



# Cisco Aironet 7.5-dBi Omnidirectional Antenna (AIR-ANT5175V-N)

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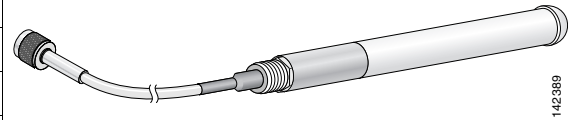
This document describes the Cisco Aironet AIR-ANT5175V-N 7.5-dBi Omnidirectional Antenna and provides instructions for mounting it. The antenna operates in the 5-GHz frequency range and is designed for outdoor use with the Cisco Aironet 1500 Series Lightweight Outdoor Mesh Access Point (*hereafter referred to as the access point*).

The following information is provided in this document.

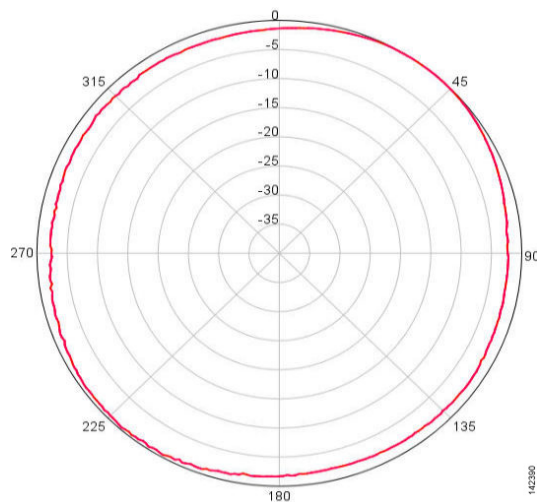
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# Technical Specifications

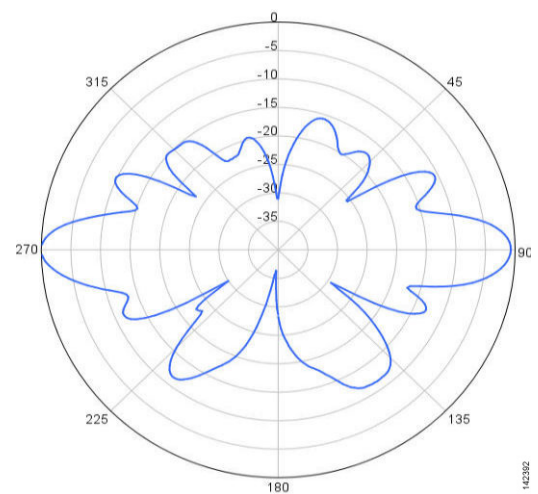
Antenna type	Omnidirectional colinear array
Operating frequency range	4900–5850 MHz
2.0:1 VSWR Bandwidth	4900–5850 MHz
Nominal input impedance	50Ω
Gain (4900–5000 MHz)	6.5-dBi
Gain (5400–5850 MHz)	7.5-dBi
Polarization	Linear
E-plane 3-dB Beamwidth	16°
H-plane 3-dB Bandwidth	Omnidirectional
Length	12.0 in. (30.5 cm)
Diameter	1.0 in. (14.5 cm)
Weight	6.0 oz. (160.0 g)
Connector type	N-Male
Operating temperature	-22°F - 158°F (-30°C - 70°C)
Wind rating	100 mph (160 kmh) 165 mph (265 kmh) gusts



**Azimuth Radiation Pattern**



**Elevation Radiation Pattern**



# System Requirements

This antenna is designed for use with the Cisco Aironet 1500 Series Lightweight Outdoor Mesh Access Point. Because it uses an N connector, it is incompatible with other Cisco Aironet access points.

# Safety Precautions



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**Installation of this antenna/access point near power lines is dangerous. For your safety, follow the installation directions.**

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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.

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

1. 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.
2. Select your installation site with safety, as well as performance in mind. Remember: electric power lines and phone lines look alike. For your safety, assume that any overhead line can kill you.
3. Call your electric power company. Tell them your plans and ask them to come look at your proposed installation. This is a small inconvenience considering your life is at stake.
4. Plan your installation carefully and completely before you begin. Successful raising of a mast or tower is largely a matter of coordination. Each person 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.
5. When installing your antenna, remember:
  - a. **Do not** use a metal ladder.
  - b. **Do not** work on a wet or windy day.
  - c. **Do** dress properly—shoes with rubber soles and heels, rubber gloves, long sleeved shirt or jacket.
6. If the assembly starts to drop, get away from it and let it fall. Remember, 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 complete an electrical path through the antenna and the installer: **you!**
7. If any part of the antenna system should come in contact with a power line, **don't touch it or try to remove it yourself. Call your local power company.** They will remove it safely.
8. If an accident should occur with the power lines call for qualified emergency help immediately.

