Cisco Aironet Omnidirectional Antennas AIR-ANT5150VG-N and AIR-ANT5150HG-N

This chapter contains the following:

Overview

This section describes the Cisco Aironet AIR-ANT5150VG-N and AIR-ANT5150HG-N Omnidirectional Antennas and provides instructions for mounting. The antennas are designed for outdoor use with Cisco Aironet Outdoor Access Points (hereafter referred to as access points) with radios operating in the 5 GHz frequency band.

Figure 1: Cisco Aironet AIR-ANT5150 Series Antenna

Technical Specifications

	AIR-ANT5150VG-N	AIR-ANT5150HG-N
Antenna Type	Omnidirectional	Omnidirectional
Operating Frequency Range	5150 - 5925 MHz	5150 - 5925 MHz
Maximum VSWR	2:1	2:1
Gain	5 dBi	5 dBi
Polorization	Vertical	Horizontal
Maximum Azimuth Plane Ripple	3.3 dB	3.3 dB
Elevation Plane 3 dB Beamwidth	33°	35°
Azimuth Plane 3 dB Beamwidth	Omnidirectional	Omnidirectional
Length	7.88 in (200.2 mm)	7.88 in (200.2 mm)
Diameter	1.0 in (25.4 mm)	1.0 in (25.4 mm)
Weight	3.5 oz. (0.1 kg)	3.5 oz. (0.1 kg)
Connector	N-Male	N-Male
Operational Temperature	-40° to +158°F (-40°C to +70°C)	-40° to +158°F (-40°C to +70°C)

	AIR-ANT5150VG-N	**AIR-ANT5150HG-N**
Storage Temperature	-40° to +185°F (-40°C to +85°C)	-40° to +185°F (-40°C to +85°C)
Water/Foreign Body Ingress	IP67	IP67
Wind Rating (Operational)	100 mph (161 kph)	100 mph (161 kph)

Radiation Patterns

AIR-ANT5150VG-N

AIR-ANT5150HG-N
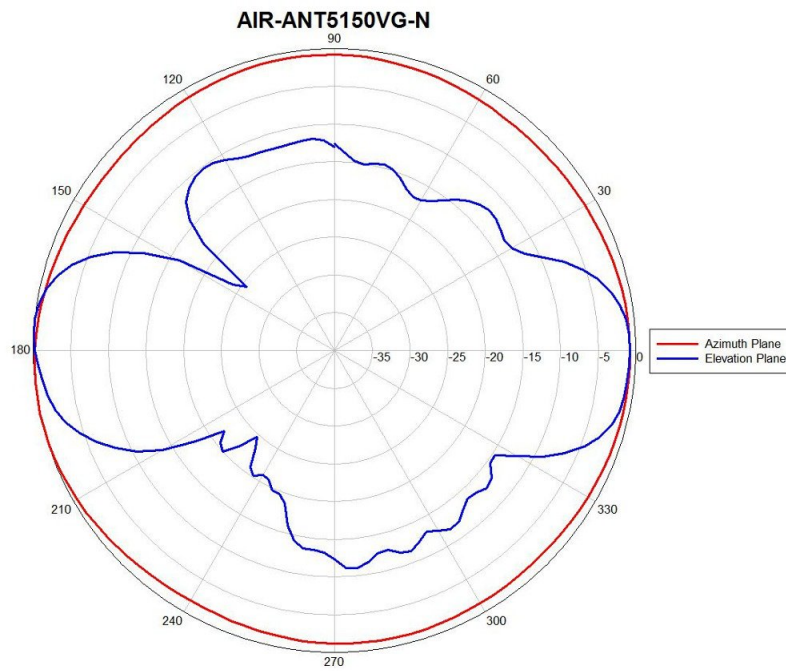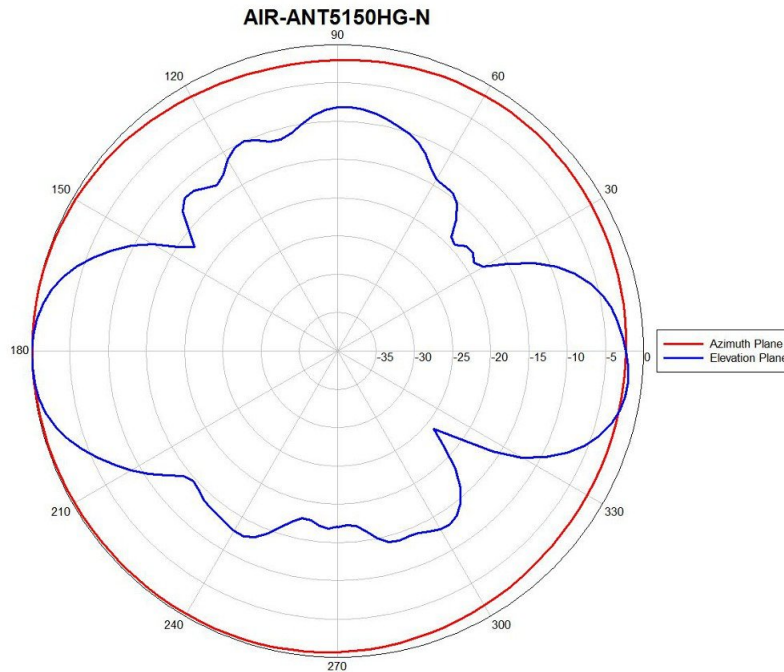
System Requirements

