



# Cisco Aironet Very Short 2.4-GHz Omnidirectional Antenna (AIR-ANT2422SDW-R)

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This document outlines the specifications for the Cisco Aironet Very Short 2.4-GHz Omnidirectional Antenna (AIR-ANT2422SDW-R) and provides instructions for mounting it. The antenna operates in the 2.4-GHz frequency range and is designed for indoor use.

The following information is provided in this document.

- [Technical Specifications, page 2](#)
- [System Requirements, page 3](#)
- [Safety Precautions, page 4](#)
- [Installation Notes, page 4](#)
- [Installing the Antenna, page 4](#)
- [Obtaining Documentation, Obtaining Support, and Security Guidelines, page 5](#)



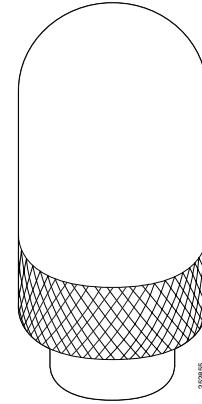
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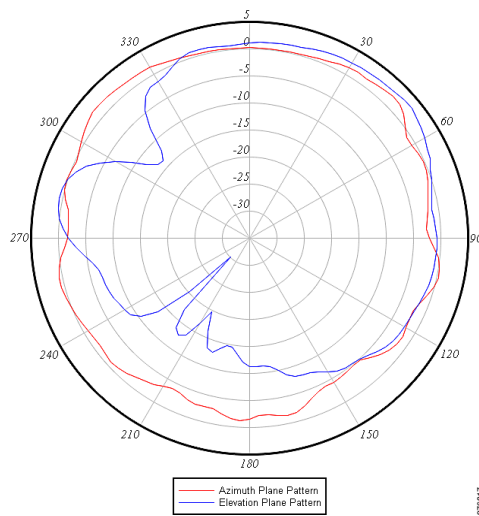
# Technical Specifications

|                                |                                    |
|--------------------------------|------------------------------------|
| Antenna type                   | Omnidirectional                    |
| Operating frequency range      | 2400–2500 MHz                      |
| VSWR                           | 2:1 or less                        |
| Peak gain                      | 2.5 dBi                            |
| Polarization                   | Linear                             |
| Azimuth plane 3 dB beamwidth   | Omnidirectional                    |
| Elevation plane 3 dB beamwidth | 50°                                |
| Length                         | 1.7 in. (4.3 cm)                   |
| Diameter                       | 0.75 in. (1.9 cm)                  |
| Connector                      | RP-TNC                             |
| Environment                    | Indoor only                        |
| Operating temperature          | 32° F to 131° F<br>(0° C to 55° C) |



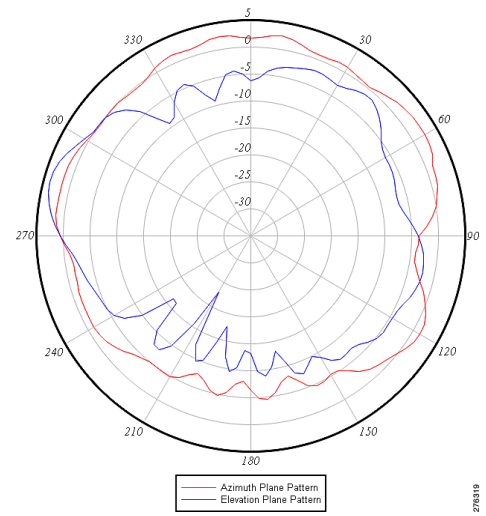
**Note** The following antenna radiation patterns were obtained with the antenna connected to a Cisco Aironet 3500 Series Access Point.

**Azimuth and Elevation Patterns End Antenna**



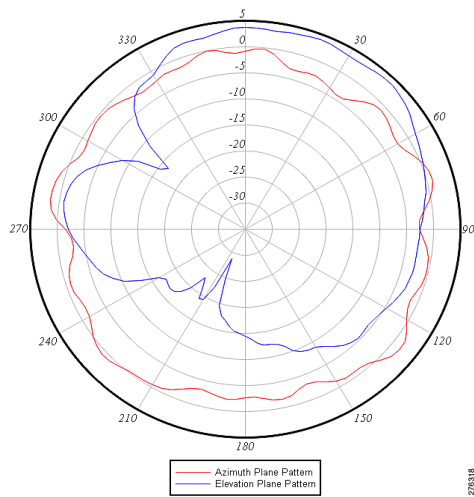
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**Azimuth and Elevation Patterns Middle Antenna**



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**Azimuth and Elevation Patterns End Antenna**



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## System Requirements

This antenna is designed for indoor use with any 2.4-GHz Cisco Aironet radio device that uses a RP-TNC connector.

## Safety Precautions

There are no specific safety precautions associated with this antenna. Translated versions of the following safety warnings are provided in the *Safety Warnings for Cisco Aironet Antennas*, which is available at <http://cisco.com>.

## Installation Notes

Antennas transmit and receive radio signals which are susceptible to RF obstructions and common sources of interference that can reduce throughput and range of the device to which they are connected. Follow these guidelines to ensure the best possible performance:

- Keep the access point away from metal obstructions such as heating and air-conditioning ducts, large ceiling trusses, building superstructures, and major power cabling runs.
- The density of the materials used in a building's construction determines the number of walls the signal can pass through and still maintain adequate signal strength. Consider the following before choosing the location for your antenna:
  - Signals penetrate paper and vinyl walls with little change to signal strength.
  - Signals penetrate only one or two solid and pre-cast concrete walls without degrading signal strength.
  - Signals penetrate three or four concrete and wood block walls without degrading signal strength.
  - Signals penetrate five or six walls constructed of drywall or wood without degrading signal strength.
  - Signals will likely reflect off a thick metal wall and may not penetrate it at all.
  - Signals will likely reflect off a chain link fence or wire mesh spaced between 1 and 1 1/2 in. (2.5 and 3.8 cm). The fence acts as a harmonic reflector that blocks the signal.
- Install the access point away from microwave ovens and 2-GHz cordless phones. These products can cause signal interference because they operate in the same frequency range as the device to which your antenna is connected.

## Installing the Antenna

Align the antenna TNC connector with the TNC connector on the access point. Tighten the antenna hand-tight. Do not over tighten.

# Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, 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>





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