Cisco AS5200 Universal Access Server Overview

The Cisco AS5200 access server is a versatile data communications platform that provides the functions of an access server, a router, and digital modems in a modular chassis.

The Cisco AS5200 provides the greatest benefit for mid-sized organizations that need to centralize processing capabilities for mobile users and telecommuters.

The Cisco AS5200 is optimized for high-speed modem access and is ideally suited for all traditional dial-up applications, such as access to a host, electronic mail, file transfer, and dial-in access to a LAN.

The Cisco AS5200 accommodates up to three feature cards—one or two WAN cards and one or two modem carrier cards. The choice of cards is as follows:

- Dual T1 Primary Rate Interface (PRI) card with integrated channel service units (CSUs).

- Modem carrier card with one or two 12-port modem cards

A blank slot cover is installed over any unused slots.

The Cisco AS5200 can be managed with software ranging from a simple terminal command line interface for device configuration to a simple network management protocol (SNMP) network manager. For more information about managing the Cisco AS5200 using a network manager, refer to the *Cisco AS5200 Manager Guide* publication.

System Components

The Cisco AS5200 access server consists of the following components:

- One 19-inch modular chassis containing three card slots and a high-speed backplane

- Up to three feature cards which provide either WAN or modem support

- Two serial WAN interface ports

- One Ethernet LAN port

- One Console and Auxiliary port

- An integral power supply (AC and DC versions are available)

Figure 1-1 shows the front panel of the Cisco AS5200 access server.
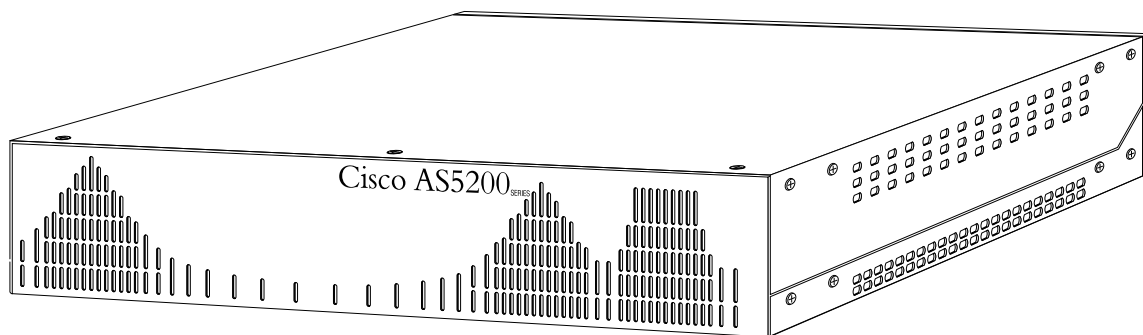
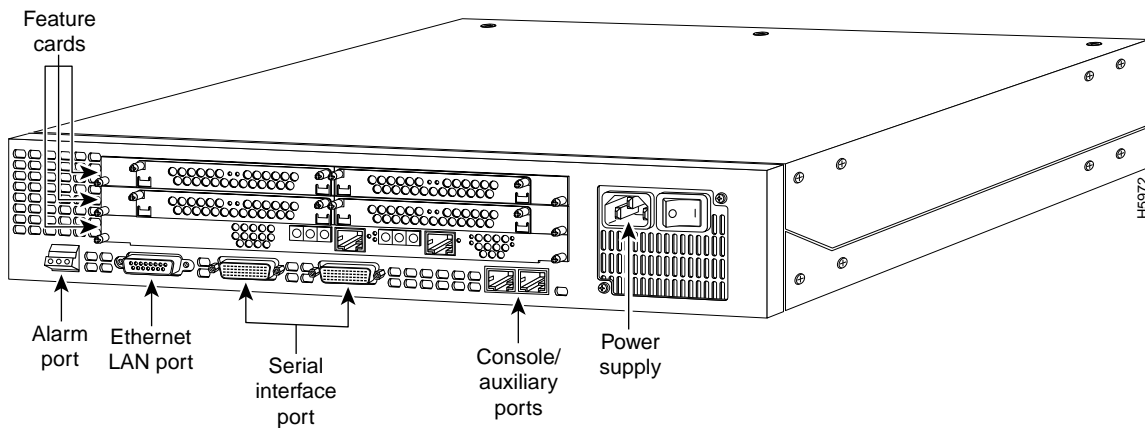**Figure 1-1   Cisco AS5200 Front Panel**

Figure 1-2 shows the interfaces on the rear panel of the Cisco AS5200 access server.

Figure 1-2   Cisco AS5200 Rear Panel

Power Supply

Two Cisco AS5200 power supplies provide AC or DC power input and supply DC power to the installed cards via connectors in the backplane. Either the AC or DC power supply is required in the chassis.

12-Port Modem Card

The Cisco AS5200 can contain 12, 24, 36, or 48 modem ports installed on two carrier cards in the chassis card slots. Each modem carrier card can hold two 12-port modem cards. The modem cards connect through the carrier card and the system backplane to the dual T1 PRI card. Transmission or reception is then accomplished on T1 lines connected to the dual T1 PRI card.

