

CHAPTER

Overview of the Router

The Cisco 1900 Series Integrated Services Routers (ISRs) are modular routers with LAN and WAN connections that can be configured by means of interchangeable interface cards and internal service modules (ISMs). The series currently consists of the 1905, 1921, 1941, and 1941W (wireless) models. The 1941W is Wi-Fi CERTIFIED[™] and 802.11a/b/g/n-compliant. The modular design of the routers provides flexibility, allowing you to configure your router according to your needs.

This ISR series has new slots that support next generation Enhanced High-Speed WAN Interface Cards (EHWICs), Internal Services Modules (ISMs, 1941 only), and 2 CompactFlash cards (1941 only). Universal serial bus (USB) ports are available for USB devices, and a USB mini Type-B serial console port is available in addition to the RJ-45 console connector.

This chapter provides an overview of the Cisco 1900 series routers and includes the following sections:

- Safety Warnings, page 1-1
- Chassis Views, page 1-2
- Hardware Features, page 1-5
- Interface Numbering, page 1-13
- Specifications, page 1-13
- Regulatory Compliance, page 1-18

Safety Warnings



IMPORTANT SAFETY INSTRUCTIONS

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

SAVE THESE INSTRUCTIONS



Ultimate disposal of this product should be handled according to all national laws and regulations. Statement 1040



No user-serviceable parts inside. Do not open. Statement 1073



Only trained and qualified personnel should be allowed to install, replace, or service this equipment. Statement 1030

Safety Warnings for Finland, Norway and Sweden

Warning statement 1017 applies to the countries of Finland, Norway, and Sweden.



This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security. Statement 1017

Chassis Views

This section contains views of the front and rear panels of Cisco 1900 series routers, showing the locations of the power and signal interfaces, the interface card slots, and the status indicators.

Figure 1-1 shows the front panel of the Cisco 1905 and Cisco 1921 router. Figure 1-2 shows the back panel connectors on the Cisco 1905 and Cisco 1921 router. Figure 1-3 shows the front panel of a Cisco 1941 wireless router and Figure 1-4 shows the LEDs of the Cisco 1941 router. Figure 1-5 shows the back panel connectors on the Cisco 1941 router.



Power off the router and the power over Ethernet (PoE) before installing an EHWIC in the Cisco 1905 and Cisco 1921 ISRs.

Figure 1-1shows the front panel of the Cisco 1905 and Cisco 1921 router and LED names.

Figure 1-1 Front Panel of the Cisco 1905, and Cisco 1921 Router



1. Power over Ethernet (PoE) is available with optional external PoE power supply.

2. Power off the PoE before installing an EHWIC in the Cisco 1905 and Cisco 1921 ISRs.

CautionPower off the PoE before installing an EHWIC in the Cisco 1905 and Cisco 1921 ISRs.

Figure 1-2 shows the back panel of the Cisco 1905 and Cisco 1921 with ports and LEDs.

Figure 1-2 Back Panel of the Cisco 1905 and Cisco 1921 Router (1921 shown)



	EHWIC (HWIC, WIC, or VWIC ¹) slots 0		EN (Enable RJ-45 console)
1	double wide ^{2345}	2	
3	RJ-45 serial console port	4	AUX port
5	GE 0/1	6	GE 0/0
7	S (Speed)	8	L (Link)
9	USB port—USB 2.0 Type-A port	10	Kensington TM security slot
11	PoE ⁶	12	Ground connector
13	On/Off switch	14	Input power connection
15	Baud reset	16	USB serial port—USB 5-pin mini USB Type-B
17	EN (Enable USB console)	18	Flash

1. VWIC support is for data only.

2. Double-wide slot on the 1921 only.

- 3. The 1905 slot 0 (Right) comes with a permanently installed interface card. Only slot 1 (Left) is available.
- 4. Only 1 EHWIC Gigabit Ethernet Switch can be installed in a 1905 or 1921.
- See Module Support on Cisco's Integrated Services Routers Generation 2 http://cisco.com/en/US/prod/collateral/routers/ps10538/aag_c07_563807.pdf for supported modules.
- 6. Power off the PoE before installing an EHWIC in the Cisco 1905 and Cisco 1921 ISRs.

