



Cisco Guard and Traffic Anomaly Detector Appliance Installation Note

Product names: Cisco Guard XT 5650B and Cisco Traffic Anomaly Detector XT 5600B

Product numbers: AGXT-5650-MMF-B-K9, ADXT-5600-MMF-B-K9

This document describes how to install the Cisco Guard (Guard) and the Traffic Anomaly Detector (Detector). This document refers to both the Guard and the Detector as the “appliance.”

The Cisco Guard is a distributed denial-of-service (DDoS) mitigation product that receives traffic diverted from attacked targets, cleans this traffic, and forwards the cleaned traffic to its original path.

The Cisco Traffic Anomaly Detector is a distributed denial-of-service (DDoS) detection product that receives a copy of the traffic that is destined to the target, analyzes that traffic, and sends out an alert when it detects a DDoS attack. The Detector can also activate a configured Guard to mitigate these attacks.

Contents

This publication contains the following sections:

- [Safety Overview, page 2](#)
- [Required Tools and Equipment, page 2](#)
- [Installation Guidelines, page 2](#)
- [Front Panel Description, page 9](#)
- [Rear Panel Description, page 9](#)
- [Connecting the Appliance, page 11](#)
- [Technical Specifications, page 14](#)
- [Related Documentation, page 14](#)
- [Obtaining Documentation, page 14](#)
- [Documentation Feedback, page 15](#)
- [Cisco Product Security Overview, page 15](#)
- [Product Alerts and Field Notices, page 17](#)
- [Obtaining Technical Assistance, page 17](#)
- [Obtaining Additional Publications and Information, page 19](#)



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Safety Overview

Safety warnings appear throughout this publication in procedures that, if performed incorrectly, may harm you. A warning symbol precedes each warning statement.



Warning

IMPORTANT SAFETY INSTRUCTIONS

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

SAVE THESE INSTRUCTIONS

Required Tools and Equipment

You need the following tools and equipment to install the appliance:

- RJ-45 console cable (provided)
- Power cord (provided)
- Number 2 Phillips screwdriver
- Antistatic mat or antistatic foam
- ESD grounding strap
- Ethernet cable
- Rack-mount kit (provided)
 - Two chassis-support rails
 - Cable support bracket (optional)
 - Cable tray clamp (optional)

Installation Guidelines

Follow these guidelines when installing the appliance:

- [Safety Guidelines, page 3](#)
- [Preparing Your Site for Installation, page 7](#)
- [Precautions for Rack-Mounting, page 8](#)

Safety Guidelines

This section provides safety information for installing the appliance and contains the following topics:

- [General Precautions, page 5](#)
- [Maintaining Safety with Electricity, page 5](#)
- [Protecting Against Electrostatic Discharge, page 6](#)
- [Preventing EMI, page 6](#)

Read the installation instructions in this document before you connect the system to its power source. Failure to read and follow these guidelines could lead to an unsuccessful installation and possibly damage the system and components.

You should observe the following safety guidelines when working with any equipment that connects to electrical power or telephone wiring. They can help you avoid injuring yourself or damaging the appliance.

The following warnings are provided to help you prevent injury to yourself or damage to the devices:



Warning

Before working on a system that has an on/off switch, turn OFF the power and unplug the power cord. Statement 1



Warning

Read the installation instructions before you connect the system to its power source. Statement 10



Warning

This unit might have more than one power cord. To reduce the risk of electric shock, disconnect the two power supply cords before servicing the unit. Statement 14



Warning

The ports labeled "Ethernet," "10BaseT," "Token Ring," "Console," and "AUX" are safety extra-low voltage (SELV) circuits. SELV circuits should only be connected to other SELV circuits. Because the BRI circuits are treated like telephone-network voltage, avoid connecting the SELV circuit to the telephone network voltage (TNV) circuits. Statement 22



Warning

Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals. Statement 43



Warning

The safety cover is an integral part of the product. Do not operate the unit without the safety cover installed. Operating the unit without the cover in place will invalidate the safety approvals and pose a risk of fire and electrical hazards. Statement 117



Warning

Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 213

**Warning**

Before working on a chassis or working near power supplies, unplug the power cord on AC units.
Statement 246

**Warning**

Do not work on the system or connect or disconnect cables during periods of lightning activity.
Statement 1001