Each modem supports V.42*bis* data compression and uses the Hayes Smartmodem AT and V.25*bis* command sets. The Microcom Networking Protocol (MNP) and V.42 error-correction protocol standards provide error-free performance. The modem offers MNP Class 10 with Adverse Channel Enhancements (ACE). MNP 10 includes:

- Multiple connection attempts during autoreliable link negotiation

- Negotiated speed upshifts

- Aggressive adaptive packet assembly

- Dynamic Transmit Level Adjustment

Each modem supports the following protocol and modulation standards:

- Compatibility with the ITU-T V.34 protocol (14400 to 28800 bps) modem port speeds.

- ITU-T protocol standards: V.21, V.22, V.22*bis*, V.23, V.32, and V.32*bis*

- Bell 212A and Bell 103 protocol standards

- V.25*bis* synchronous operation

- V.13 synchronous half-duplex simulation

- V.42 error correction, including LAPM and MNP Classes 2 to 4

- V.42*bis* compression and MNP Class 5 Data Compression

- MNP Class 10 Adverse Channel Enhancements (ACE)

Dual T1 PRI Card

The dual T1 PRI card routes incoming digital T1 lines to the modem cards. The dual T1 PRI card provides RJ-48C connector(s) to terminate at the trunk(s). The dual T1 PRI card performs all necessary autoequalization and autogain functions to support 6000 feet of 24-gauge shielded cable. This card complies with all Bell Core standards relating to T1 (ANSI T1.403) alarms, loopbacks, error detection, and so forth. The dual T1 PRI card is equipped with an integrated CSU.

The dual T1 PRI card handles up to 48 digital signal level 0 (DS-0) channels from two trunks. Each channel carries either a pulse code modulation (PCM)–encoded voice channel or digital data. The dual T1 PRI card supports 64-kbps clear channel operation for data channels and feature group B operation for voice channels.

The dual T1 PRI card allows the Cisco AS5200 to use DNIS and ANI information provided by the public 950 services, feature groups B and D, and enhanced 800 services to route data. With this call information, the Cisco AS5200 independently routes the individual DS-0 channels of the T1 signal to specific modems.

Specifications

The specifications of the Cisco AS5200 are listed in Table 1-1.

Table 1-1   **System Specifications**

Description	Specification
Dimensions (H x W x D)	3.5 x 17.5 x 15" two rack units (8.89 x 44.45 x 38.1 cm)
Weight	25 lb (11.4 kg)
Input voltage, AC power supply Current Frequency Power dissipation	100 to 240 VAC[1] 1.5 to 3.0A 50/60 Hz 180W (maximum), 135.5 Btus[2]/hr
Input voltage, DC power supply Maximum input current Typical input current Power dissipation Output voltage 5V Output voltage 12V Output voltage –12V Protection	–48 to –60 VDC 6.0A 4.0A 180W (maximum) 5.0 VDC 26A 12.00 VDC 3A –12.00 VDC 2A Current limit, overpower
Processor	20-MHz Motorola 68EC030
WAN interface options	Dual T1 PRI (RJ-48C) Five-in-one synchronous serial (DB-60)
LAN interface options	Ethernet AUI[3] (DB-15)

Description	Specification
Synchronous serial interfaces (five-in-one synchronous serial WAN ports)	EIA/TIA[4]-232, EIA/TIA-449, V.35, X.21 (NRZ/NRZI[5] and DTE/DCE[6] mode) EIA-530 (NRZ/NRZI and DTE mode) The five-in-one synchronous serial interface uses the DB-60 connector at the chassis
Console and auxiliary ports	Asynchronous serial (RJ-45)
Alarm relay rating: Voltage Current Max switching power Maximum switching voltage	 30VDC 5A 150 W[7] 250 VAC
Operating environment	32–104°F (0–40°C)
Nonoperating temperature	–40 to 185°F (–40 to 85°C)
Operating humidity	5 to 95%, noncondensing
Noise level	34 dB[8] @ 3' (0.914 m)

1. VAC = volts alternating current. VD = volts direct current.

2. BTU = British thermal unit.

3. AUI = attachment unit interface

4. TIA = Electronic Industries Association/Telecommunications Industries Association

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

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

7. W = Watts

8. dB = decibels.

FCC Part 68

The following text is required for Federal Communications Commission (FCC) Part 68 regulatory compliance:

This equipment complies with Part 68 of the FCC rules. On the side of this Network Module interface card is a label that contains, among other information, the FCC registration number. If requested, this information must be provided to the telephone company.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your the right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment, please contact:

Cisco Systems
RMA Receiving
1135 Walsh Avenue
Santa Clara, California 95050

For repair and (or) warranty information. If the trouble is causing harm to the telephone network, the telephone company may request that you remove the equipment from the network until the problem is resolved.

It is recommended that the customer install an AC surge arrestor in the AC outlet to which this device is connected. This is to avoid damaging the equipment caused by local lightning strikes and other electrical surges.

The Cisco AS52-2CT1 has the 6.0F service order cable.

The unit has the following facility interface codes: 04DU9-BN, 04DU9-DN, 04DU9-IKN, 04DU9-ISN.

FCC Part 68