Contents

1 H3C ANT-2510P-M4 directional antenna user guide

About the antenna

The ANT-2510P-M4 dual-band directional antenna is used outdoors. It uses a type N male connector for connecting to a device.

Figure1-1 Antenna view

Table1-1 Technical specifications

Item	Specification
Frequency range	• 2400 MHz to 2500 MHz • 4900 MHz to 5950 MHz
Polarization	Horizontal/Vertical
Gain	10/10 dBi
Horizontal beamwidth (HBM)	40/40 degrees
Vertical beamwidth (VBM)	40/40 degrees
Front-to-back ratio (FBR)	≥ 20/25 dB
Port-to-port isolation	≥ 24 dB

Item	Specification
Impedance	50 Ω
Voltage standing wave ratio (VSWR)	≤ 2.0
Maximum power	20 W
Connectors	4 × type N male connectors
Cable length	0.9 m (2.95 ft)
Connector position	Bottom
Dimensions (H × W × D)	340 × 200 × 45 mm (13.39 × 7.87 × 1.77 in)
Antenna weight	1.1 kg (2.43 lb)
Bracket weight	1.05 kg (2.31 lb)
Color	White
Application scenario	Outdoor
Operating temperature	–40°C to +70°C (–40°F to +158°F)
Storage temperature	–50°C to +85°C (–58°F to +185°F)
Wind resistance	35 m/s (114.8 ft/s)
Installation method	Pole mounting, with the pole diameter in the range of 50 to 85 mm (1.97 to 3.35 in)

Figure1-2 and Figure1-3 show the azimuth and elevation radiation patterns of the antenna.

Figure1-2 Azimuth radiation pattern

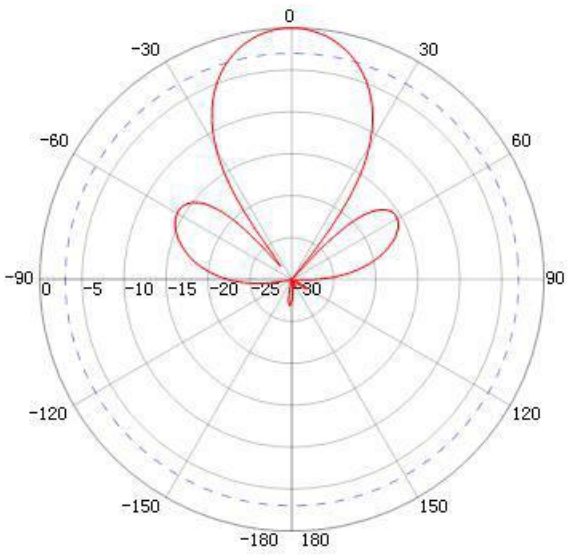
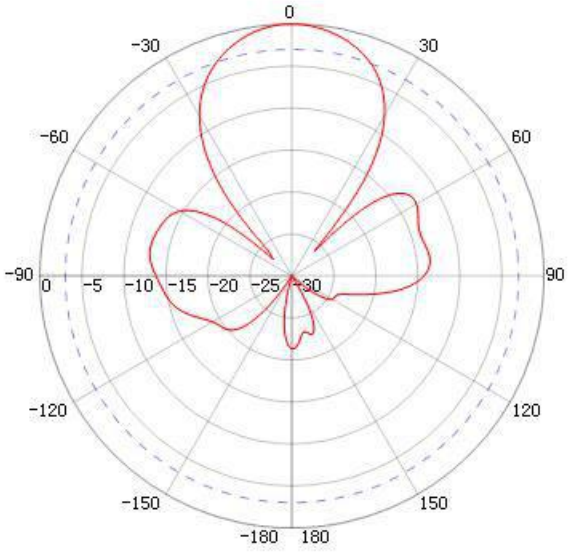


Figure1-3 Elevation radiation pattern



Safety precautions

WARNING!

- Misoperations in antenna installation might cause serious injury or even death. Read the following safety precautions carefully before installing an antenna.
- Do not install the antenna near power sources, street lights, power supply boxes, or other places that might cause electric shock. Be careful not to touch electric wires when installing the antenna.