**Warning**

To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack. Statement 1006

**Warning**

There is the danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Statement 1015

**Warning**

Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place. Statement 1029

**Warning**

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.
Statement 1030

**Warning**

Ultimate disposal of this product should be handled according to all national laws and regulations.
Statement 1040

**Warning**

Before opening the unit, disconnect the telephone-network cables to avoid contact with telephone-network voltages. Statement 1041



Warning

This product requires short-circuit (overcurrent) protection, to be provided as part of the building installation. Install only in accordance with national and local wiring regulations. Statement 1045



Warning

This equipment is intended to be grounded to comply with emission and immunity requirements. Ensure that the switch functional ground lug is connected to earth ground during normal use. Statement 1064



Warning

Installation of the equipment must comply with local and national electrical codes. Statement 1074

General Precautions

Observe the following general precautions when using your appliance:

- Keep all system components away from radiators and heat sources, and do not block cooling vents.
- Do not spill food or liquids on your system components, and never operate the product in a wet environment. If the computer gets wet, see the appropriate chapter in your troubleshooting guide or contact the Cisco Technical Assistance Center. For instructions on contacting the Technical Assistance Center, see [Obtaining Technical Assistance, page 17](#).
- Do not push any objects into the openings of your system components. Doing so can cause fire or electric shock by shorting out interior components.
- Position system cables and power cables carefully; Be sure to route the system cables and the power cable and plug so that they cannot be stepped on or tripped over. Be sure that nothing rests on your system component cables or power cable.
- Do not modify power cables or plugs. Consult a licensed electrician or your power company for site modifications. Always follow your local/national wiring rules.
- To help avoid possible damage to the system board, wait 5 seconds after turning off the system before removing a component from the system board or before disconnecting a peripheral device from the computer.

Maintaining Safety with Electricity

Follow these guidelines when working on equipment powered by electricity:

- If any of the following conditions occur contact the Cisco Technical Assistance Center:
 - The power cable or plug is damaged.
 - An object has fallen into the appliance.
 - The appliance has been exposed to water.
 - The appliance has been dropped or damaged.
 - The appliance does not operate correctly when you follow the operating instructions.
- Use the correct external power source. Operate the appliance only from the type of power source indicated on the electrical ratings label. If you are not sure of the type of power source required, consult the Cisco Technical Assistance Center or a local power company.

- Use only approved power cables. An approved power cable arrived with your appliance and is intended for use with your system (approved for use in your country, based on the shipping location). If you must purchase an additional power cable, ensure that it is rated for the appliance and for the voltage and the specific current that are marked on the appliance's electrical ratings label. The voltage and current rating for the cable should be greater than the ratings that are marked on the appliance.
- To prevent electric shock, plug the appliance components and peripheral power cables into properly grounded electrical outlets. These cables are equipped with three-prong plugs to ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable.
- To protect your system and components from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).
- Do not modify power cables or plugs. Consult a licensed electrician or your power company for site modifications. Always follow your local and national wiring rules.

Protecting Against Electrostatic Discharge

Static electricity can harm the delicate components inside of your computer. To prevent static damage, discharge static electricity from your body before you touch any electronic components on your computer, such as the microprocessor. You can do so by touching an unpainted metal surface on the computer chassis.

As you continue to work inside the computer, periodically touch an unpainted metal surface to remove any static charge your body may have accumulated.

You can also take the following steps to prevent damage from electrostatic discharge (ESD):

- When unpacking a static-sensitive component from its shipping carton, do not remove the component from the antistatic packing material until you are ready to install the component in your computer. Just before unwrapping the antistatic packaging, be sure to discharge static electricity from your body.
- When transporting a sensitive component, first place it in an antistatic container or packaging.
- Handle all sensitive components in a static-safe area. If possible, use antistatic floor pads and workbench pads.

Preventing EMI

When you run wires for any significant distance in an electromagnetic field, electromagnetic interference (EMI) can occur between the field and the signals on the wires.

Strong EMI, especially when it is caused by lightning or radio transmitters, can destroy the signal drivers and receivers in the system and can create an electrical hazard by conducting power surges through lines and into the system.

Be aware that improper plant wiring can result in radio frequency interference (RFI).

To predict and remedy strong EMI, consult RFI experts.

