

Cisco Single-Port Antenna Stand for Multiband TNC Male-Terminated Portable Antenna (Cisco 3G-AE015-R)

This document outlines the specifications and describes the Cisco 3G-AE015-R single port antenna stand for mulitband TNC male-terminated portable antenna. This document contains the following sections:

- Cisco 90-Day Limited Hardware Warranty Terms, page 1
- Overview, page 3
- Technical Specifications, page 4
- System Requirements, page 5
- Installation Notes, page 5
- Safety Instructions, page 6
- Obtaining Documentation, page 7
- Obtaining Documentation, page 7
- Documentation Feedback, page 8
- Cisco Product Security Overview, page 9
- Obtaining Technical Assistance, page 9
- Obtaining Additional Publications and Information, page 11

Cisco 90-Day Limited Hardware Warranty Terms

There are special terms applicable to your hardware warranty and various services that you can use during the warranty period. Your formal Warranty Statement, including the warranties and license agreements applicable to Cisco software, is available on Cisco.com. Follow these steps to access and download the *Cisco Information Packet* and your warranty and license agreements from Cisco.com.

1. Launch your browser, and go to this URL:

   http://www.cisco.com/univercd/cc/td/doc/es_inpck/cetrans.htm

Americas Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

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The Warranties and License Agreements page appears.

To read the *Cisco Information Packet*, follow these steps:

a. Click the **Information Packet Number** field, and make sure that the part number 78-5235-03A0 is highlighted.

b. Select the language in which you would like to read the document.

c. Click **Go**.

The Cisco Limited Warranty and Software License page from the Information Packet appears.

d. Read the document online, or click the **PDF** icon to download and print the document in Adobe Portable Document Format (PDF).

Note You must have Adobe Acrobat Reader to view and print PDF files. You can download the reader from Adobe's website: http://www.adobe.com

2. To read translated and localized warranty information about your product, follow these steps:

a. Enter this part number in the Warranty Document Number field:

78-5236-01C0

b. Select the language in which you would like to read the document.

c. Click **Go**.

The Cisco warranty page appears.

d. Review the document online, or click the **PDF** icon to download and print the document in Adobe Portable Document Format (PDF).

You can also contact the Cisco service and support website for assistance:

http://www.cisco.com/public/Support_root.shtml.

Duration of Hardware Warranty

Ninety (90) days.

Replacement, Repair, or Refund Policy for Hardware

Cisco or its service center will use commercially reasonable efforts to ship a replacement part within ten (10) working days after receipt of a Return Materials Authorization (RMA) request. Actual delivery times can vary, depending on the customer location.

Cisco reserves the right to refund the purchase price as its exclusive warranty remedy.

To Receive a Return Materials Authorization (RMA) Number

Contact the company from whom you purchased the product. If you purchased the product directly from Cisco, contact your Cisco Sales and Service Representative.

Complete the information below, and keep it for reference:

Company product purchased from	
Company telephone number	
Product model number	
Product serial number	
Maintenance contract number	

Overview

The Cisco 3G-AE015-R single-port antenna base is designed for use with portable antennas operating at frequencies up to 6 GHz that connect to 3G wireless high-speed WAN interface cards (HWICs) using a threaded Neill-Concelman (TNC) male connector. This antenna base unit, ordered separately, has 15 feet of plenum LMR-195 cable and can be used with antenna Cisco 3G-ANTM1919D.

The antenna base can be wall-mounted or placed on a rack or desktop, and has the following features:

- Multiple band coverage supporting cellular backahaul installations and wireless LAN (WLAN) and wi-fi networks
- Ergonomic design

Figure 1 shows the Cisco 3G-AE015-R antenna base.