# Installation Notes

The antenna is designed to mount on a dedicated mounting panel on the access point. Other than an appropriate wrench, no special tools are required.

## Choosing a Mounting Location

The antenna is designed to create a directional 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. Good 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. If possible, find a mounting place directly above your wireless device so that the lead-in cable can be as short as possible.

## Tools and Equipment Required

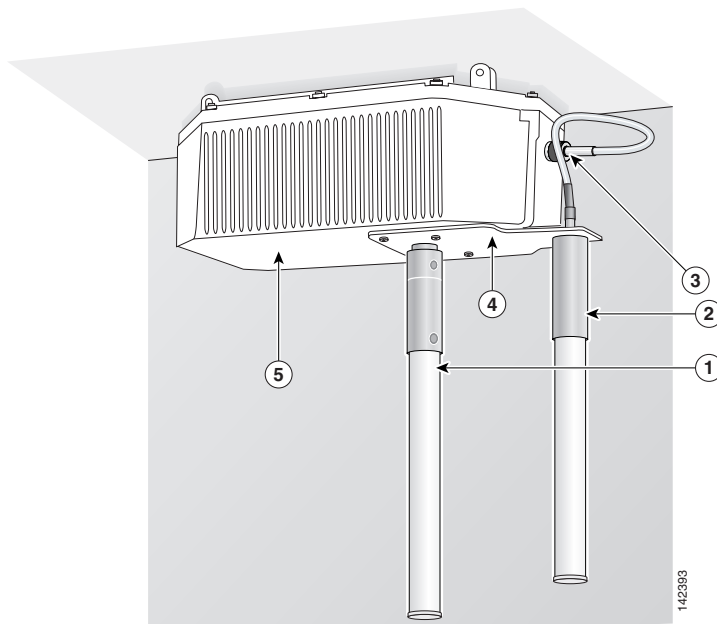
You will need an appropriate wrench (such as an open end wrench, adjustable wrench, or pliers) to secure the antenna on the access point's 5-GHz antenna mounting panel.

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

## Mounting the Antenna

Figure 1 shows how the antenna should be mounted to the access point.

**Figure 1**      **Antenna Mounting**

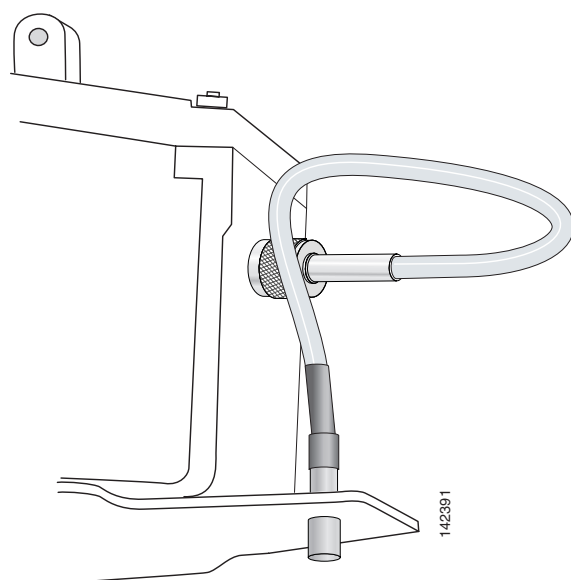


<b>1</b>	2.4-GHz antenna	<b>4</b>	G-GHz antenna mounting panel
<b>2</b>	5-GHz antenna	<b>5</b>	Access point
<b>3</b>	5-GHz antenna connector		

Follow these steps to mount the antenna on the access point.

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- Step 1** Position the antenna below the mounting hole on the access point mounting panel and carefully slide the antenna cable through the slot on the mounting panel. Make sure the star washer and nut are above the mounting panel.
  - Step 2** Insert the antenna into the hole on the 5-GHz antenna mounting panel.
  - Step 3** Install the star washer and start the nut onto the antenna mounting threads.
  - Step 4** Tighten the nut hand tight.
  - Step 5** Use a wrench to tighten the nut. Do not over tighten.
  - Step 6** Form a loop in the antenna cable and connect the antenna to the access point as shown in [Figure 2](#).

**Figure 2**      **Connecting the Antenna to the Access Point**



## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

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