Preparing Your Site for Installation

This section describes the site requirements for safe installation and operation of your appliance. Ensure that your site is properly prepared before beginning installation.

This section contains the following topics:

- [Environmental, page 7](#)
- [AC Power, page 8](#)
- [Cabling, page 8](#)

Environmental

When planning your site layout and equipment locations, follow the precautions described in this section to help avoid equipment failures and reduce the possibility of environmentally caused shutdowns. If you experience shutdowns or unusually high errors with your existing equipment, these precautions will help you to isolate the cause of the failures and prevent future problems.

Use the following precautions when planning the operating environment for your appliance:

- Always follow the ESD-prevention procedures described in [Preventing EMI, page 6](#), to avoid damage to the appliance. Damage from static discharge can cause immediate or intermittent equipment failure.
- Make sure that the chassis cover is secure. An open chassis allows air leaks, which could interrupt and redirect the flow of cooling air from internal components.
- Electrical equipment generates heat. Ambient air temperature might not be adequate to cool equipment to acceptable operating temperatures without adequate circulation. Make sure that the room in which you operate has adequate air circulation.

When choosing a site for installation, follow these guidelines:

- Install the appliance in a restricted access area, where access can be gained only by service personnel through the use of a special tool, lock and key, or other means of security.
- Choose a site that is dry, clean, well-ventilated, and air-conditioned.
- Choose a site that maintains an ambient temperature of 10° to 35°C (50° to 95°F).

Follow these guidelines to create a safe operating environment:

- Keep tools and chassis components off of the floor and away from foot traffic.
- Clear the area of possible hazards, such as moist floors, ungrounded power extension cables, and missing safety grounds.
- Keep the area around the chassis free from dust and foreign conductive material (such as metal flakes from nearby construction activity).

AC Power

Ensure that the plug-socket combination is accessible at all times because it serves as the main disconnecting device. For the Guard and the Detector power requirements, see [Connecting the Appliance, page 11](#).

Cabling

Use the cables in the accessory kit to connect the appliance console port to a console or computer that is running a console program. In addition to using the console cable, use the provided standard Ethernet cable to connect the appliance to your network.

Precautions for Rack-Mounting

Observe the following precautions for rack stability and safety. Also, for specific warning and caution statements and procedures, refer to the rack installation documentation that accompanied the rack.

**Note**

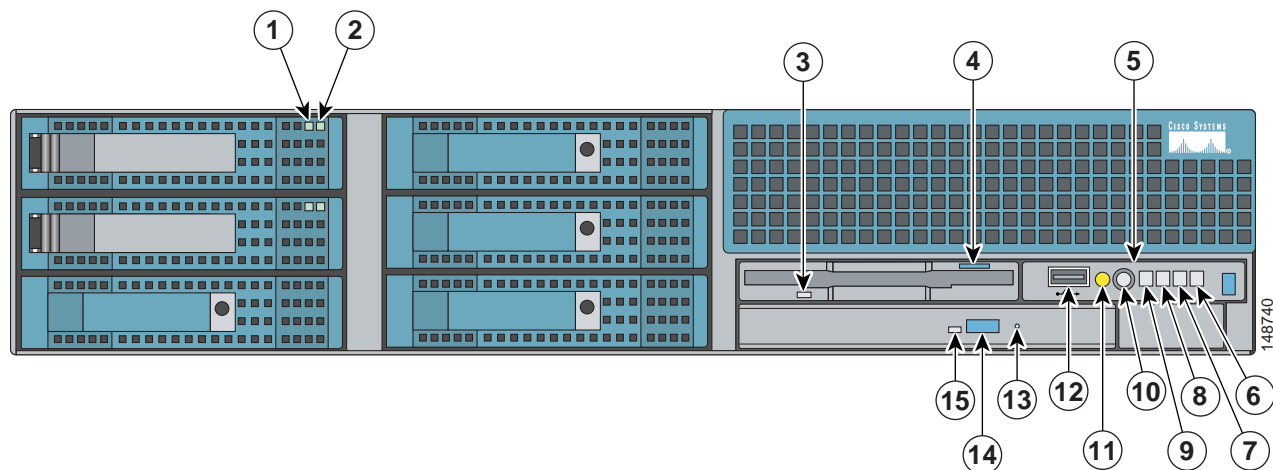
The term “component” refers to any server, storage system, or appliance, and to various peripherals or supporting hardware.

