



CHAPTER 1

Overview

The Cisco IAD2801 series integrated access devices is a fixed configuration router that provides three models with a common front panel. The front panel, labeled “Cisco IAD2801 series integrated access devices,” is identical for all models. However, the back panels, labeled by specific model number, vary depending on interfaces, ports, and options. The Cisco IAD2801 series integrated access devices support the following configurations:

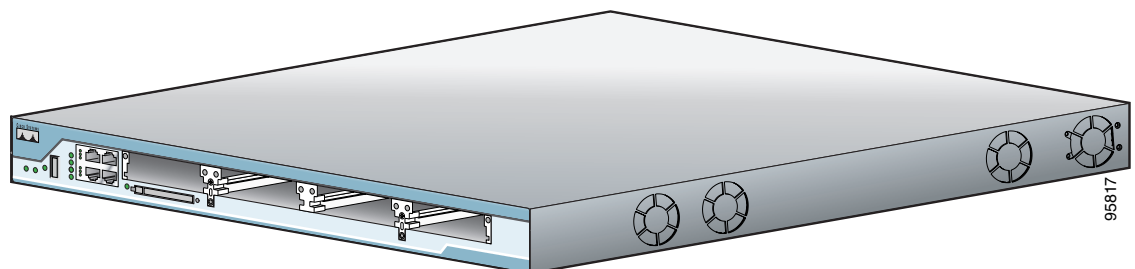
- IAD2801-2BRI-A/K9—Fixed configuration router, with integrated PVDM2-8, HWIC-1ADSL, and 1 VIC2-2BRI-NT/TE-P, 2 Fast Ethernet connections, and 1 factory configurable or field-upgradeable HWIC slot.
- IAD2801-4BRI-A/K9—Fixed configuration router, with integrated PVDM2-16, HWIC-1ADSL, and 2 VIC2-2BRI-NT/TE-P, 2 Fast Ethernet connections, and 1 factory configurable or field-upgradeable HWIC slot.
- IAD2801-4BRI-S/K9—Fixed configuration router, with integrated PVDM2-16, HWIC-4SHDSL, and 2 VIC2-2BRI-NT/TE-P, 2 Fast Ethernet connections, and 1 factory configurable or field-upgradeable HWIC slot.

The following cards are configurable or field upgradeable in slot 3 on all models:

- HWIC-4ESW
- VIC-4FXS/DID
- HWIC-AP-AG-E or HWIC-AP-G-E

[Figure 1-1](#) Front View of the Cisco IAD2801.

Figure 1-1 Front View of a Cisco IAD2801



This chapter describes the features and specifications of the routers and includes the following sections:

- [Hardware Features, page 1-2](#)
- [Chassis Views, page 1-5](#)

- [Interface Numbering](#), page 1-6
- [Specifications](#), page 1-7

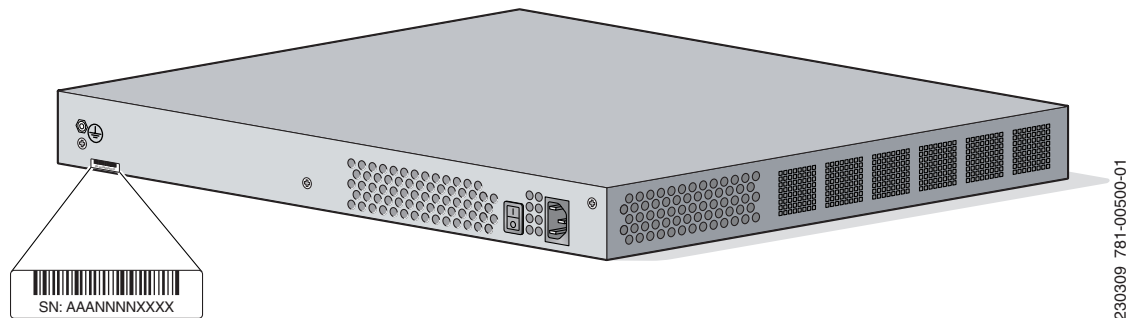
Hardware Features

This section describes the basic features of Cisco IAD2801, including product identification, built-in interfaces, modules, memory, LED indicators, chassis ventilation, and the internal clock.

