Cisco 3270 Rugged Integrated Services Routers

The Cisco® 3270 Rugged Integrated Services Router is a high-performance router designed to support multiple applications running concurrently over wired or wireless networks. With onboard hardware encryption, the Cisco 3270 Rugged Integrated Services Router offloads encryption processing from the router CPU to provide secure, yet scalable video, voice, and data services for outdoor and mobile networks.

With a form factor approximately twice the length of the Cisco 3250 Rugged Integrated Services Router, the Cisco 3270 offers a broader selection of network interfaces such as fiber, Gigabit Ethernet copper, and universal serial bus (USB). The Cisco 3270 can also support two stacks of PC/104-Plus cards. With higher scalability, increased port densities, and greater network module expansion, the Cisco 3270 delivers investment protection for customers deploying embedded, outdoor, and high-end mobile networks in the defense and transportation industries.

Marketing and Positioning

Q. Will the Cisco 3270 Rugged Integrated Services Router replace the Cisco 3250 Rugged Integrated Services Router?

A. No. The Cisco 3250 and the Cisco 3270 will coexist as part of the Cisco 3200 Series Rugged Integrated Services Routers.

Q. How is the Cisco 3250 Rugged Integrated Services Router positioned relative to the Cisco 3270 Rugged Integrated Services Router?

A. The Cisco 3250 is intended for large-scale vehicular fleets, outdoor networks, and embedded applications where a small form factor router is required. The Cisco 3270 is intended for highly scalable outdoor networks, embedded applications with larger footprints, and high-end vehicles such as armored vehicles and command and control trucks. With a fiber interface and greater module expansion, the Cisco 3270 is optimized for multipurpose outdoor networks, providing an aggregation point for a fiber backhaul, multiple wireless networks, and video surveillance.

Q. Is the Cisco 3270 Rugged Integrated Services Router the same size as the Cisco 3250 Rugged Integrated Services Router?

A. No. The Cisco 3270 is approximately twice as long as the Cisco 3250. Therefore, it does not meet the PC/104-Plus specification. The Cisco 3270 can, however, support up to two PC/104-Plus-compliant card stacks. The Cisco 3250 is a standard PC/104-Plus-compliant card.

Technical Information

Q. What configurations do the Cisco 3270 Rugged Integrated Services Router enclosure bundles support?

A. The Cisco 3270 enclosure bundles support up to a seven-card configuration. The I/O end cap supports the following cards from Cisco:

- One Cisco 3270 Rugged Integrated Services Router
- One serial mobile interface card (SMIC)

- One Fast Ethernet switching mobile interface card (FESMIC)
- One mobile router power card (MRPC)
- Zero to three wireless mobile interface cards (WMICs)

Q. Does the Cisco 3270 Rugged Integrated Services Router support more than seven cards?

A. Yes. The Cisco 3270 can support a second stack of PC/104-Plus-compliant cards for future card expansion. Cisco supports a seven-card configuration. However, qualified systems integrators might choose to add PC/104-Plus cards to the second card stack. A second power card is required to provide power to any PC/104-Plus modules added to the second stack.

Q. Can third-party PC/104-Plus cards be inserted into the Cisco 3200 Series Rugged Integrated Services Router enclosure?

A. Yes. Third-party cards can be inserted into the extended Cisco 3200 Series Rugged Integrated Services Router enclosure to offer an integrated solution for mobile and outdoor networks. The cards must be PC/104-Plus-compliant. Only hardware design integrators who are Cisco advanced technology partners for the Cisco 3200 Series will be able to design the thermal plates required to insert third-party PC/104-Plus modules into the Cisco 3200 Series Rugged Integrated Services Router enclosure.

Q. What is the power consumption for the Cisco 3270 Rugged Integrated Services Router?

A. The power consumption is approximately 20 watts for the standalone router card.

Q. Does the Cisco 3270 Rugged Integrated Services Router use the same power card (MRPC) as the Cisco 3250 Rugged Integrated Services Router?

A. Yes. The Cisco 3270 uses the same power card as the Cisco 3250. A second power card is required to power PC/104-Plus cards that are used on the second stack of the Cisco 3270.

Q. Can I order the Cisco 3270 Rugged Integrated Services Router in a Cisco Rugged Enclosure?

A. Yes. An extended Cisco 3200 Series Rugged Integrated Services Router enclosure is available to store the Cisco 3270 router card. Preconfigured bundles are offered with the Cisco 3270 enclosed in the extended Cisco 3200 Series Rugged Integrated Services Router enclosure.

Q. What type of console ports are available on the Cisco 3200 Series extended rugged enclosure?

A. The Cisco 3200 Series extended rugged enclosure offers RJ-45 console ports for the router and WMICs preconfigured with the Cisco 3270.

Q. What software releases are available with the Cisco 3270 Rugged Integrated Services Router?

A. Two Cisco IOS® Software images are available for the Cisco 3270: Enterprise Base and Advanced Enterprise images (Table 1).

Table 1. Cisco IOS Software Images Available for Cisco 3270 Rugged Integrated Services Router

Cisco IOS Software Image Name and Description
C3270-entbase-mz: Cisco 3270 Enterprise Base Cisco IOS Software image
C3270-adventerprisek9-mz: Cisco 3270 Advanced Enterprise Cisco IOS Software image

Q. Where can I go to determine what software features are available on the Cisco 3270 Rugged Integrated Services Router?

A. Use the Cisco IOS Software feature navigator for detailed supported software feature support: http://tools.cisco.com/ITDIT/CFN/jsp/index.jsp.