- Do not move large racks by yourself. Due to the height and weight of the rack, a minimum of two people are needed to accomplish this task.
- Ensure that the rack is level and stable before extending a component from the rack.
- Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
- Ensure that proper airflow is provided to components in the rack.
- Do not step on or stand on any system or component when servicing other systems and components in a rack.
- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

Front Panel Description

Figure 1 shows the front panel of the appliance.

Figure 1 Front Panel

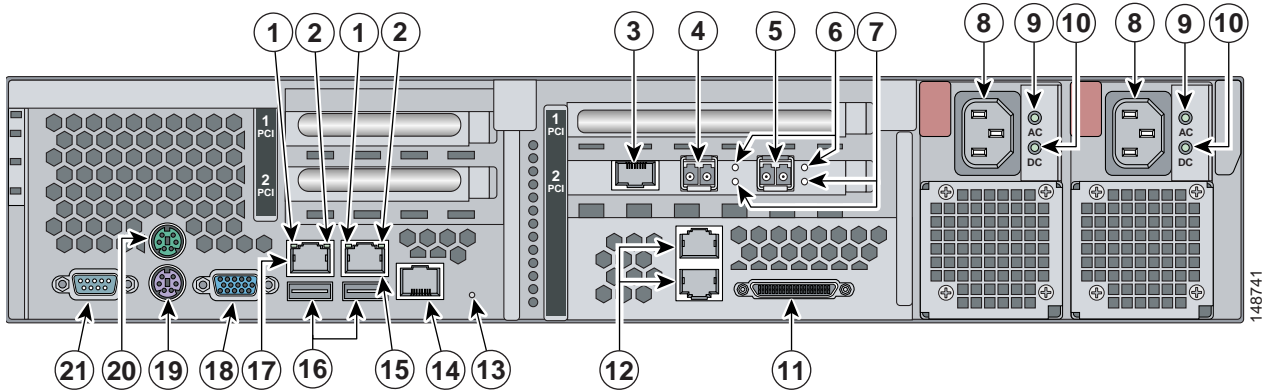


1	Hard disk drive activity LED (green). The activity LED flashes to indicate that the drive is in use.	10	Power control button. The power control button turns the appliance on or off.
2	Hard disk drive status LED (amber). The status LED lights to indicate that the drive has failed.	11	Power on LED. The power LED indicates that the appliance is receiving power and functioning properly. The power LED can have the following status: <ul style="list-style-type: none"> Green—The appliance is in normal operation. Blinking—The appliance is receiving power but is not powered up. Off—The appliance is not connected to a power source, or the power supply or the LED failed.
3	Diskette drive activity LED (green). The activity LED lights to indicate that the drive is in use.		
4	Diskette eject button.		
5	Operator information panel.		
6	System error LED (amber). The system error LED indicates that a system error has occurred.	12	USB connector.
7	Information LED (amber). The information LED indicates that a noncritical event has occurred.	13	DVD-ROM emergency eject button.
8	System locator LED (not supported).	14	DVD-ROM drive eject button.
9	SCSI activity LED (not supported).	15	DVD-ROM drive activity LED (green).

Rear Panel Description

Figure 2 displays the rear panel of the appliance.

