



## Cisco Aironet Directional Antenna (AIR-ANT-SE-WiFi-D)

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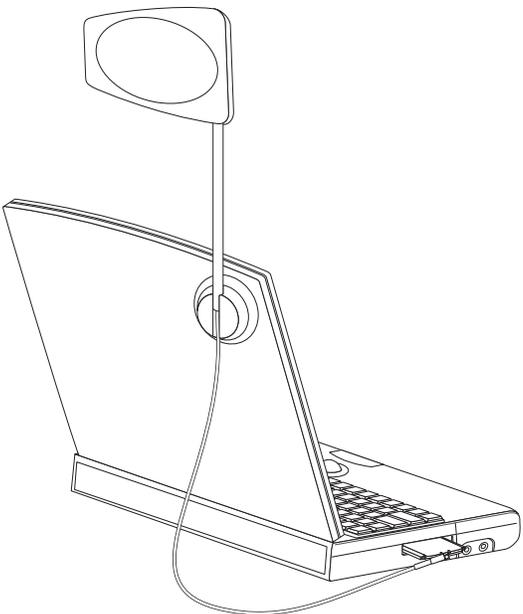
This document describes the Cisco Directional Antenna (AIR-ANT-SE-WiFi-D) and provides instructions for mounting it. The antenna operates in the 2.4-GHz and 5-GHz frequency bands and is designed for use with Cisco Spectrum Expert spectrum analyzer software. The antenna connects to the Cisco Spectrum Expert adapter card (hereafter referred to as the card). The antenna's directional qualities provide focused RF detection in a given direction. The antenna can be useful with all ISMS mobile features, but is especially useful in locating and identifying RF devices.

The following information is provided in this document.

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# Technical Specifications

Antenna type	Dual band directional	
Operating frequency range	2400–2500 MHz 4900–5900 MHz	
Nominal input impedance	50 Ohms	
VSWR	Less than 1.8:1 over all bands	
Peak gain (2400–2500 MHz)	5-dBi	
Peak gain (4900–5900 MHz)	5-dBi	
Polarization	Linear, vertical	
Azimuth plane beamwidth	55 degrees	
Elevation plane beamwidth	50 degrees	
Front-to-back ratio	> 20 dB	
Mounting method	Hook and loop (Velcro)	
Length	4.5 in. ( 11.4 cm)	
Width	2.875 in. (7.302 cm)	
Height	0.375 in. (0.952 cm)	
Connector	MMCX	
Cable	LMR-100	
Cable length	24-in. (60.9 cm)	

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# System Requirements

This antenna is designed for use with the Cisco Spectrum Expert application only. The antenna is not designed for use with access points.

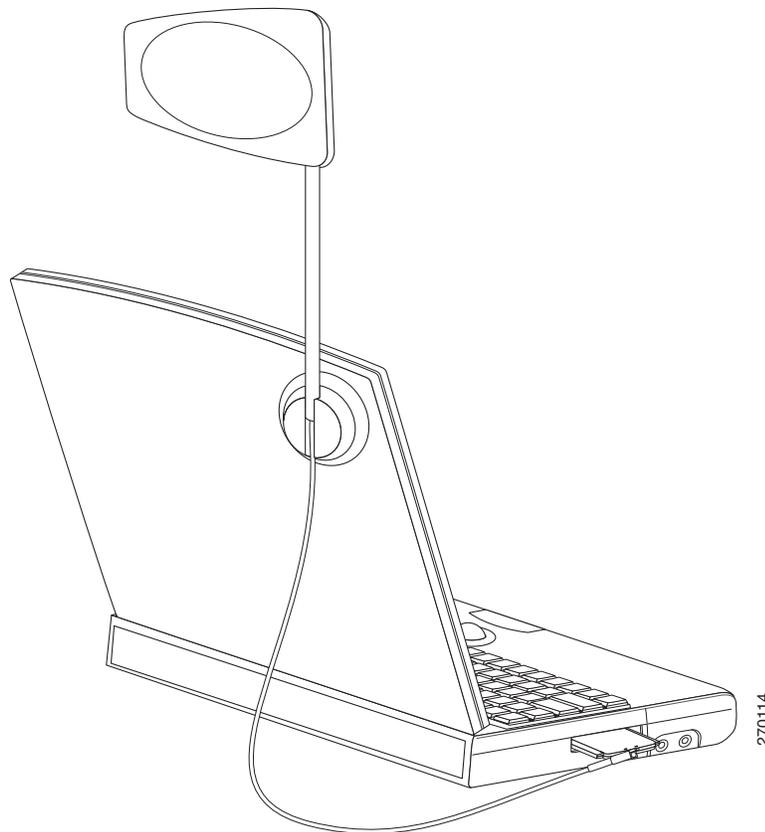
## Installation Notes

The antenna is designed to connect to a dedicated antenna port on a Cisco Spectrum Expert adapter card. No special tools are required to install the antenna.