This antenna is designed for use with the Cisco Aironet Outdoor Access Points.

General Safety Precautions

⚠

Warning This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. **Statement 1071**

⚠

Warning Do not work on the system or connect or disconnect cables during periods of lightning activity. **Statement 1001**

⚠

Warning Do not locate the outdoor 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**

⚠

Warning   In order to comply with FCC radio frequency (RF) exposure limits, antennas should be located at a minimum of 7.9 inches (20 cm) or more from the body of all persons. **Statement 332**

Each year hundreds of people are killed or injured when attempting to install an antenna. In many of these cases, the victim was aware of the danger of electrocution, but did not take adequate steps to avoid the hazard.

⚠

Warning   For your safety, and to help you achieve a good installation, please read and follow these safety precautions. **They may save your life!**

For your safety, read and follow these safety precautions.

- If you are installing an antenna for the first time, for your own safety as well as others, seek professional assistance. Your Cisco sales representative can explain which mounting method to use for the size and type antenna you are about to install.
- Before you install an antenna, contact your Cisco account representative to explain which mounting method to use for the size and type of antenna that you are about to install.
- Find someone to help you—installing an antenna is often a two-person job.
- Select your installation site with safety, as well as performance, in mind. Remember that electric power lines and phone lines look alike. For your safety, assume that any overhead line can kill you.
- Contact your electric power company. Tell them your plans and ask them to come look at your proposed installation.
- Plan your installation carefully and completely before you begin. Each person involved in an installation should be assigned to a specific task, and should know what to do and when to do it. One person should be in charge of the operation to issue instructions and watch for signs of trouble.
- When installing your antenna, follow these guidelines:

    - Do not use a metal ladder.
    - Do not work on a wet or windy day.
    - Do dress properly—wear shoes with rubber soles and heels, rubber gloves, and a long-sleeved shirt or jacket.

- If the assembly starts to drop, move away from it and let it fall. Because the antenna, mast, cable, and metal guy wires are all excellent conductors of electrical current, even the slightest touch of any of these parts to a power line completes an electrical path through the antenna and the installer.
- If any part of the antenna system should come in contact with a power line, do not touch it or try to remove it yourself. Call your local power company to have it removed safely.
- If an accident should occur with the power lines, call for qualified emergency help immediately.

Installation Notes

The antenna is designed to connect to a dedicated antenna port on the access point. No special tools are required to install the antenna.

The antenna is resistant to the full range of outdoor environments. After the antenna is attached to the access point, seal the connections to prevent moisture and other weathering elements from affecting performance. Cisco recommends using a coax seal (such as CoaxSeal) for outdoor connections. Silicone sealant or electrical tape are not recommended for sealing outdoor connections.

Choosing a Mounting Location

The antenna is designed to create an omnidirectional broadcast pattern. To achieve this pattern, the access point should be mounted clear of any obstructions to the sides of the radiating element. If the mounting location is on the side of a building or tower, the antenna pattern is degraded on the building or tower side.

Generally, the higher an antenna is above the ground, the better it performs. A practice is to install your antenna about 5 to 10 ft (1.5 to 3 m) above the roof line and away from all power lines and obstructions.

Tools and Equipment Required

No tools are required to mount the antenna to the access point. However, you may need a ¾-in. (19-mm) open end or combination wrench (or adjustable wrench) to remove the antenna port covers.

For information about tools required to mount the access point, see the appropriate access point documentation.

Mounting the Antenna

To connect the antenna to the access point, follow these steps:

1. If necessary, remove the antenna port cover.
2. Align the antenna's N connector with the appropriate antenna port.
3. Gently push the antenna into the port.
4. Hand-tighten the antenna.

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