Figure 2 Rear Panel



1	Ethernet activity LEDs (green). The Ethernet activity LEDs flash to indicate that the server is transmitting to or receiving signals from the Ethernet LAN that is connected to the Ethernet port.	8	Power cords.
		9	AC power LED.
		10	DC power LED.
2	Ethernet link status LEDs (green). The Ethernet link status LEDs light to indicate that there is an active link connection on the 10BASE-T, 100BASE-TX, or 1000BASE-TX interface for the Ethernet port.	11	SCSI (not supported).
		12	ASM (not supported).
		13	System locator LED (not supported).
3	Accelerator card RS-232 (RJ45) serial connector. Note Do not use this port. This port is intended for use by Cisco TAC personnel only.	14	Remote Supervisor Adapter II SimLine Ethernet (not supported).
4	Giga0 connector. The Giga0 connector is a 1000BaseSX LC Fiber SFP module on the accelerator card that provides connection for the in-band interface.	15	Eth0 RJ-45 connector. Gigabit 10/100/1000 Ethernet port that provides a connection for out-of-band management.
		16	USB connectors.
5	Giga1 connector. The Giga1 connector is a 1000BaseSX LC Fiber SFP module on the accelerator card that provides connection for the in-band interface.	17	Eth1 RJ-45 connector. Gigabit 10/100/1000 Ethernet port that provides a connection for out-of-band management.
		18	Video. Console monitor connector.
6	Gigabit Ethernet activity LEDs (amber). The Ethernet activity LEDs flash to indicate that the server is transmitting to or receiving signals from the Ethernet LAN that is connected to the Gigabit Ethernet port.	19	Keyboard. Console keyboard connector.
		20	Mouse.
7	Gigabit Ethernet link status LEDs (green). The Gigabit Ethernet link status LEDs light to indicate that there is an active link connection on the Gigabit Ethernet port.	21	Serial RS-232 (DB-9). Use this port to attach a console.



Warning

The Cisco proprietary accelerator card contains a CLASS I LASER product. This module satisfies Class I Laser Safety requirements in accordance with the US FDA/CDRH and international IEC-825 standards.

Connecting the Appliance

This section describes how to connect the appliance to the network and power sources, and contains the following topics:

- [Connecting AC Power, page 11](#)
- [Connecting the Appliance to Your Network, page 11](#)
- [Establishing a Console Connection, page 12](#)
- [Configuring Passwords for System User Accounts](#)
- [Removing or Replacing an Appliance](#)


Connecting AC Power

To connect AC power to your appliance, perform the following steps:

-
- Step 1** Review the safety information that is outlined in [Maintaining Safety with Electricity, page 5](#) and [AC Power, page 8](#).
- Step 2** Plug an AC power cord into each one of the power cable receptacles at the rear of the appliance. (See item 7 in [Figure 2](#).)
- Step 3** Connect the other end of the power cords to an AC power source.
Both cables must be connected to a power source for the appliance to work properly.
- Step 4** Press the power control button on the front of the appliance. (See item 10 in [Figure 1](#).)
The system LED lights to indicate the connection. (See item 11 in [Figure 1](#).)
-

Connecting the Appliance to Your Network

To connect the appliance to your network, perform the following steps:

-
- Step 1** Connect the in-band cable to the in-band network connector. (See items 4 and 5 in [Figure 2](#).)
- Step 2** Connect the other end of the in-band cable to a hub, switch, or router in your network. You can connect one or two in-band network interface cards.
-  **Note** Ensure that you connect the Detector to a port-mirroring switch or to an optical splitter or the Detector will not be able to monitor traffic.
-
- Step 3** Connect the Ethernet 10/100/1000BASE-T cable to the network connector of the appliance. (See items 15 and 17 in [Figure 2](#).)
- Step 4** Connect the other end of the Ethernet 10/100/1000BASE-T to your management network connector.
-

Establishing a Console Connection

You must establish a console connection to the appliance as part of the initial configuration process.

To establish a serial console connection, perform the following steps:

-
- Step 1** Connect a console to the serial console port on the rear panel:
- Attach the RS-232 cable to the console serial connector (see item 21 in [Figure 2](#)) and the other end of RS-232 cable to a console.
 - Power up the appliance. (See [Connecting AC Power, page 11](#) for more information.)
- Step 2** Open the terminal emulation application on your PC to access the appliance CLI. Configure your terminal emulation communication software (such as Hyper Terminal) to operate with the following settings:
- Bits per second: 9600
 - Data bits: 8
 - Parity: None
 - Stop bits: 1
 - Flow control: None
- Step 3** Press **Enter** to display the CLI prompt.

As an alternative to using a serial console, you can connect a monitor and keyboard to the corresponding appliance connectors. (See items 18 and 19 in [Figure 2](#).) The monitor and keyboard serve as the console and you can perform the same operations as on a serial console.

If this is the first time that you are connecting to the appliance, you must configure passwords for the system user accounts (root, admin, and riverhead). (See the [“Configuring Passwords for System User Accounts”](#) section for more information.)

Configuring Passwords for System User Accounts

The appliance has preconfigured system users. You must set passwords for the system users when you log in for the first time. You can change the passwords for the admin and riverhead usernames at any time by using the **password** command.