## Installing and Using the Antenna

To provide mobility and take advantage of the antenna's directional characteristics, the antenna is typically connected to a laptop computer as shown in [Figure 1](#).

**Figure 1** Typical Antenna Installation on a Laptop Computer

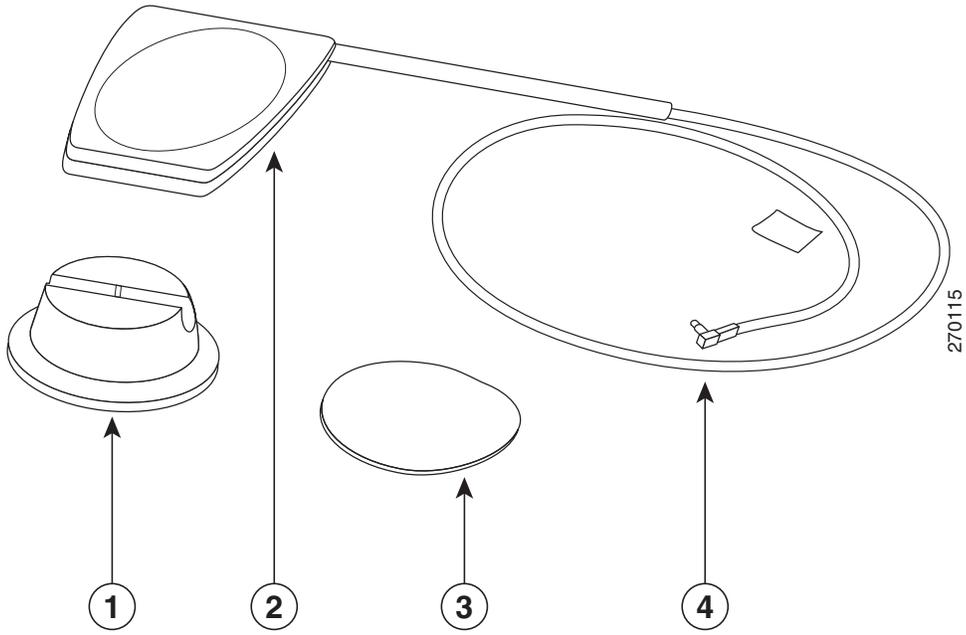


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. Follow these steps to assemble the antenna and install it on a laptop computer.

**Step 1** Verify that the contents of the directional antenna kit are complete as shown in [Figure 2](#).

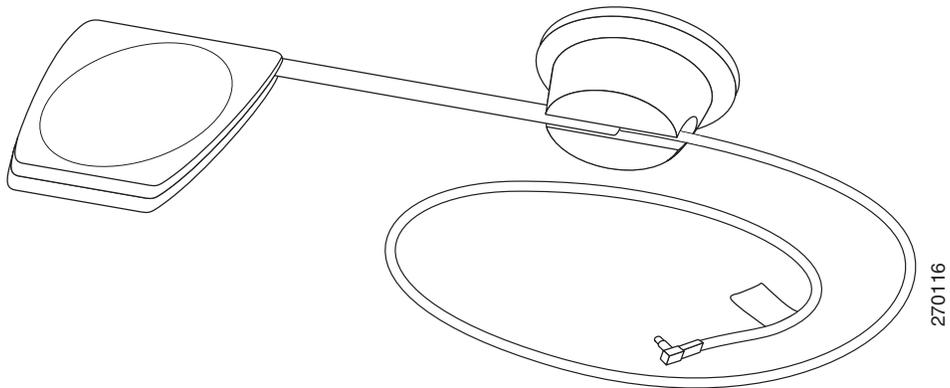
**Figure 2** Directional Antenna Kit Contents