Figure 1-3 shows the front panel of a Cisco 1941 wireless router with antennas mounted.



The Cisco 1905 comes with a permanently installed EHWIC in slot 0 (Right).



Figure 1-3 Front Panel of the Cisco 1941W Router

1. The antenna mounts are not available on the non-wireless models.

2. Some LEDs are not available on the non-wireless models.

Figure 1-4 shows the front panel of the Cisco 1941W (without antennas) with the LED names.





1	SYS	2	ACT
3	РоЕ	4	WLAN
5	2.4 or 5 GHz		

Figure 1-5 shows the Cisco 1941 and 1941W back panel with ports and LEDs.



Figure 1-5 Back Panel of the Cisco 1941 and Cisco 1941W Router

1	USB ports—two USB 2.0 Type-A ports	2	L (Link)
1	(USB 0=Bollom)	Z	
3	GE 0/1	4	S (Speed)
5	RJ-45 serial console port	6	EN (Enable RJ-45 console)
7	USB serial port—USB 5-pin mini USB Type-B	8	EN (Enable USB console)
9	HWIC slot 0 (EHWIC, HWIC, WIC, or VWIC ¹)—single wide ²	10	ISM ³ or WLAN
11	CF 0	12	CompactFlash 0
13	HWIC slot 1 (EHWIC, HWIC, or WIC)—double wide ⁴	14	CF 1
15	CompactFlash 1	16	Kensington TM security slot
17	On/Off switch	18	Input power connection
19	AUX port	20	S (Speed)
21	GE 0/0	22	L (Link)

1. VWIC support is for data only.

 See Module Support on Cisco's Integrated Services Routers Generation 2 http://cisco.com/en/US/prod/collateral/routers/ps10538/aag_c07_563807.pdf for supported modules.

3. Internal Service Module (ISM).

4. The double-wide slot can accommodate a single wide EHWIC, HWIC, WIC, or VWIC (data only), on the left side of the slot.

Hardware Features

- Product Serial Number Location, page 1-6
- Built-In Interfaces, page 1-7
- Removable, Interchangeable, and Optional Modules, page 1-8
- Memory, page 1-9
- LED Indicators, page 1-10

- Chassis Ventilation, page 1-12
- Real-Time Clock, page 1-12
- Chassis Security, page 1-12
- Wireless LAN Connectivity, page 1-12
- Baud Reset Button, page 1-13

Product Serial Number Location

The serial number and common language equipment identifier (CLEI) label for the Cisco 1905 and Cisco 1921 router is located on the rear of the chassis. (See Figure 1-6.) The product ID (PID) label for the Cisco 1905 and Cisco 1921 series routers is located on the bottom of the chassis. (See Figure 1-8.) The serial number label for the Cisco 1940 series routers is located on the rear of the chassis on a pull-out tab. (See Figure 1-8.)

Figure 1-6 Serial Number and CLEI Location on Cisco 1905 and Cisco 1921 Routers



Figure 1-7 PID and Compliance Label on Cisco 1905 and Cisco 1921 Routers



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1	Product ID (PID)	2	Compliance label

Serial Number, PID/VID, and CLEI Number Location on Cisco 1940 Series Routers Figure 1-8



1	Product ID (PID)	2	Serial Number (SN)
3	Product ID/Version ID (PID/VID)	4	Common Language Equipment Identifier (CLEI)

Note

The serial number for Cisco 1900 series routers 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 describes the interfaces available on the Cisco 1900 series routers.

<u>Note</u>

Either the RJ-45 console port or USB console port may be used. They can not both be used at the same time.

Interface	Description
Gigabit Ethernet (GE)	Two GE ports (RJ-45 connectors).
RJ-45 Console	One console port (RJ-45 connector).
Auxiliary	One auxiliary port (RJ-45 connectors).
USB console	In addition to the RJ-45 Console port, the Cisco 1900 ISRs have a USB 5-pin mini Type-B port. When first connecting to this port, a USB driver must be installed. You will be prompted to install the driver. Simply follow the installation prompts to install the driver.
USB	Two USB 2.0 Type-A compliant ports;1940 series. One USB 2.0 Type-A compliant port; 1905 and1921. These ports are backward compatible with USB1.1 devices. The USB port provides connection for USB devices such as security tokens and flash memory.

