



# Cisco Aironet Dual-band Dipole Antenna (AIR-ANT2524DB-R, AIR-ANT2524DG-R, AIR-ANT2524DW-R, and AIR-ANT2524DW-RS)

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This describes the Cisco Aironet high-performance, dual-band dipole antenna, and provides specifications and mounting instructions. The antenna operates in both the 2.4 GHz and 5 GHz frequency bands, and is designed for use with Cisco Aironet 2.4 GHz and 5 GHz radio products with dual-band reverse-polarity TNC (RP-TNC) antenna ports. The antenna has a nominal gain of 2 dBi in the 2.4 GHz frequency band and 4 dBi in the 5 GHz frequency band. The AIR-ANT2524Dx-R antennas covered in this document are electrically the same but differ physically by the color of the radome, which is specified by the product part number shown in [Table 1 on page 1](#). The AIR-ANT2524DW-RS antenna includes self-identifying circuitry.

**Table 1    Antenna Radome Colors**

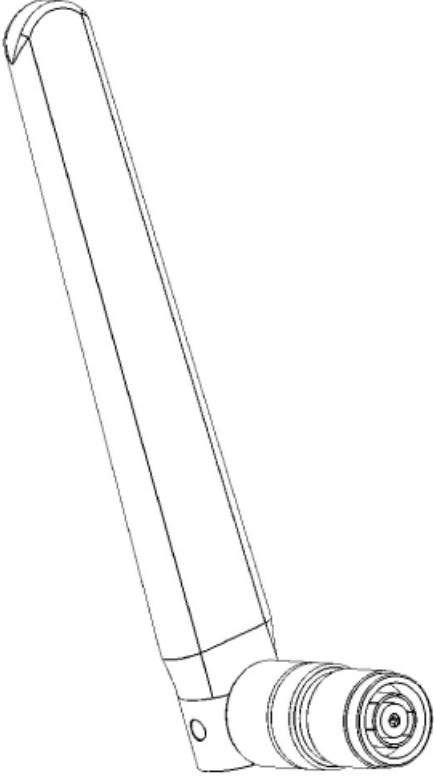
Antenna Part Numbers	Radome Color
AIR-ANT2524DB-R	Black
AIR-ANT2524DG-R	Gray
AIR-ANT2524DW-R	White
AIR-ANT2524DW-RS	White, self-identifying

These topics are discussed:

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- [Communications, Services, and Additional Information, page 3](#)

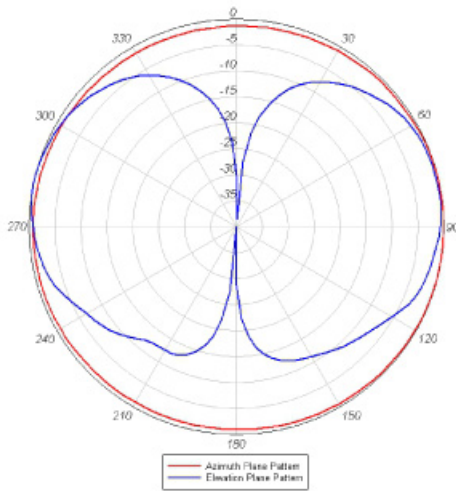
# Technical Specifications

**Table 2 AIR-ANT2524Dx-Rx Series Dual-band Dipole Specifications**

Parameter	Specification	
Antenna type	Dual-band dipole	
Operating frequency range	2400 to 2500 MHz 5150 to 5850 MHz	
Nominal input impedance	50 Ohms	
VSWR	Less than 2:1	
Peak Gain @ 2.4 GHz	2 dBi	
Peak Gain @ 5 GHz	4 dBi	
Elevation plane 3dB beamwidth @2.4 GHz	63 degrees	
Elevation plane 3dB beamwidth @ 5 GHz	39 degrees	
Connector type	RP-TNC plug	
Antenna length	6.63 in. (168.5 mm)	
Antenna width	0.83 in (21 mm)	
Radome length	4.88 in. (124 mm)	
Weight	1.3 oz	
Operating temperature	-4° to 140° F (-20° C to 60° C)	
Storage temperature	-40° F to 185° F (-40° C to 85° C)	
Environment	Indoor, office	

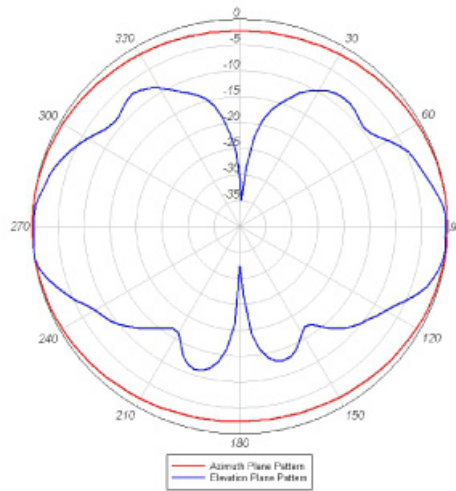
330043

Azimuth and Elevation Plane Patterns for 2.4 GHz



330044

Azimuth and Elevation Plane Patterns for 5 GHz



330045

## System Requirements

This antenna is designed for use with Cisco Aironet access points that support simultaneous operation in the 2.4 GHz band and the 5 GHz band and that have dual-band antenna ports, labeled in orange text.

## Features

The antenna has an articulated base that can be rotated 360 degrees at the connection point and from 0 to 90 degrees at its joint.

The AIR-ANT2524DW-RS antenna includes circuitry to enable self identification of the antenna by the Cisco Catalyst 91xx Series access points. The self identifying function is indicated by a purple band on the antenna. Ensure this antenna is connected to Port A on the AP, which is also designated by purple text around the RP-TNC connector. This antenna has a built-in EEPROM that can be read by the AP to automatically configure the antenna type and gain in the Wireless LAN Controller.

## Installing the Antenna

**Caution:** The AIR-ANT2524Dx-R series of antennas are dual-band antennas, meaning that they operate in both the 2.4 GHz and 5 GHz frequency bands. The AIR-ANT2524Dx-R series antennas have an orange ID band on them to indicate their dual-band functionality. Connect these antennas only to dual-band antenna ports, which are identified with orange text on Cisco Aironet access points. Using these antennas on Cisco Aironet access points that employ single-band antennas might result in lower performance.

To install the antenna:

1. Verify that the connector to which you are connecting the antenna is a dual-band antenna port, identified by orange text on the access point.
2. Align the antenna connector with the RP-TNC connector on the access point.
3. Engage the antenna connector threads with the RP-TNC connector on the access point.
4. Tighten the antenna by hand. Do not use a wrench or any other tool to tighten the antenna.
5. Adjust the antenna articulating joint to the desired position.

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- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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