



Cisco WPAN Dipole Antenna (ANT-WPAN-OD-OUT-N)

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Overview

This section describes the technical specifications and installation instructions for the Cisco WPAN dipole antenna. The antenna is a single-port antenna designed to cover the 863-928 MHz frequency bands for worldwide ISM operation.



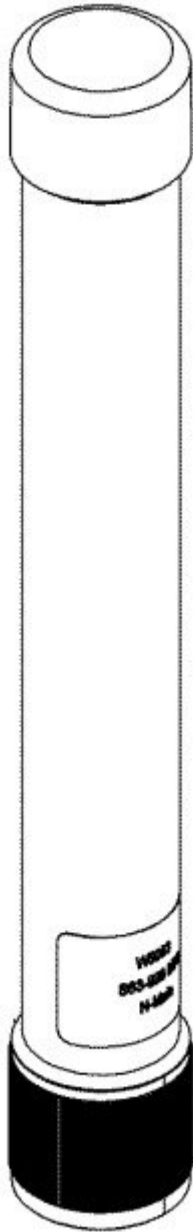
Caution Read the information in Safety Warnings before installing or replacing antennas.

Antenna Features

The Cisco WPAN Dipole antenna (ANT-WPAN-OD-OUT-N) has the following features:

- 863 - 928 MHz support
- Omnidirectional, vertically polarized
- Indoor or outdoor location
- Direct chassis-mount installation
- Type N male connector

Figure 1: Cisco ANT-WPAN-OD-OUT-N Antenna



Technical Specifications

This section contains the following:

RF Specifications

The following are the Radio Frequency (RF) antenna specifications for the Cisco ANT-WPAN-OD-OUT-N Antenna:

Specification	Description
Antenna Type	Dipole
Operating frequency range	863 to 928 MHz
Nominal impedance	50 ohms
VSWR	2.0:1 maximum
Gain	1.5 dBi maximum
3 dB beamwidth (vertical plane)	84 degrees
3 dB beamwidth (horizontal plane)	360 degrees
Polarization	Linear, vertical
Radiation Pattern	Omnidirectional
Maximum input power	20 Watts

Radiation Patterns

The following diagrams illustrate the radiation patterns for the Cisco ANT-WPAN-OD-OUT-N Antenna:

Figure 2: Radiation Pattern — Vertical Plane

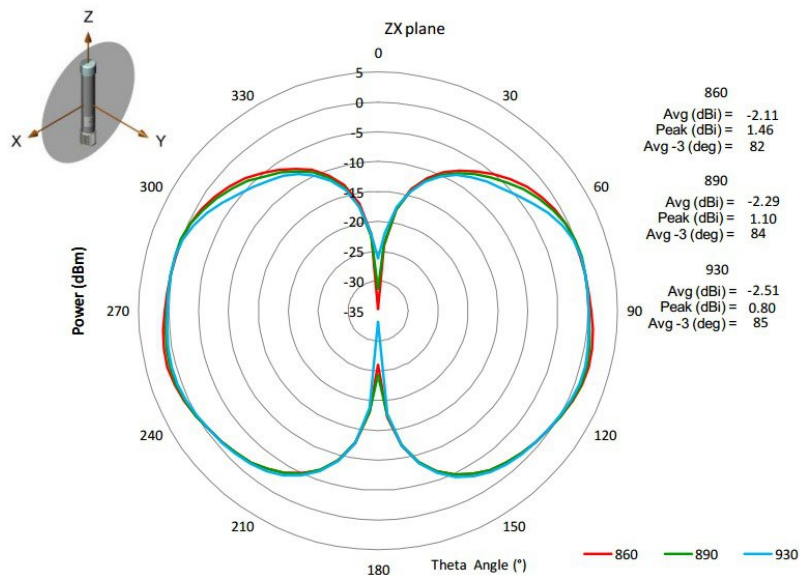
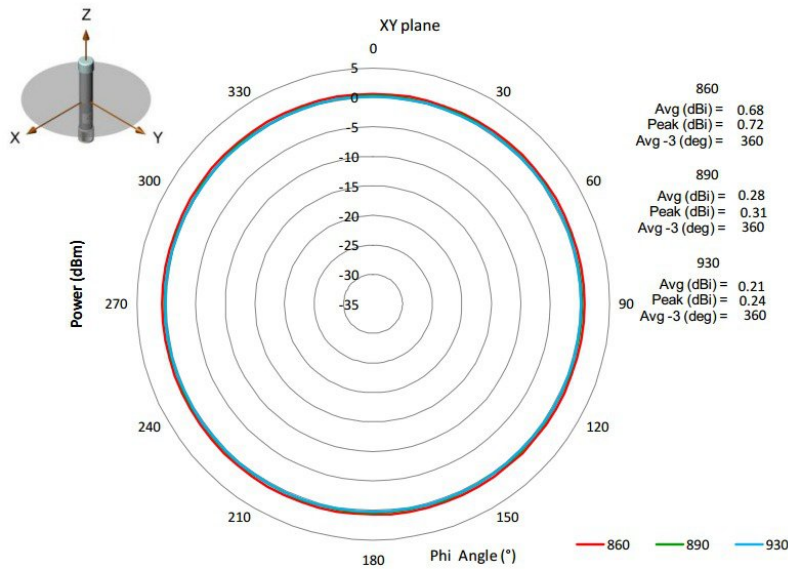


Figure 3: Radiation Pattern — Horizontal Plane



Environmental and Mechanical Specifications

The following are the Environmental and Mechanical Specifications for the Cisco ANT-WPAN-OD-OUT-N Antenna:

Specification	Description
Operating temperature range	-40 to 185°F (-40 to 85°C)
Mount style	Direct chassis or bulkhead mount
Location	Outdoor
Connector	Type N male
Dimensions	7.70 in. length x 1.02 in. diameter (19.56 cm length x 2.60 cm diameter)
Weight	0.26 lbs (120 g)
Wind rating	265 km/hr (165 mph)
IP rating	IP67
Radome	Polyester/Fiberglass, UV resistant, white
Material substance compliance	RoHS compliant

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.

Installing the Antenna

This section contains the following:

Contents of the Antenna Kit

The antenna kit contains:

- 1 x Cisco ANT-WPAN-OD-OUT-N Antenna

Tools and Equipment Required

No tools are required to install the antenna. This does not include the tools and equipment required to install the router or to assemble the tower, mast, or other structure you intend to mount the router and antenna on.

Mounting the Antenna

Follow these instructions to mount the antenna.

- If installing the antenna on an IR529UWP-915S/K9 or IR529UBWP-915S/K9, screw the antenna's N male connector onto the N female connector on the chassis. Ensure that the connection is tight. See [Single Antenna Advanced Range Extender—Direct Connect Antenna Configuration](#) in the [Cisco IR500 Series WPAN Gateway and WPAN Range Extender Installation and Configuration Guide](#).
- If installing the antenna to a bulkhead adapter or lightning arrestor, install the lightning arrestor or adapter to the side of the enclosure first, then screw the antenna onto the N female connector of the lightning arrestor or adapter. See [Gateway Enclosure Mounted Antenna Configuration](#) in the [Cisco IR500 Series WPAN Gateway and WPAN Range Extender Installation and Configuration Guide](#).



Note

Coaxial cable loses efficiency as the frequency increases, resulting in signal loss. If a cable is used it should be kept as short as possible because cable length also determines the amount of signal loss—the longer the cable length or run, the greater the loss.

Communications, Services, and Additional Information

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