



REVIEW DRAFT - CISCO CONFIDENTIAL

CHAPTER 1

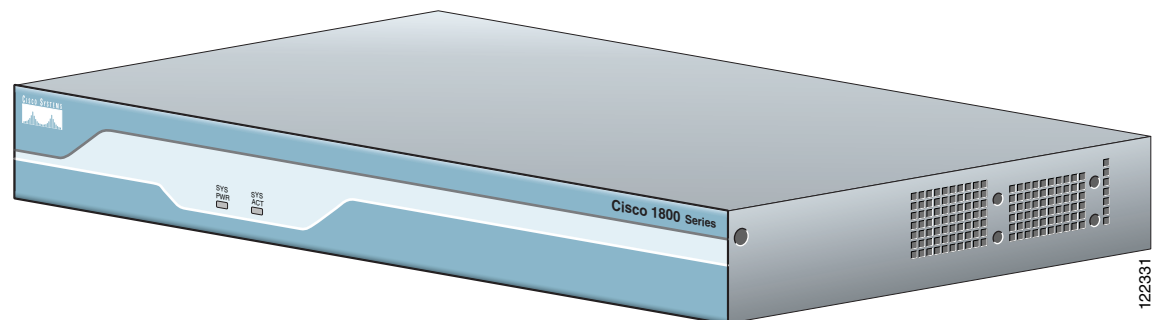
Product Description

Cisco 1805 DOCSIS cable routers are fixed-configuration routers with LAN and WAN connections. The Cisco 1805 cable router supports three SKUs:

- CISCO1805-D
- CISCO1805-E
- CISCO1805-D/K9

The Cisco 1805 DOCSIS cable router is a data-only device for desktop use. (See [Figure 1-1](#).)

Figure 1-1 Cisco 1805 Cable Router



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

- [Product Description, page 1-1](#)
- [Hardware Features, page 1-2](#)
- [Chassis Views, page 1-5](#)
- [Interface Numbering, page 1-6](#)
- [Specifications, page 1-6](#)

Product Description

The Cisco 1805 cable router ships with a Cisco cable modem high-speed WAN interface card (HWIC) installed in slot 0 and with a Cisco 10/100BASE-T Ethernet switch HWIC installed in slot 1. Both of these cards must be installed in order for the router to be operational. If either card is removed, the router will default to ROMMON state.

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The Cisco cable modem HWIC installed in slot 0 is designed to be fully compliant with DOCSIS 2.0 standards in the United States, Europe, and Japan. The cable modem HWICs provide secure, high-speed connections over cable modem hybrid fiber-coaxial (HFC) cable network.

With the Cisco 10/100BASE-T Ethernet switch HWIC installed in slot 1, the Cisco 1805 cable router provides Layer 2 switching for traffic between one port on the HWIC and any other port on the same HWIC. This HWIC also supports Layer 3 traffic to and from the HWIC and any of the other platform interfaces. Traffic between different VLANs on the switch is routed through the router.

Hardware Features

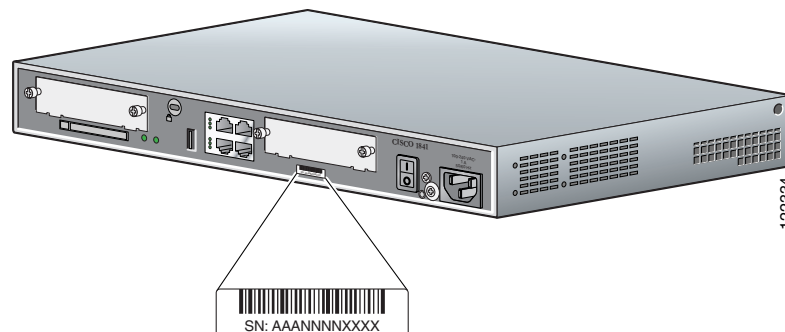
This section describes the basic features of the Cisco 1805 cable router. It contains the following:

- [Product Serial Number Location, page 1-2](#)
- [Built-In Interfaces, page 1-3](#)
- [Memory, page 1-3](#)
- [LED Indicators, page 1-4](#)
- [Chassis Ventilation, page 1-4](#)
- [Real-Time Clock, page 1-4](#)
- [Chassis Security, page 1-5](#)

Product Serial Number Location

The serial number label for Cisco 1805 cable router is located on the back of the chassis, below interface card slot 0. (See [Figure 1-2](#).)

Figure 1-2 Serial Number Location

**Note**

The serial number for Cisco 1805 cable router is 11 characters long.

