·m. Before tightening the torque wrench, secure the connector by referring to the following figure.



If the ORU is powered on, the white indicator for the RF port on the ORU is on after the AU is connected to the ORU, as shown in the following figure.



----End

50.2.3 Description of Mounting an AU on a Plasterboard Ceiling

Background

For a plasterboard ceiling with a thickness of 10 mm to 25 mm, if it is inconvenient to tighten the nut plate on the plasterboard ceiling, prepare two sets of hollow wall anchors or toggle bolts and matching tapping screws for installing the AU. The method of securing an AU is similar to that of installing an AU on the wall.

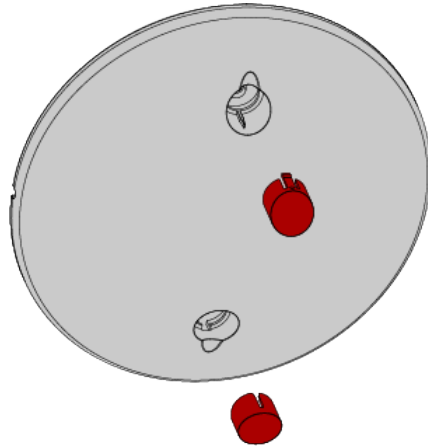
Figure 50-5 Hollow wall anchors and toggle bolts + tapping screws



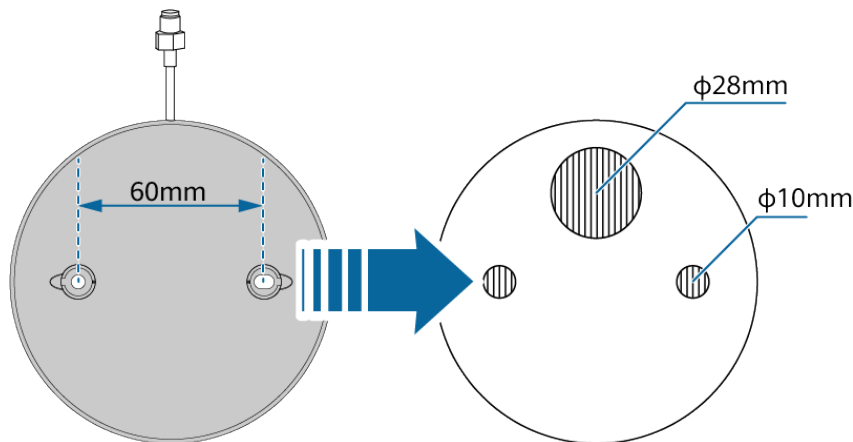
Procedure

This section uses a toggle bolt as an example to describe the installation procedure.

- Step 1** Use a tool, such as tweezers, to remove the caps from the two screw holes on an AU.

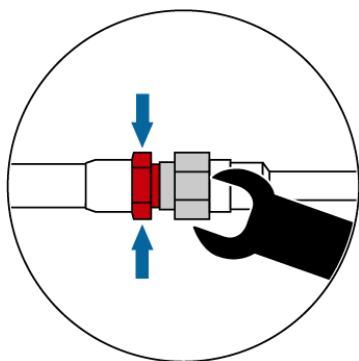


- Step 2** Drill two small holes and one large hole on the plasterboard ceiling by referring to the outline and holes of the AU.



- Step 3** Lead the pre-routed feeder out of the big hole and connect it to the RF feeder of the AU.

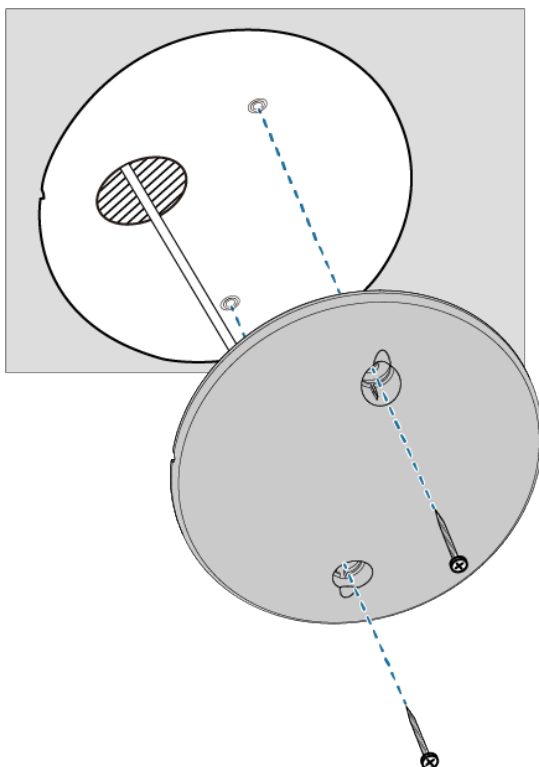
Use a torque wrench to tighten the feeder connector with a torque of 1 N·m. Before tightening the torque wrench, secure the connector by referring to the following figure.



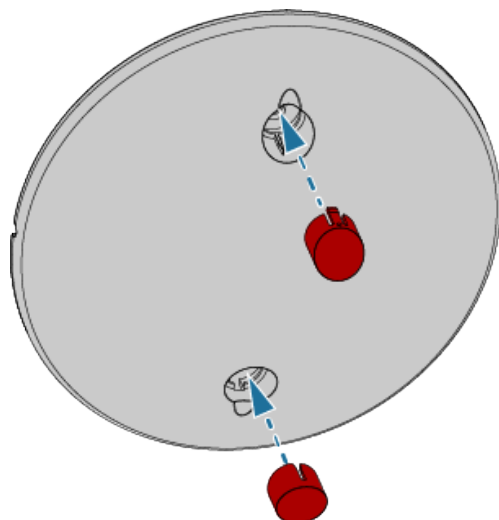
If the ORU is powered on, the white indicator for the RF port on the ORU is on after the AU is connected to the ORU, as shown in the following figure.



Step 4 Insert the expansion tubes into the two small holes and hammer two self-tapping screws into the tubes to fix the AU.



Step 5 Place caps on the screw holes.



----End