Q. What USB devices does the Cisco 3270 Rugged Integrated Services Router support?

A. Cisco has qualified the Aladdin eToken and several flash memory devices for use with the Cisco 3270 USB ports. Customers can use the eToken Smartcard device to conveniently and securely provision routers; they can store preconfigured data securely on the eToken device and upload it to the router without having to load the configuration manually onto the Cisco 3270. Table 2 lists flash memory devices that have been qualified for use with the Cisco 3270.

Table 2. Flash Memory Devices Qualified for Use with Cisco 3270 Rugged Integrated Services Router

Model Number	Vendor Part Number
16-3153-01 SanDisk	SDUJGU0-256-926
16-3153-01 M-Systems	8U-52E-0256-12A01C
16-3152-01 SanDisk	SDUJGU0-128-926
16-3152-01 M-Systems	8U-52E-0128-12A01C
16-3152-01 M-Systems	8U-52E-0128-12A01C
16-3151-01 SanDisk	SDUJGU0-64-926
16-3151-01 M-Systems	8U-52E-0064-12A01C

Q. Can the Cisco 3270 Rugged Integrated Services Router enclosure bundles be opened to add new PC/104-Plus modules or the Small Form-Factor Pluggable (SFP) module?

A. Yes. Qualified systems integrators or technically proficient end users can open the Cisco 3200 Series Rugged Integrated Services Router enclosure to add new PC/104-Plus interface modules or change the SFP module (for Cisco 3270 routers with a fiber-optic interface). Instructions for upgrading an SFP module are in the Cisco 3200 Router Hardware Guide: http://www.cisco.com/en/US/products/hw/routers/ps272/tsd_products_support_series_home.html.

Cisco supports the following SFP module changes:

- From single-mode fiber (100 or 1000 Mbps) to single-mode fiber (100 or 1000 Mbps)
- From multimode fiber (100 or 1000 Mbps) to multimode fiber (100 or 1000 Mbps)

Cisco does not support users upgrading from single-mode fiber to multimode fiber SFP modules.

Q. What SFP modules does the Cisco 3271 router card (MARC-FO-TP) support?

A. Cisco has qualified two SFP modules with the extended temperature ranges for use with the Cisco 3270 fiber-optic model. These SFP modules have a device temperature range of -40 to 185℉ (-40 to 85℃). The two SFP modules that can b e ordered with the Cisco 3270 fiber-optic model follow:

- 1000-Mbps LX single-mode fabric (SMF) SFP module (GLC-LX-SM-RGD=)
- 1000-Mbps SX multimode fabric (MMF) SFP module (GLC-SX-MM-RGD=)

Cisco also offers commercial-grade SFP modules for use with other Cisco enterprise-class switches and routers. These commercial-grade SFP modules typically have lower operating temperature ranges. Although these SFP modules might work with the Cisco 3270, the Cisco Technical Assistance Center (TAC) does not provide support for commercial-grade SFP modules used with the Cisco 3270 fiber-optic model.

Q. What are the operating temperature ranges for the Cisco 3270 Rugged Integrated Services Router?

A. The operating temperature ranges for the Cisco 3270 Rugged Integrated Services Router are:

- Component local ambient temperature range: -40 to 185°F (-40 to 85°C)
- Temperature range for extended-temperature-range SFP device (fiber-optic model): -40 to 185°F (-40 to 85°C)

The operating temperature ranges with the Cisco 3200 Series Rugged enclosure bundle with a seven-card configuration (one Cisco 3270 Router, one MRPC, one SMIC, one FESMIC, and one WMICs) are:

- -40 to 165°F (-40 to 74°C)
- -40 to 149°F (-40 to 65°C) with Cisco 3270 fiber-op tic model

Q. What is the difference between the first card stack and the second card stack on the Cisco 3270 Rugged Integrated Services Router?

A. The first card stack offers an industry-standard architecture (ISA) bus and a peripheral component interconnect (PCI) bus for stacking PC/104-, PC/104-Plus-, or PCI-104-compliant cards. The second stack does not have an ISA bus. Therefore, the second stack supports only PC/104-Plus and PCI-104 cards. Each card stack on the Cisco 3270 supports up to six mobile interface cards (includes the Cisco 3200 Series MRPC).

Q. What are the dimensions of the Cisco 3270 standalone router card and a fully enclosed Cisco 3270 Rugged Integrated Services Router in the extended rugged enclosure?

A. Refer to the Cisco 3270 Rugged Integrated Services Router data sheet for details about dimensions: http://www.cisco.com/go/3200.

How to Order

Q. What are the ordering options for the Cisco 3270 Rugged Integrated Services Router?

A. The Cisco 3270 Rugged Integrated Services Router can be ordered as a standalone router (spare) or as a fully assembled system in the extended Cisco 3200 Series Rugged Integrated Services Router enclosure. Refer to the Cisco 3200 Series Rugged Integrated Services Router data sheet for more information about part numbers: http://www.cisco.com/en/US/products/hw/routers/ps272/index.html.

Q. Can the standalone Cisco 3270 Rugged Integrated Services Router card be ordered with or without thermal plates?

A. The Cisco 3270 can be ordered as a standalone router with thermal plates only. The thermal plates provide a heat sink for the router card when it is used as an embedded router in third-party enclosure designs.

For More Information

For more information about the Cisco 3270 Rugged Integrated Services Router, visit http://www.cisco.com/go/3200 or contact your local Cisco account representative.

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