Figure 1 Cisco 3G-AE015-R Antenna Base

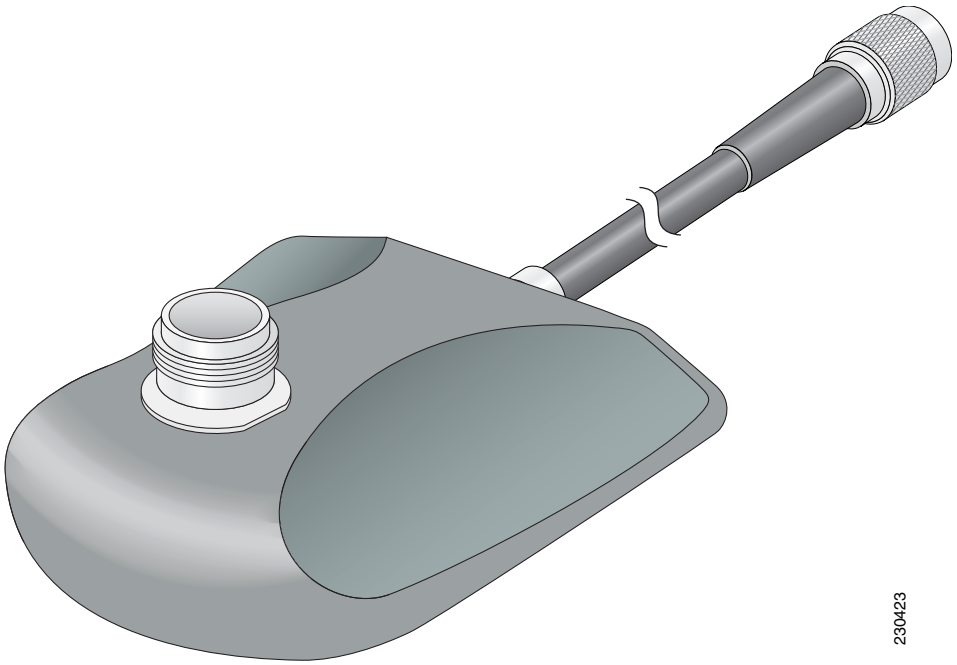
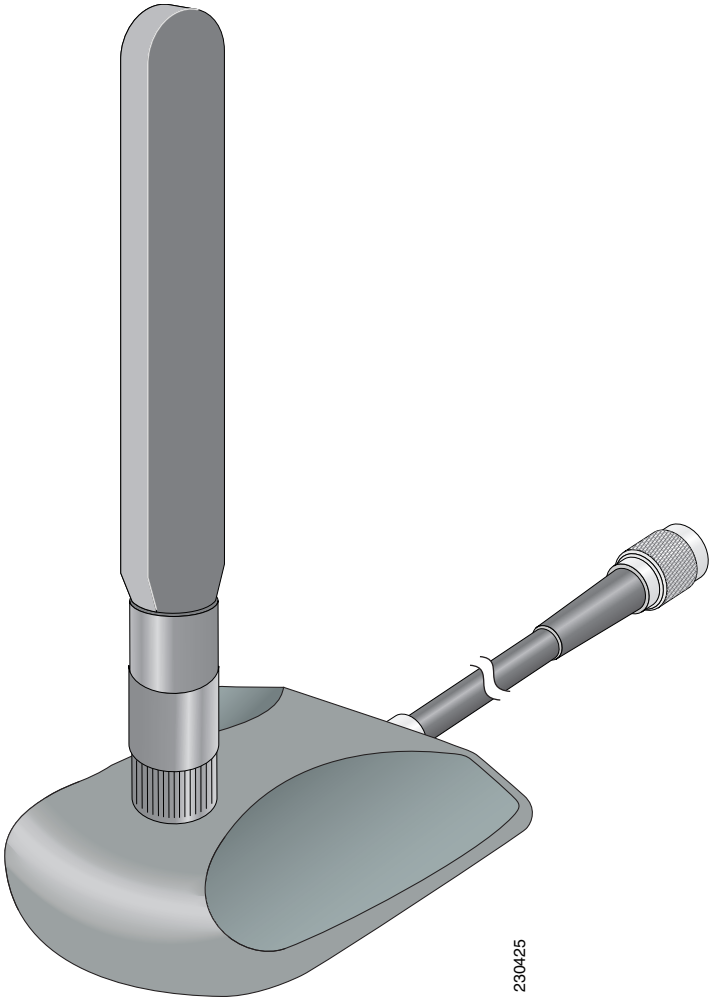


Figure 2 shows the Cisco 3G-AE015-R Antenna connected to the Cisco 3G-ANTM-1919D multiband swivel-mount dipole antenna recommended for use with this product.

Figure 2 Cisco 3G-AE015-R Antenna Connected to the Cisco 3G-ANTM1919D Antenna Base



Technical Specifications

The following table lists the technical specifications for the Cisco 3G-AE015-R antenna.