To configure the passwords for the system user accounts, perform the following steps:

-
- Step 1** Establish a console connection with the appliance. (See the [“Establishing a Console Connection”](#) section for more information.)
- After the boot process completes, the software prompts you to enter a username.
- Step 2** Enter **admin** for the username and **radmin** for the password.
- Step 3** Choose a password for the administrative (root) account. The password must have a minimum length of six characters and should be a combination of letters and numbers. Retype the new password to verify it.
- Step 4** Choose a password for the admin username. The password must have a minimum length of six characters and should be a combination of letters and numbers. Retype the new password to verify it.

- Step 5** Choose a password for the riverhead username. The password must have a minimum length of six characters and should be a combination of letters and numbers. Retype the new password to verify it.

To access the appliance CLI, enter **admin** for the username and enter the password that you have configured in [Step 4](#). Note that this step is not necessary following the above procedure because you are already logged in to the admin account.

Removing or Replacing an Appliance



Warning

Ultimate disposal of this product should be handled according to all national laws and regulations.
Statement 1040



Warning

Before working on a system that has an on/off switch, turn OFF the power and unplug the power cord.
Statement 1

To physically remove an appliance from your network, follow these steps:

- Step 1** Log into the appliance and enter the **poweroff** command to power down the appliance.
- Step 2** Type **yes** at the command prompt to verify the process.
- Step 3** Wait for about 30 to 60 seconds because the shutdown process takes some time. If the VGA or serial console is connected, you should monitor the system messages. The last message on the screen will be “System halted.”
- Step 4** Press the power control button on the front of the appliance to turn the power off. (See item 10 in [Figure 1](#).)
- The system LED turns off. (See item 11 in [Figure 1](#).)



Caution

Pushing the power control button without entering the **poweroff** command may result in critical data loss.

- Step 5** Disconnect the power cords and network cables.
- Step 6** Physically remove the chassis from the rack.

To physically replace an appliance, install the new appliance, and configure it using the same configuration parameters (such as the IP address) that you used for the removed appliance see the “Performing Maintenance Tasks” chapter in the *Cisco Guard Configuration Guide* or the *Cisco Traffic Anomaly Detector Configuration Guide*.

Technical Specifications

Table 1 describes the Guard and the Detector rack-mount specifications.

Table 1 Rack-Mount Specifications

Item	Specification
Dimensions	
Weight	29.03 kg (64 lb)
Height	85.4 mm (3.36 inches)
Width	443.6 mm (17.5 inches)
Depth	698 mm (27.48 inches)
Form Factor	Rack mount 2U
Power management	
Power supply	625 Watts
Power supply type	100-240VAC volt universal auto setting
Interfaces	
Out-of-Band	Two 10/100/1000BASE-T RJ-45 ports
In-Band	One dual-port NIC consisting of two 1000BaseSX LC Fiber SFP modules
Serial port	One serial RS-232 (DB-9) port and one serial RS-232 RJ45 port
Electrical	
	100–240 VAC auto-sense auto switch 50–60 Hz dual power supply

Related Documentation

For configuration information on the Guard, refer to the following publications:

- *Cisco Anomaly Guard Configuration Guide*
- *Cisco Anomaly Guard Web-Based Manager Configuration Guide*

For configuration information on the Detector, refer to the following publications:

- *Cisco Traffic Anomaly Detector Configuration Guide*
- *Cisco Traffic Anomaly Detector Web-Based Manager Configuration Guide*

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. This section explains the product documentation resources that Cisco offers.

Cisco.com

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

<http://www.cisco.com/techsupport>

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

Product Documentation DVD

The Product Documentation DVD is a library of technical product documentation on a portable medium. The DVD enables you to access installation, configuration, and command guides for Cisco hardware and software products. With the DVD, you have access to the HTML documentation and some of the PDF files found on the Cisco website at this URL:

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

The Product Documentation DVD is created and released regularly. DVDs are available singly or by subscription. Registered Cisco.com users can order a Product Documentation DVD (product number DOC-DOCDVD= or DOC-DOCDVD=SUB) from Cisco Marketplace at the Product Documentation Store at this URL:

<http://www.cisco.com/go/marketplace/docstore>

Ordering Documentation

You must be a registered Cisco.com user to access Cisco Marketplace. Registered users may order Cisco documentation at the Product Documentation Store at this URL:

<http://www.cisco.com/go/marketplace/docstore>

If you do not have a user ID or password, you can register at this URL:

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

Documentation Feedback

You can provide feedback about Cisco technical documentation on the Cisco Support site area by entering your comments in the feedback form available in every online document.