Product Serial Number Location

The serial number label for Cisco IAD2801 is located on the rear of the chassis, along the bottom edge near the lower left corner. (See [Figure 1-2](#).)

Figure 1-2 Serial Number Location on the Cisco IAD2801



Note

The serial number for Cisco IAD2801 is 11 characters long.

Cisco Product Identification Tool

The Cisco Product Identification (CPI) tool provides detailed illustrations and descriptions showing where to locate serial number labels on Cisco products. It includes the following features:

- A search option that allows browsing for models using a tree-structured product hierarchy
- A search field on the final results page making it easier to look up multiple products
- End-of-sale products are clearly identified in results lists

The tool streamlines the process of locating serial number labels and identifying products. Serial number information expedites the entitlement process and is important for access to support services.

The Cisco Product Identification tool can be accessed at the following URL:

<http://tools.cisco.com/Support/CPI/index.do>

Built-in Interfaces

Table 1-1 summarizes the interface ports built into the chassis.

Table 1-1 Summary of Cisco IAD2801 Built-In Interfaces

IAD2801	100BASE-T Fast Ethernet (FE) Ports (RJ-45)	Universal Serial Bus (USB) Ports	Console Port (RJ-45)	Auxiliary Port (RJ-45)
IAD2801-2BRI-A/K9	2	1	1	1
IAD2801-4BRI-A/K9	2	1	1	1
IAD2801-4BRI-S/K9	2	1	1	1

Memory

Cisco IAD2801 contain the following types of memory:

- DRAM—Stores the running configuration and routing tables and is used for packet buffering by the network interfaces. Cisco IOS software executes from DRAM memory.
- Boot/NVRAM—Internal flash memory. Stores the bootstrap program (ROM monitor), the configuration register, and the startup configuration.
- Flash memory—External flash memory. Stores the operating system software image.

Table 1-2 summarizes the memory options for Cisco IAD2801. The default memory numbers for RAM represent the minimum usable memory. You can install additional RAM in multiples of the default amount, up to the maximum amount.

Table 1-2 Router Memory Specifications

Router Platform	DRAM	Boot/NVRAM	Flash Memory
Cisco IAD2801	Type—SDRAM DIMM DIMM size—256 MB DIMM expansion slots—1 ¹ Default onboard memory—128 MB Maximum memory—384 MB	Internal 4-MB flash memory	External CompactFlash memory cards of the following optional sizes: <ul style="list-style-type: none"> • 64 MB (default)

1. Cisco IAD2801 has 128 MB of SDRAM soldered onto the system board. You can install a DIMM into the expansion slot to increase memory to the maximum of 384 MB.

LED Indicators

Table 1-3 summarizes the LED indicators that are located in the router bezel or chassis.

For LED troubleshooting information, including possible trouble causes and corrective actions, see Table A-1 in the “Troubleshooting” document.

Table 1-3 Summary of Cisco IAD2801 LED Indicators

LED	Color	Description	Location
SYS PWR	Green	Router has successfully booted up and the software is functional. This LED blinks while booting or in the ROM monitor.	Front
SYS ACT	Green	Blinking when any packets are transmitted or received on any WAN or LAN or system is monitoring internal activities.	Front
CF	Green	On when flash memory is busy. Do not remove the CompactFlash memory card when this light is on.	Front
AUX/PWR	Green/ Amber	LED is off because inline power is not supported on the Cisco IAD2801.	Front
FE 0 Link	Green	On when the router is correctly connected to a local Ethernet LAN through Ethernet port 0.	Front
FE 0 100	Green	On indicates a 100-Mbps link. Off indicates a 10-Mbps link.	Front
FE 0 FDX	Green	On indicates full-duplex operation. Off indicates half-duplex operation.	Front
FE 1 Link	Green	On when the router is correctly connected to a local Ethernet LAN through Ethernet port 1.	Front
FE 1 100	Green	On indicates a 100-Mbps link. Off indicates a 10-Mbps link.	Front
FE 1 FDX	Green	On indicates full-duplex operation. Off indicates half-duplex operation.	Front
PVDM 0	Green	On indicates presence of a packet voice data module (PVDM) in PVDM slot 0.	Front