REVIEW DRAFT – CISCO CONFIDENTIAL**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. The tool includes the following features:

- A search option that allows browsing for models by using a tree-structured product hierarchy
- A search field on the final results page which makes it easier to look up multiple products
- Clearly identified end-of-sale products 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

This section summarizes the interfaces available on the Cisco 1805 cable router:

- Two Fast Ethernet ports (RJ-45 connectors)
- High-speed console and auxiliary ports, up to 115.2 kbps each (RJ-45 connectors)
- One USB port (version 1.1), intended for future use

Memory

The Cisco 1805 cable routers contain the following types of memory:

- SDRAM—Serves two functions. It stores the running configuration and routing tables, and it is used for packet buffering by the network interfaces. The Cisco IOS software executes from SDRAM.
- Flash memory—Stores the operating system software image, configuration files, and log files, implemented in an external CompactFlash memory card.
- Boot/NVRAM—Serves two functions. It stores the ROM monitor, which allows you to boot an operating system software image from flash memory. It also stores the system configuration file and the virtual configuration register.

Table 1-1 lists the memory specifications for Cisco 1805 cable routers.

Table 1-1 Router Memory Specifications

Description	Specification
SDRAM	128 MB, expandable to 384 MB; default is 128 MB
Flash memory	32, 64, or 128 MB; default is 64 MB
Boot or NVRAM	2/4 MB flash memory

Note

SDRAM and the flash memory are user upgradable, but the boot or NVRAM is permanently soldered to the router's motherboard and is not upgradable.

REVIEW DRAFT – CISCO CONFIDENTIAL**LED Indicators**

Table 1-2 summarizes the LED indicators that are located in the router bezel or chassis, but not in the interface cards installed in slot 0 or slot 1.

Table 1-2 Summary of Cisco 1805 DOCSIS Cable Router 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 panel
SYS ACT	Green	Blinking when any packets are transmitted or received on any WAN or LAN, or during monitoring system activity.	Front panel
CF	Green	On when flash memory is busy. Do not remove the CompactFlash memory card when this light is on.	Back panel
FDX (FE 0/0)	Green	On indicates full-duplex operation. Off indicates half-duplex operation.	Back panel
100 (FE 0/0)	Green	On indicates a 100-Mbps link. Off indicates a 10-Mbps link.	Back panel
Link (FE 0/0)	Green	On when the router is correctly connected to a local Ethernet LAN through Ethernet port 0.	Back panel
FDX (FE 0/1)	Green	On indicates full-duplex operation. Off indicates half-duplex operation.	Back panel
100 (FE 0/1)	Green	On indicates a 100-Mbps link. Off indicates a 10-Mbps link.	Back panel
Link (FE 0/1)	Green	On when the router is correctly connected to a local Ethernet LAN through Ethernet port 1.	Back panel
AIM	Green	On indicates presence of an AIM in the internal AIM slot.	Back panel

Chassis Ventilation

An internal three-speed fan provides chassis cooling. An onboard temperature sensor controls the fan speed. The fan is always on when power is applied to the router. Under most conditions, the fan operates at the slowest speed to conserve power and reduce fan noise. It operates at higher speeds when necessary in conditions of higher ambient temperature.

Real-Time Clock

On system power up, an internal real-time clock with battery backup provides the system software with time of day. This allows the system to verify the validity of a certification authority (CA) certificate. The backup battery is 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.

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Note

If the lithium battery in a Cisco 1805 router should fail, the router must be returned to Cisco for repair. Do not replace the battery yourself. Although the battery is not intended to be field replaceable, the safety agencies require the following warning to be included in this document.



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 Security

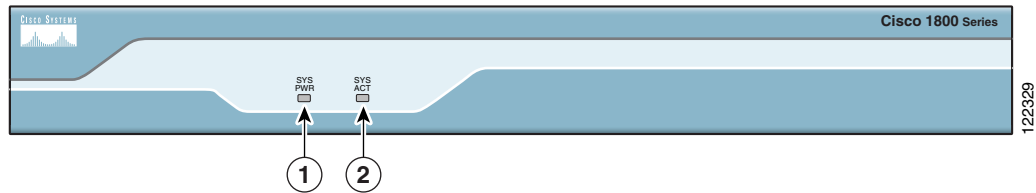
The chassis of the Cisco 1805 cable router is constructed with a Kensington security slot on the back panel. It can be secured to a desktop or other surface by using Kensington lockdown equipment.

Chassis Views

This section provides views of the front and back panels of Cisco 1805 cable routers, showing the locations of the power and signal interfaces, the interface card slots, and the status indicators.

Figure 1-3 shows the front panel of a Cisco 1805 cable router.

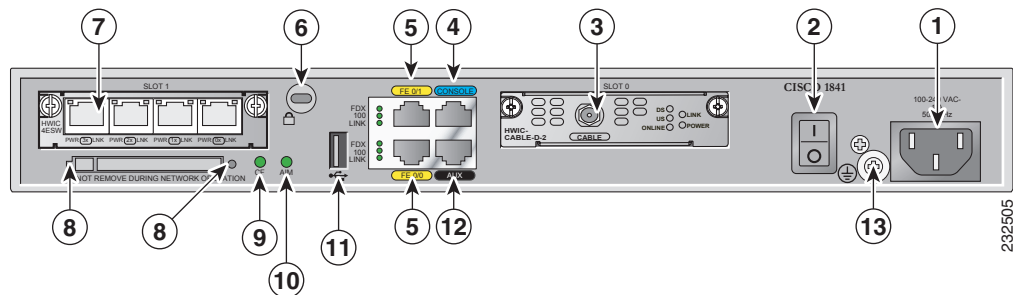
Figure 1-3 Front Panel of the Cisco 1805 Cable Router



1 System power (SYS PWR) LED	2 System activity (SYS ACT) LED
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Figure 1-4 shows the back panel of a Cisco 1805 cable router.

