

Overview of the Cisco 2500 Series Access Server

The Cisco 2500 series access server is a full-featured communication server with multiprotocol routing capability between synchronous serial, LAN, and asynchronous serial ports.

The Cisco 2500 series access server is available in four models, as follows:

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|-------------------|--|
| Model 2509 | 1 Ethernet port
2 synchronous serial ports
8 asynchronous serial ports |
| Model 2510 | 1 Token Ring
2 synchronous serial ports
8 asynchronous serial ports |
| Model 2511 | 1 Ethernet
2 synchronous serial ports
16 asynchronous serial ports |
| Model 2512 | 1 Token Ring
2 synchronous serial ports
16 asynchronous serial ports |

Access Server Hardware Features

The access server has the following hardware features:

- 8 or 16 ports for connection to modems, terminals, or other asynchronous (EIA/TIA-232) equipment
- 2 MB to 16 MB (depending on the selected feature set) of primary memory, using dynamic random-access memory (DRAM) single in-line memory modules (SIMMs)
- 32-KB nonvolatile random-access memory (NVRAM) to store configurations
- 4-MB to 8-MB Flash memory for running the Cisco Internetwork Operating System (Cisco IOS) image
- 2-MB shared packet memory
- Two synchronous serial ports for connection to a WAN
- EIA/TIA-232 console port for connection of a console terminal
- EIA/TIA-232 auxiliary port for connection of a terminal or modem

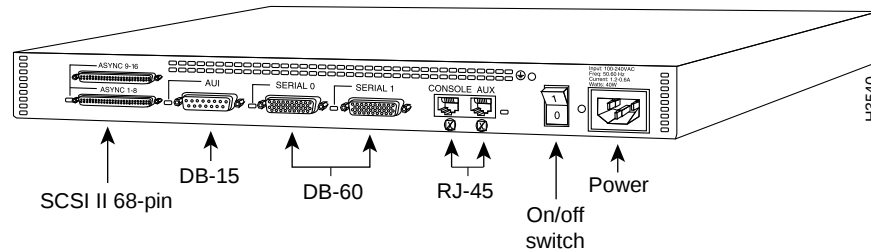
Note EIA/TIA-232 and EIA/TIA-449 were known as recommended standards RS-232 and RS-449 before their acceptance as standards by the Electronic Industries Association (EIA) and Telecommunications Industry Association (TIA).

The serial WAN connections use a proprietary, 60-pin connector. The Ethernet and Token Ring connections use standard LAN cabling with an attachment unit interface (AUI) or DB-9 connector.

The console terminal is used to provide basic and emergency local system access. The auxiliary port is used to provide basic and emergency remote system access.

The access server uses a 68-pin connector and breakout cable, which provides 8 RJ-45 ports on each cable. These ports use RJ-45-to-DB-25 adapters to connect to asynchronous devices.

Figure 1-1 Cisco 2500 Series Access Server (Model 2511 Shown)



Access Server Services

The access server connects terminals, printers, modems, microcomputers, and remote LANs over asynchronous serial lines to an internetwork. The access server uses a set of connection services to allow remote networks access to an internetwork of LANs and WANs.

The access server supports four types of server operation:

- Remote node services
- Terminal services
- Asynchronous routing services
- Protocol translation services

Remote Node Services

Remote node services support remote network connectivity with Serial Line Internet Protocol (SLIP), Point-to-point Protocol (PPP), AppleTalk Remote Access Protocol (ARA protocol), and XRemote.

System Specifications

Terminal Services

Terminal services provide terminal-to-host connectivity with virtual terminal protocols including Telnet, local-area transport (LAT), TN3270, and rlogin. Terminal services can be used to connect to a modem in a modem pool for outbound connectivity.

Asynchronous Routing Services

Routing services enable the access server to route packets over LANs and WANs using asynchronous interfaces to a remote LAN or WAN.

Protocol Translation Services

Protocol translation allows terminal services running over one protocol to be translated to terminal services running over another protocol such as an X.25 packet assembler/disassembler (PAD) to Telnet (using Transmission Control Protocol/Internet Protocol [TCP/IP]). Protocol translation on the access server supports Telnet, TN3270, LAT, X.25, and PAD.

System Specifications

The system specifications of the Cisco 2500 series access server are listed in Table 1-1.

Table 1-1 System Specifications

Description	Specification
Dimensions (H x W x D)	1.75 x 17.5 x 10.56" one rack unit (4.44 x 44.45 x 26.82 cm)
Weight	10 lb (4.5 kg)
Input voltage, AC power supply	100–240 VAC
Current	0.5–1.0A
Frequency	50–60 Hz
Power dissipation	40W (maximum), 135.5 Btus ¹ /hr

System Specifications

Description	Specification
Input voltage, DC power supply	40W, 40–72 VDC
Current	0.5–1.0A
Power dissipation	40W (maximum), 135.5 Btus/hr
Processor	20-MHz Motorola 68EC030
Network interface options	Model 2509: 1 Ethernet, 2 synchronous serial, 8 asynchronous serial Model 2510: 1 Token Ring, 2 synchronous serial, 8 asynchronous serial Model 2511: 1 Ethernet, 2 synchronous serial, 16 asynchronous serial Model 2512: 1 Token Ring, 2 synchronous serial, 16 asynchronous serial
Ethernet interface	Ethernet AUI IEEE 802.3
Token Ring interface	IEEE 802.5 (DB-9)
Synchronous serial interfaces	EIA/TIA-232, EIA/TIA-449, V.35, X.21 (NRZ/NRZI ² and DTE/DCE ³ mode) EIA-530 (NRZ/NRZI and DTE mode) All synchronous serial interfaces use the DB-60 connector at the chassis
Asynchronous serial interfaces	EIA/TIA-232, Asynchronous serial interfaces use RJ-45 connectors
Console and auxiliary ports	Asynchronous serial (RJ-45)
Operating environment	32–104°F (0–40°C)
Nonoperating temperature	–40–185°F (–40–85°C)
Operating humidity	5–95%, noncondensing
Noise level	34 dBa @ 3' (0.914 m)

1. BTU = British thermal unit.

2. NRZ = nonreturn to zero; NRZI = nonreturn to zero inverted.

3. DTE = data terminal equipment; DCE = data communications equipment.

System Specifications