Chassis Ventilation

Internal multispeed fans provide chassis cooling, controlled by an onboard temperature sensor.

The Cisco IAD2801 has two fans. The Cisco IAD2801 internal fans operate at three different speeds, running at the slower speeds to conserve power and reduce fan noise at ambient temperatures below 40°C. They operate at the highest speed in ambient temperatures above 40°C.

Real-Time Clock

An internal real-time clock with battery backup provides the system software with time of day on system power up. This allows the system to verify the validity of the certification authority (CA) certificate. The Cisco IAD2801 has a socketed lithium battery. This battery lasts the life of the router under the operating environmental conditions specified for the router, and is not field-replaceable.



Note

If the lithium battery in a Cisco IAD2801 should fail, the router must be returned to Cisco for repair.

Although the battery is not intended to be field-replaceable, the following warning must be heeded:



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

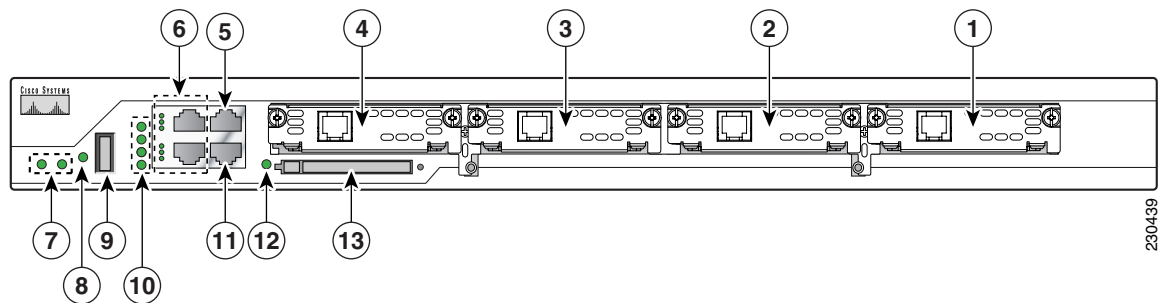
Chassis Views

This section contains views of the front and rear panels of the Cisco IAD2801, showing locations of the power and signal interfaces, module slots, status indicators, and chassis identification labels.

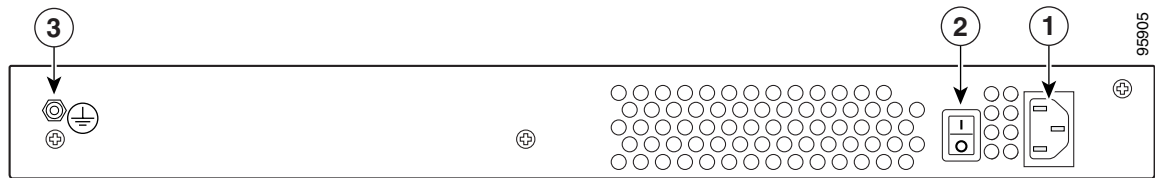
Cisco IAD2801 Chassis

Figure 1-3 shows the front panel of a Cisco IAD2801. Figure 1-4 shows the back panel.