Figure 1-4 Back Panel of the Cisco 1805 Cable Router



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1	Input power connection	8	CompactFlash memory card slot
2	On/Off switch	9	CompactFlash LED
3	Slot 0 (cable modem HWIC)	10	AIM LED
4	Console port	11	USB port
5	Fast Ethernet ports and LEDs	12	Auxiliary port
6	Kensington security slot	13	Chassis ground connection
7	Slot 1 (4ESW HWIC)		

Interface Numbering

Each individual interface (port) on a Cisco 1805 cable router is identified by a number. A Cisco 1805 cable router contains the following wide-area network (WAN) and local-area network (LAN) interface types:

- Two onboard FastEthernet LAN interfaces
- Slot 0 Cisco cable modem HWIC
- Slot 1 Cisco 4-port 10/100BASE-T Ethernet switch HWIC

The numbering format for the slots is *interface-type 0/slot-number/interface-number*. [Table 1-3](#) summarizes the interface numbering.

Table 1-3 **Interface Numbering**

Slot Number	Slot Type	Slot Numbering Range	Example
Onboard ports	Fast Ethernet	0/0 and 0/1	interface fastethernet 0/0
Slot 0	HWIC	0/0/0 to 0/0/3	cable-modem 0/0/0 line async 0/0/0
Slot 1	HWIC	0/1/0 to 0/1/3	fastethernet 0/1/0 line async 0/1/0

Specifications

[Table 1-4](#) lists the specifications for Cisco 1805 DOCSIS cable router.

Table 1-4 **Cisco 1805 Cable Router Specifications**

Description	Specification
Dimensions (H x W x D)	1.73 x 13.5 x 10.8 in. (4.4 x 34.3 x 27.4 cm) without rubber feet 1.87 in. (4.75 cm) height with rubber feet
Weight	6.1 lb (2.77 kg)
Input voltage, AC power supply	100 to 240 VAC, autoranging
Frequency	47 to 63 Hz

REVIEW DRAFT – CISCO CONFIDENTIAL**Table 1-4 Cisco 1805 Cable Router Specifications (continued)**

Description	Specification
Power consumption	20W maximum for an unloaded unit. With two WICs and an AIM installed, power consumption will be less than 50W.
Console and auxiliary ports	RJ-45 connectors
Operating humidity	5 to 95%, noncondensing
Operating temperature	32 to 104°F (0 to 40°C)
Nonoperating temperature shock	–13 to 158°F (–25 to 70°C) at 9° F (5° C)/minute minimum
Noise level	Normal operating temperature (< 78° F or 26°C): 34 dBA From (78° F or 26°C) through (104° F or 40°C): 37 dBA Higher than 104° F or 40°C: 42 dBA
Regulatory compliance	For detailed regulatory compliance information, see the Regulatory Compliance and Safety Information for Cisco 1840 Routers document available online.
Electromagnetic compatibility	FCC Part 15 Class A.
Safety compliance	UL 60950; CSA 60950; IEC 60950; EN 60950; AS/NZS 3260; NOM-019-SCFI-1998.

Table 1-5 lists the specifications for the Cisco 10/100BASE-T Ethernet switch HWIC LEDs.

Table 1-5 Cisco 10/100BASE-T Ethernet Switch HWIC LEDs

LED	Color	Definition	State
LNK	Green	Link status	ON = Link pulses detected OFF = No link pulses detected
ILP	Green or amber	Inline power status	GREEN = Providing power to the device AMBER BLINKING = Power delivery fault or denial AMBER = Power administratively disabled OFF = No external device detected, or inline power option not installed


Table 1-6 lists the specifications for the the Cisco cable modem HWIC LEDs.

Table 1-6 Cisco Cable Modem HWIC LEDs

LED	State	Description
US	FLASHING	The cable modem is scanning for a DOCSIS channel and tries to lock on an upstream signal.
	SOLID	The cable modem is locked on to the US DOCSIS channel.

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Table 1-6 Cisco Cable Modem HWIC LEDs (continued)

LED	State	Description
ONLINE	FLASHING	The cable modem is establishing a connection to the router.
	SOLID	The cable modem is synchronized with the router.
LINK	ON	A link is active when a CPE device is connected and the cable modem is not bridging data.
	BLINKING	The cable modem is bridging data in the cable modem operational state.  Note The LINK LED does not pulse for data traffic that originates or terminates at the cable modem.
POWER	ON	The cable modem is powered on.
	SOLID	It stays solid after the power-on self-test (POST).
	RED	The self-test has failed.