



Overview

This chapter provides an overview of the Cisco AS5400 and Cisco AS5400HPX universal gateways, a versatile voice and data communications platform that provides high performance, high density, and hot swappability in only two rack units. (See [Figure 1-1](#) and [Figure 1-2](#).)

The Cisco AS5400 and Cisco AS5400HPX are intended for large companies and service providers who require dense and scalable solutions to create new multi-service access networks, replace existing hardware, or expand and enhance their current access offering. The Cisco AS5400HPX provides enhanced performance for processor-intensive voice and fax applications. The Cisco AS5400 and Cisco AS5400HPX provide you with a cost-effective platform for deploying the widest range of IP based services.



Note

Unless specifically noted, all references to the Cisco AS5400 also apply to the Cisco AS5400HPX.

This chapter includes the following sections:

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Chassis Components

The Cisco AS5400 universal gateway chassis has a system board, high-speed backplane, and seven slots for dial feature cards (DFCs). The chassis includes four backplane slots. Three backplane slots accept DFC carrier cards and the other backplane slot accepts one DFC. Each DFC carrier card accepts two DFCs which allow online insertion and removal (OIR).



Tips

To help identify your universal gateway, starting with Cisco IOS Release 12.2(11)T, the **show version** and **show diag** commands will identify the universal gateway as an *AS5400* or *AS5400HPX*. Prior to this release, these commands showed the universal gateway as an *AS5400*, even if it was an *AS5400HPX*.

The chassis consists of the following components:

- One Building Integrated Timing System (BITS) interface port
- One alarm port
- Two Fast Ethernet (2FE) LAN ports
- Two T serial ports for backhaul WAN support
- One fast console port for local administrative access
- An integral redundant AC or DC power supply, with two power input lines

Figure 1-1 Cisco AS5400 Front Panel

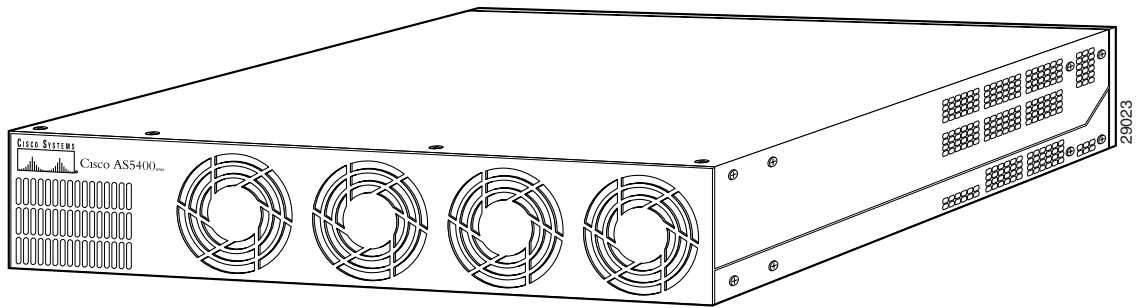
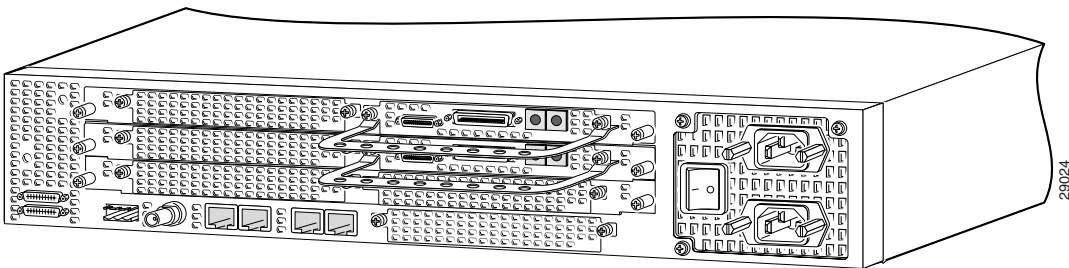


Figure 1-2 Cisco AS5400 Rear Panel



Dial Feature Cards (DFCs)

Each DFC is a 5.1 by 13 inch PCI-based interface board. The following is a brief description of the trunk types supported:

- North American robbed-bit signaling (RBS) is supported on T1 trunks, including a variety of North American RBS protocol, framing, and encoding types on these trunks.
- CAS is supported for E1 trunks, with R2 signaling.
- Many countries require an E1 R2 variant. Per-country defaults are provided for supervisory and inter-register signaling.
- The CT3 DFC provides physical line termination for a channelized T3 ingress trunk line, and it uses an onboard multiplexer to multiplex 28 channelized T1 lines into a single channelized T3 line.
- Universal access (analog modem or digital calls) is supported when an interface is configured for ISDN PRI signaling. PRI signaling is available for both T1 and E1 trunks.

In any single DFC slot, you can install your choice of:

- One T1 dial feature card
- One E1 dial feature card
- One T3 dial feature card



Note

The Cisco AS5400 supports only one type of WAN DFC at a time. For more information, see the [“Mixing WAN DFCs” section on page 4-3](#).

Power Supply

The power system is comprised of a fully redundant switching power supply with two AC (or DC) inputs to the main power modules. Each input and output is 100 percent fully redundant, with dual fans for added reliability.

The output of each power module is rated at 300 watts (nonredundant mode), and is composed of four independent output voltages: 3.3V, 5V, 12V and -12V. AC input units have power factor correction, and low harmonic distortion. Units that are in redundant mode run at one-half the power capability. If a power supply failure occurs, these units are capable of powering the complete system either at the input side or the DC load side. Power failures are reported through environmental monitoring software.

Specifications

Table 1-1 provides system specifications for the Cisco AS5400.

Table 1-1 Specifications

Description	Specification
Dimensions (H x W x D)	3.5 x 17.5 x 18.25 in. (8.89 x 44.45 x 46.36 cm)
Weight	35 lb maximum (15.8 kg)
Processor	250 MHz (Cisco AS5400) 390 MHz (Cisco AS5400HPX)
Operating environment	32 to 104°F (0 to 40°C)
Nonoperating temperature	-40 to 185°F (-40 to 85°C)
Operating humidity	5 to 95%, noncondensing
Noise level	70 dB ¹ @ 3 ft (0.914 m)

Table 1-1 Specifications (continued)

Description	Specification
Input voltage, AC power supply	100 to 240 VAC ² ; -10%, +6% tolerance
Current	5 to 2A
Frequency	50/60 Hz
Power factor	0.80 to 0.95
Input AC power	200 to 400W (maximum)
Input voltage, DC power supply	-48 to -60 VDC ³ ; -10%, +6% tolerance
Maximum input current	9.0A
Typical input current	2.0 to 4.0A
Efficiency	63%
Input DC power	200 to 400W (maximum)
WAN interface options	T1, E1, T3
Serial interfaces (for backhaul WAN support)	2 serial line interfaces
LAN interface options	Fast Ethernet 10/100BASE-T (RJ-45)
Console and auxiliary ports	Asynchronous serial (RJ-45)
Regulatory compliance	See the <i>Regulatory Compliance and Safety Information</i> guide that came with your gateway.

1. dB = decibels.
2. VAC = volts alternating current.
3. VDC = volts direct current.