Product type	Single-port antenna base
Operating frequency range	6 GHz
Attenuation	<3 dB at or below 2.5 GHz
Antenna base connector	TNC female
Pigtail connector	TNC male

VSWR[1]	<2.0
Maximum input power	25 Watts
Base material	Cisco grey UL94 V0 PC/ABS plastic
Cable	15 ft (4.6 m)
Environment	Indoor only

1. VSWR = voltage standing -wave radio

System Requirements

The Cisco 3G-AE015-R antenna base is a remote antenna solution for the Cisco 3G wireless WAN HWICs and should be connected using the 20-ft or 50-ft ultra-low-loss (ULL) cables recommended for this product. It requires an antenna that uses a TNC (male) connector.

For proper use of the antenna base in conjunction with the Cisco 3G-ANTM-1919D antenna, see the *Cisco Multiband Swivel Mount Dipole Antenna (3G-ANTM1919D)* document.

Installation Notes

Table 1 lists the Cisco antennas that are supported for use with the antenna extension base.

Table 1 Cisco Antennas Supported on the 3G Wireless HWIC

Cisco Part Number	Antenna Type	Maximum Gain and Frequency Range	Description
3G-ANTM1919D	Dipole Omnidirectional	0 dBi (806–960 MHz) 0 dBi (1710–2170 MHz)	This is the default antenna. Multiband faceplate-mounted dipole antenna. This antenna is included with all faceplate-mounted 3G wireless WAN HWICs. For more information, see the *Cisco Multiband- Swivel Mount Dipole Antenna (3G-ANTM1919D)* document.

Warning **This equipment must be connected to an indoor antenna only.** Statement 373

Caution Install the HWIC and any antennas away from appliances that share the same frequency bands. Microwave ovens, cordless telephones, and security monitors can temporarily interfere with wireless performance.

Caution We recommend avoiding installing wireless antennas in or near rack-mounted equipment that include networking equipment and computer servers whose radiated noise emissions can severely degrade radio performance.

To extend the coaxial cable included with your antenna base, we recommend a ULL coaxial cable for flexibility of installation without significant loss of range.

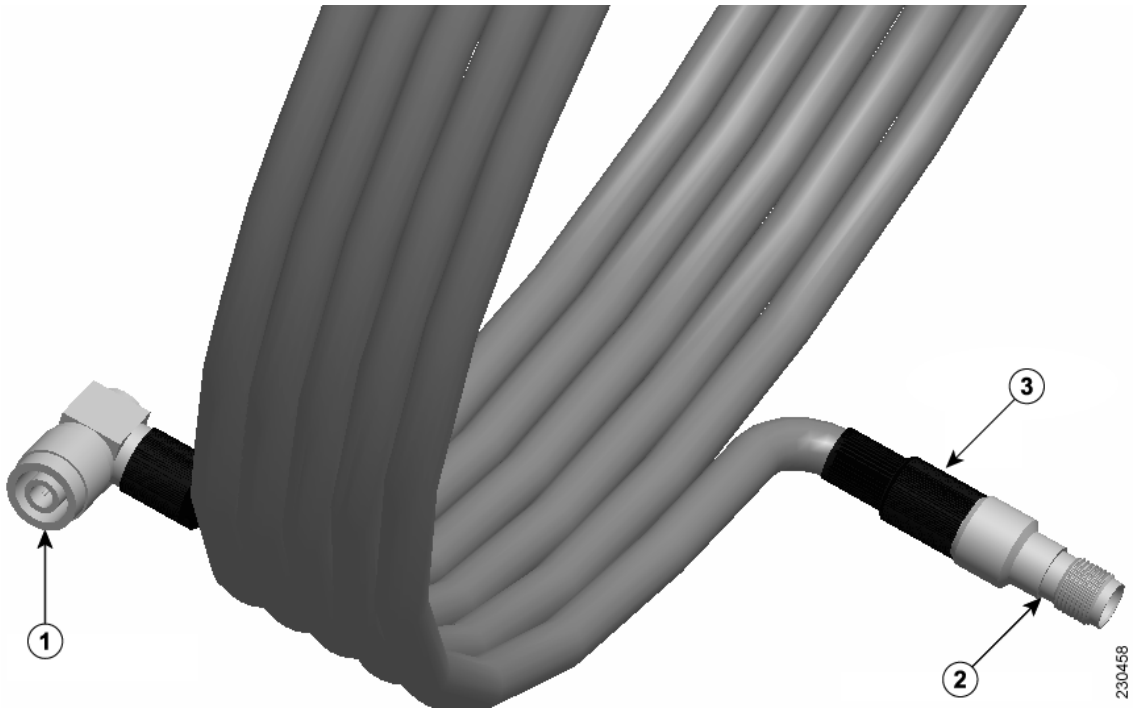
Table 2 provides insertion loss information about ULL extension coaxial cables available from Cisco.