Figure 1-3 Front Panel of the Cisco IAD2801



1	Slot 0	8	Auxiliary Power (AUX/PWR) LED
2	Slot 1	9	Universal serial bus (USB) port
3	Slot 2	10	PVDM LEDs
4	Slot 3	11	Auxiliary port
5	Console port	12	Compact flash (CF) LED
6	Fast Ethernet ports and LEDs	13	External CompactFlash memory card slot
7	System LEDs		

Figure 1-4 Back Panel of the Cisco IAD2801

1	Input power connector	3	Chassis ground connection
2	On/Off switch		

Interface Numbering

Table 1-4 summarizes the interface numbering on a Cisco IAD2801.



Note

On the Cisco IAD2801, the numbering format for slots is *interface type 0/slot/port*. “0” indicates slots that are built into the chassis of a router. On the Cisco IAD2801, all slots begin with “0,” because all slots are built into the chassis.



Caution

The following message will appear during bootup for any unsupported card detected:

```
Card is not supported in slot 2. Please remove it.
```

This message will appear for each unsupported card detected.

If **smart-init** is enabled on your IAD2801, the following message will appear during bootup for any unsupported card detected:

```
Smart Init is enabled
smart init is sizing iomem
ID          MEMORY_REQ      TYPE
0X003AA110 public buffer pools
0X00211000 public particle pools
0X00020000 Crypto module pools
0X00120000 VPM buffer pools
0X05B3      0X000034A0 Card in slot 0
0X04C8      0X00077D00 Card in slot 1
0X05B3      0X00000000 UNKNOWN Card in slot 2
0X003A      0X00000000 Card in slot 3
0X000021B8 Onboard USB
```

Table 1-4 summarizes the interface numbering on a Cisco IAD2801.

Table 1-4 Interface Numbering on the Cisco IAD2801

Model	Slot0	Slot1	Slot2	Slot3
IAD2801-2BRI-A/K9	VIC2-2BRI-NT/TE-P	HWIC-1ADSL	Not available	LTD option ¹
IAD2801-4BRI-A/K9	VIC2-2BRI-NT/TE-P	HWIC-1ADSL	VIC2-2BRI-NT/TE-P	LTD option ¹
IAD2801-4BRI-S/K9	VIC2-2BRI-NT/TE-P	HWIC-4SHDSL	VIC2-2BRI-NT/TE-P	LTD option ¹

1. The factory installable or field upgradeable LTD option includes: HWIC-AP-AG-E and HWIC-AP-G-E, HWIC-4ESW, and VIC-4FXS/DID.

Specifications

Table 1-5, list Cisco IAD2801 specifications.

Table 1-5 Cisco IAD2801 Specifications

Description	Specification
Dimensions (H x W x D)	1.72 x 17.49 x 16.5 in. (4.4 x 44.4 x 41.9 cm).
Weight	10.9 lb (4.9 kg) with standard power supply if fully populated with modules
AC input power	
• Input voltage	100 to 240 VAC, autoranging
• Frequency	47 to 63 Hz
• Input current	2 A
• Inrush surge current	50 A maximum, one cycle (–48V power included)
Power consumption	105 W with standard power supply (maximum)
Console and auxiliary ports	RJ-45 connector
Operating humidity	5 to 95%, noncondensing
Operating temperature	32 to 104°F (0 to 40°C)
Nonoperating temperature	–40 to 162°F (–40 to 72°C)
Noise level, standard power supply	39 dBA for local temperatures < 90°F (32°C) 47 dBA for local temperatures between 90°F and 116°F (47°F) 52.6 dBA for temperatures above 116°F (47°F)
Safety compliance	UL 60950-1; CAN/CSA C22.2 No. 60950-1; IEC 60950-1; EN 60950-1; AS/NZS 60950.1
EMC compliance	FCC Part 15; ICES-003 Class A; EN50082-1; EN55022 Class A; CISPR22 Class A; EN55024/CISPR24; AS/NZS 3548 Class A; VCCI Class A; EN 300386; EN61000-3-3; EN61000-3-2; EN61000-6-2

