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.

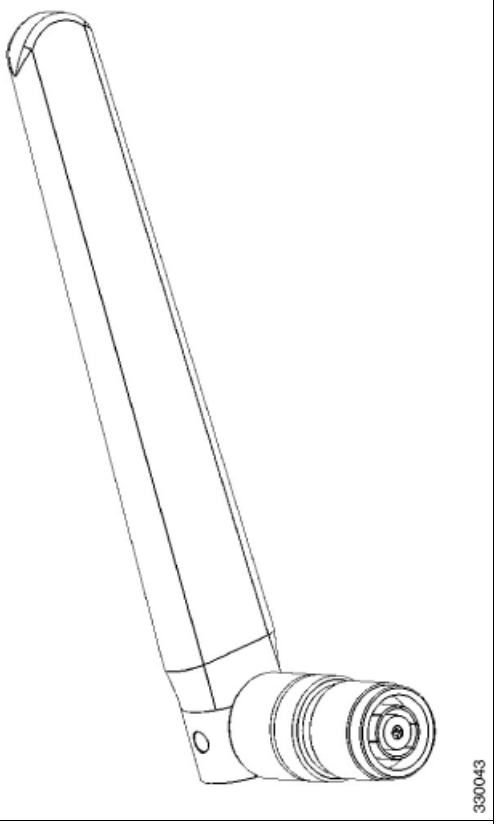
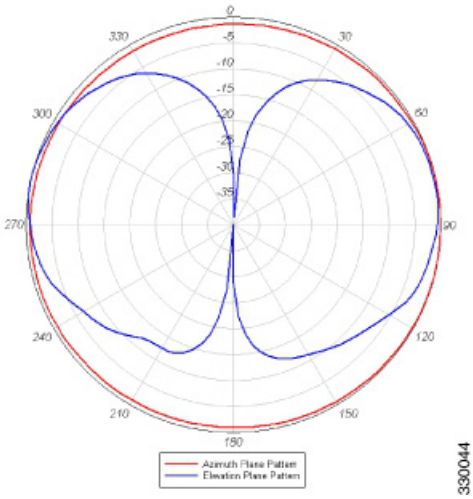
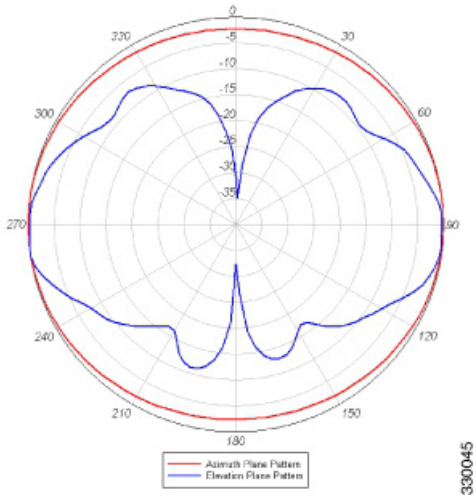
Table 1 Antenna Radome Colors

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:

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	
Azimuth and Elevation Plane Patterns for 2.4 GHz		Azimuth and Elevation Plane Patterns for 5 GHz
		

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.

The Self Identifying Antenna model AIR-ANT2524DW-RS= is supported only on Cisco Catalyst 9800 Series Wireless Controllers running an IOS-XE 17.4.1 release or a later release. This antenna model is not supported on Cisco AireOS Wireless Controllers.

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. Hand tighten the antenna to the port using the metal knurled ring only.

   Warning: Do not use the plastic body to tighten. This may damage 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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