Table 2 ULL Extension Coaxial Cables

Cisco Product Number	Cable Length	Frequency Range	Insertion Loss
3G-CAB-ULL-20	20 ft (6 m)	500-2000 MHz	–1.50 dB maximum
3G-CAB-ULL-50	50 ft (15 m)	500-2000 MHz	–3.50 dB maximum

Figure 3 shows the ULL cable recommended for Cisco 3G Wireless WAN HWICs.

Figure 3 ULL Cable Recommended for Cisco 3G Wireless WAN HWICs



1	TNC Male RA[1]	**3**	Heat Shrink Tube
2	TNC Female Straight		

1. RA = Right angle

Safety Instructions

Follow these safety instructions when installing your antenna.

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

Warning **This equipment must be connected to an indoor antenna only.** Statement 373

- Plan your installation procedure carefully and completely before you begin.
- If you are installing an antenna for the first time, for your own safety as well as that of others, *seek professional assistance*. Consult your dealer, who can explain which mounting method to use for the location in which you plan to install the antenna.
- Choose your installation site with both safety and performance in mind. Remember that electric power cables and telephone lines look alike. For your safety, assume that any line is an electric power line until determined otherwise.
- Call your local power company or building maintenance organization if you are unsure about cables close to your mounting location.
- When installing your antenna, *do not* use a metal ladder. *Do* dress properly: wear shoes with rubber soles and heels, rubber gloves, and a long-sleeved shirt or jacket.
- If an accident or emergency occurs with the power lines, call for qualified emergency help immediately.

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation at this URL:

http://www.cisco.com/univercd/home/home.htm

You can access the Cisco website at this URL:

http://www.cisco.com

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

Documentation DVD

Cisco documentation and additional literature are available in a Documentation DVD package, which may have shipped with your product. The Documentation DVD is updated regularly and may be more current than printed documentation. The Documentation DVD package is available as a single unit.

Registered Cisco.com users (Cisco direct customers) can order a Cisco Documentation DVD (product number DOC-DOCDVD=) from the Ordering tool or Cisco Marketplace.

Cisco Ordering tool:

http://www.cisco.com/en/US/partner/ordering/

Cisco Marketplace:

http://www.cisco.com/go/marketplace/

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpck/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:

  http://www.cisco.com/en/US/partner/ordering/

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 1 800 553-NETS (6387).

Documentation Feedback

You can send comments about technical documentation to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

http://www.cisco.com/go/psirt

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

http://www.cisco.com/en/US/products/products_psirt_rss_feed.html

Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies—security-alert@cisco.com
- Nonemergencies—psirt@cisco.com

Tip We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.*x* through 8.*x*.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one that has the most recent creation date in this public key server list:

http://pgp.mit.edu:11371/pks/lookup?search=psirt%40cisco.com&op=index&exact=on

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

Cisco Technical Support Website

The Cisco Technical Support Website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, 365 days a year, at this URL:

http://www.cisco.com/techsupport

Access to all tools on the Cisco Technical Support Website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

http://tools.cisco.com/RPF/register/register.do

Note Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support Website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco TAC engineer. The TAC Service Request Tool is located at this URL:

http://www.cisco.com/techsupport/servicerequest

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)
EMEA: +32 2 704 55 55
USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

http://www.cisco.com/techsupport/contacts

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is "down," or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

  http://www.cisco.com/go/marketplace/

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

  http://www.ciscopress.com

- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

  http://www.cisco.com/packet

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

  http://www.cisco.com/go/iqmagazine

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

  http://www.cisco.com/ipj

- World-class networking training is available from Cisco. You can view current offerings at this URL:

  http://www.cisco.com/en/US/learning/index.html

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