1	Mounting base	3	Two Velcro mounting pads
2	Antenna and mast	4	Antenna cable

**Step 2** Slide the antenna and mast into the mounting base as shown in Fig 3.

**Figure 3** Installing the Antenna and Mast in the Mounting Base



**Step 3** Attach a Velcro pad to the mounting base.

**Step 4** Attach the other Velcro pad on the laptop computer cover where you intend to mount the antenna.

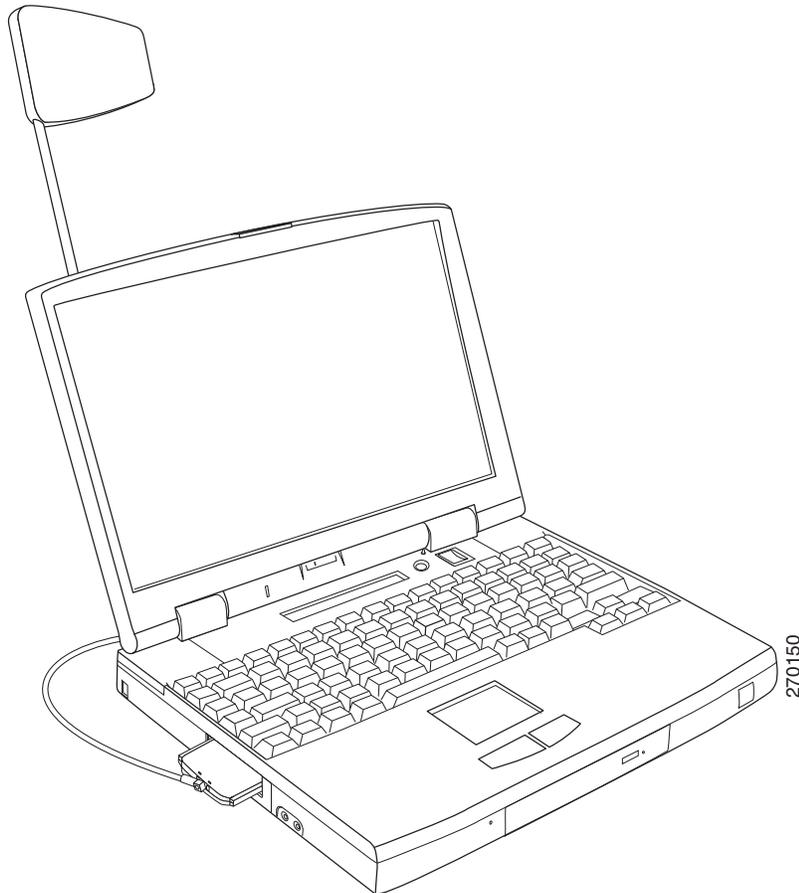
**Step 5** Attach the assembled antenna to the Velcro pad on your laptop computer cover as shown in [Figure 1](#).



**Note** Before completing the following steps, you must have installed and configured Cisco Spectrum Expert software and the Spectrum Expert card on your laptop. The card should be inserted in a PCMCIA slot before you continue the installation.

**Step 6** Connect the antenna cable to the card as shown in [Figure 4](#).

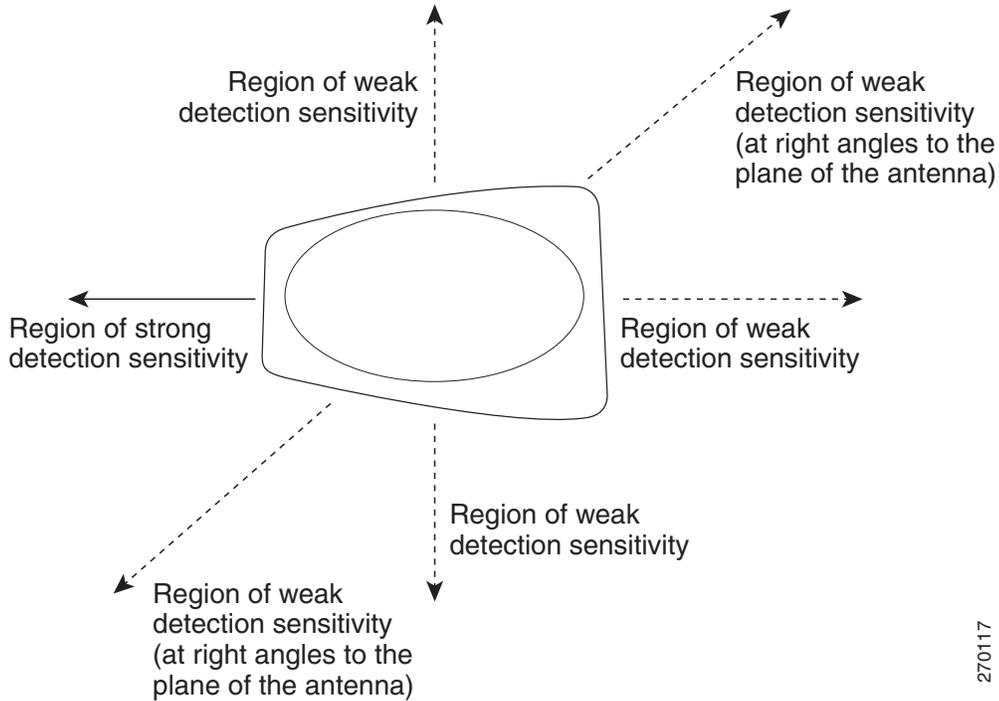
**Figure 4** *Connecting the Antenna Cable to the Sensor Card*



**Step 7** Boot your laptop computer and start the Cisco Spectrum Expert software.

**Step 8** To find the direction of a signal on the frequency band selected, slowly rotate the antenna mast to obtain a maximum level on the spectrum display. [Figure 5](#) shows the directional properties of the antenna.

**Figure 5** Using the Directional Antenna



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- Step 9** Refer to your Cisco Spectrum Expert software documentation for information about detecting, locating, and identifying signals.

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: <http://www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html>.

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