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 will find information about how to do the following:

- 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, security notices, and security responses for Cisco products is available at this URL:

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

To see security advisories, security notices, and security responses as they are updated in real time, you can subscribe to the Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed. Information about how to subscribe to the PSIRT RSS feed is found at 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 have identified a vulnerability in a Cisco product, contact PSIRT:

- For emergencies only — security-alert@cisco.com

An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- For nonemergencies — psirt@cisco.com

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

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



Tip

We encourage you to use Pretty Good Privacy (PGP) or a compatible product (for example, GnuPG) to encrypt any sensitive information that you send to Cisco. PSIRT can work with information that has been encrypted with PGP versions 2.x through 9.x.

Never use a revoked encryption key or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

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

The link on this page has the current PGP key ID in use.

If you do not have or use PGP, contact PSIRT to find other means of encrypting the data before sending any sensitive material.

Product Alerts and Field Notices

Modifications to or updates about Cisco products are announced in Cisco Product Alerts and Cisco Field Notices. You can receive these announcements by using the Product Alert Tool on Cisco.com. This tool enables you to create a profile and choose those products for which you want to receive information.

To access the Product Alert Tool, you must be a registered Cisco.com user. Registered users can access the tool at this URL:

<http://tools.cisco.com/Support/PAT/do/ViewMyProfiles.do?local=en>

To register as a Cisco.com user, go to this URL:

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

Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Support website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

Cisco Support Website

The Cisco 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 at this URL:

<http://www.cisco.com/en/US/support/index.html>

Access to all tools on the Cisco 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

Before you submit a request for service online or by phone, use the **Cisco Product Identification Tool** to locate your product serial number. You can access this tool from the Cisco Support website by clicking the **Get Tools & Resources** link, clicking the **All Tools (A-Z)** tab, and then choosing **Cisco Product Identification Tool** from the alphabetical list. This 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.



Tip

Displaying and Searching on Cisco.com

If you suspect that the browser is not refreshing a web page, force the browser to update the web page by holding down the Ctrl key while pressing **F5**.

To find technical information, narrow your search to look in technical documentation, not the entire Cisco.com website. After using the Search box on the Cisco.com home page, click the **Advanced Search** link next to the Search box on the resulting page and then click the **Technical Support & Documentation** radio button.

To provide feedback about the Cisco.com website or a particular technical document, click **Contacts & Feedback** at the top of any Cisco.com web page.

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 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 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)—An existing 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 operations 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 the network is impaired while 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.

- The Cisco Online Subscription Center is the website where you can sign up for a variety of Cisco e-mail newsletters and other communications. Create a profile and then select the subscriptions that you would like to receive. To visit the Cisco Online Subscription Center, go to this URL:

<http://www.cisco.com/offer/subscribe>

- The *Cisco Product Quick Reference Guide* is a handy, compact reference tool that includes brief product overviews, key features, sample part numbers, and abbreviated technical specifications for many Cisco products that are sold through channel partners. It is updated twice a year and includes the latest Cisco channel product offerings. To order and find out more about the *Cisco Product Quick Reference Guide*, go to this URL:

<http://www.cisco.com/go/guide>

- Cisco Marketplace provides a variety of Cisco books, reference guides, documentation, 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>

- *Internet Protocol Journal* is a quarterly journal published by Cisco 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>

- Networking products offered by Cisco, as well as customer support services, can be obtained at this URL:

<http://www.cisco.com/en/US/products/index.html>

- Networking Professionals Connection is an interactive website where networking professionals share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:

<http://www.cisco.com/discuss/networking>

- “What’s New in Cisco Documentation” is an online publication that provides information about the latest documentation releases for Cisco products. Updated monthly, this online publication is organized by product category to direct you quickly to the documentation for your products. You can view the latest release of “What’s New in Cisco Documentation” at this URL:

<http://www.cisco.com/univercd/cc/td/doc/abtnicd/136957.htm>

- 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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