Read the following safety precautions carefully before installing the antenna:

- To avoid electric shock or being tangled by cables, select an installation location for the antenna away from electric power lines and other lines.
- Do not work alone. Determine the installation location and procedure with other installers in advance.
- To avoid bodily injury, use multiple people to raise and secure a pole.
- Do not stand on a metal ladder to install the antenna. Do not install the antenna in wet or windy weather.
- Wear clothing suitable for antenna installation. Wear rubber gloves and shoes with rubber soles.
- Be careful to avoid any objects falling from a high place, such as the antenna, RF cable, or other mounting accessories.
- When it is required to connect a power source, do not connect it yourself. Ask professionals to handle it.
- Call for help immediately when an emergency such as an electric shock occurs.

Installation guidelines

To ensure optimal performance of the antenna, follow these guidelines:

- Install the antenna vertically with the connector side facing downwards.

- Keep the antenna away from metal obstacles, such as heating pipes and air conditioners.
- The material and thickness of walls determine the number of walls that the RF signal can penetrate. 5 GHz signal attenuation is large. Avoid signal penetration through solid walls.

Selecting an installation location

To ensure optimal coverage, follow these guidelines when selecting an installation location for the antenna:

- Perform site surveys to determine the antenna installation location and height. Make sure no obstruction, especially no solid walls and metal plates, exists between the antenna and the target coverage area.
- The antenna installation location must be as close as possible to the AP to reduce the RF cable length and signal loss.
- The AP must be installed at a location where wires (cables or fibers) and power (local power supply or PoE) can reach.

Mounting the antenna

You can mount the antenna on a pole. The antenna is provided with pole-mounting installation accessories. Prepare installation tools yourself.

For other installation options, prepare installation accessories yourself.

Installation accessories and tools

The antenna is provided with the following pole-mounting installation accessories:

- One articulating mount.
- One mounting plate.
- Two pole-mount clamps.
- One mounting support.
- One device label.

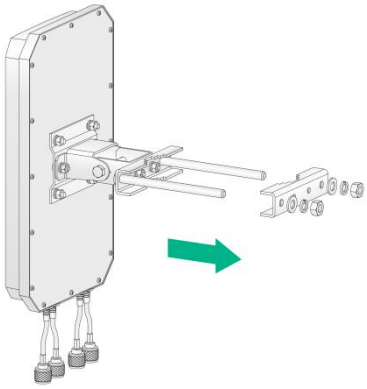
The following installation tools are required for installing the antenna. Prepare them yourself.

- An adjustable wrench.
- One pole with a diameter of 50 to 85 mm (1.97 to 3.35 in).

Mounting the antenna on a pole

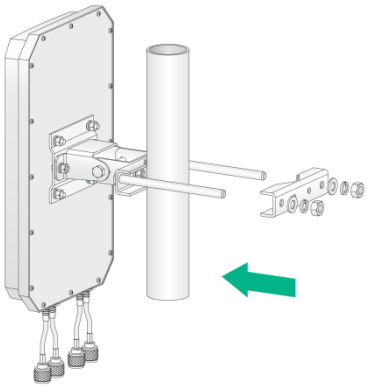
1. As shown in Figure1-4, use a wrench to remove the outer pole-mount clamp from the antenna.

Figure1-4 Removing the pole-mount clamp



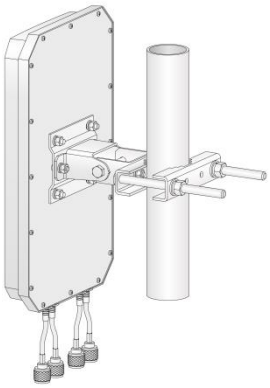
2. Attach the antenna to the pole and then use nuts to fasten the pole-mount clamp for securing the antenna to the pole.

Figure1-5 Mounting the antenna to the pole



3. Adjust the elevation (up-and-down position) of the antenna and then fasten the nut on the articulating mount.

Figure1-6 Adjusting the antenna



Installing lightning arresters

The antenna is installed outdoors. You must install lightning arresters for it. No lightning arrester is provided with the antenna. Purchase them yourself.

To install a lightning arrester:

1. Connect the lighting arrester to the antenna connector or AP.
2. Connect the RF cable to the lightning arrester.
3. Connect the grounding cable to the lightning arrester. Make sure the grounding terminal is reliably grounded.

Requirements for RF cables

The antenna provides four antenna ports. A type N male connector is provided for each antenna port. To connect the antenna to an H3C outdoor AP, you can connect the type N connectors to the 2.4 GHz RF ports or 5 GHz RF ports on the AP. As a best practice, use high-quality low-loss RF cables. Reduce the cable length as short as possible to reduce the signal attenuation.