 Table 1-1
 Interfaces Available on the Cisco 1900 Series Routers

Removable, Interchangeable, and Optional Modules

Some modules can be installed either by inserting them into slots on the chassis, or by opening the chassis and plugging them into connectors inside. The WLAN is factory installed.

- CompactFlash memory and enhanced high-speed WAN interface cards (EHWICs) fit into slots on the Cisco 1940 series chassis, and can be installed or removed without opening the chassis.
- A connector inside the Cisco 1940 series chassis accommodates an optional field installable Internal Service Module (ISM). See *Installing and Upgrading Internal Modules and FRUs in Cisco 1900 Series ISRs*.
- The ISM connector inside the Cisco 1941W chassis accommodates an optional factory installed wireless LAN card. The WLAN card is permanently installed in the ISM connector.
- Cisco 1940 series ISRs feature an optional upgrade to the internal power supply providing in-line power (802.3af-compliant Power-over-Ethernet (PoE) and Cisco standard inline power) to optional integrated switch modules. The Cisco 1905, and Cisco 1921 have an external feed for PoE. (See Figure 1-2.)
- There are no user-installable or replaceable modules on the Cisco 1905 or Cisco 1921 routers. The chassis cover should never be removed.



Power off the PoE before installing an EHWIC in the Cisco 1905 and Cisco 1921 ISRs.

Table 1-2 summarizes the optional modules:

External Modules	s (In chassis slots)	Internal Modules
CompactFlash ¹	Enhanced High-Speed WAN Interface Cards (EHWICs) ²	Internal Service Module (ISM) ³
2	2	1

Table 1-2 Summary of Cisco 1940 Series Removable and Interchangeable Modules

 Only Advanced Capability CompactFlash (CF) purchased from Cisco operate in Cisco 1900 series ISRs. Legacy CF will not operate in these routers. When legacy CF is inserted, the following error message appears:

WARNING: Unsupported compact flash detected. Use of this card during normal operation can impact and severely degrade performance of the system. Please use supported compact flash cards only.

- 2. HWICs, WICs, and VWICs (data only) are supported.
- 3. Non wireless models only.

Memory

Cisco 1900 series routers 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 (1940 series only). Stores the operating system software image.

Table 1-3 summarizes the memory options for Cisco 1900 series routers. 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 on the Cisco 1940 series ISRs. The Cisco 1905 and Cisco 1921 have factory installed, fixed memory modules and no expansion slots.

DRAM	1940 Series	1905	1921
DRAM	Type—Unregistered DIMM	Type—DDR2	Type—DDR2
	(UDIMM)	DIMM expansion slots—0	DIMM expansion slots—0
	DIMM sizes—512 MB, 1 GB, 2 GB	Default onboard memory—512 MB non ECC effective with Cisco	Default onboard memory—512 MB non ECC
	DIMM expansion slots—1	IOS release 15.5(3) M onwards	Maximum memory—512 MB
	Default onboard memory—512 MB non ECC	and 256 MB non ECC for older versions.	Boot or NVRAM—Internal 16 MB
	Maximum memory—2.5 GB	Maximum memory—512 MB ¹	fiash memory.
	Boot or NVRAM—Internal 16-MB flash memory.	Boot or NVRAM—Internal 16 MB flash memory.	

Table 1-3 Router Memory Specifications

1. 512 MB activation requires memory licensing feature. See the Cisco IOS Software Activation Configuration Guide for details.

LED Indicators

Table 1-4 summarizes the LED indicators that are located in the router bezel or chassis, but not on the interface cards. Not all models have every LED.

LED	Color	Description	
SYS	Solid green	Solid green indicates normal operation.	Front panel
	Blinking green	System is booting or is in ROM monitor mode.	
	Amber	System error.	
	Off	Power is off or system board is faulty.	
ACT	Green	Solid or blinking when any packets are transmitted or received on any WAN or LAN, or when monitoring system activity.	Front panel
РоЕ	Green	PoE is available.	Front panel
Amber Power supply is not supplying PoE power.		Power supply is not supplying PoE power.	
WLAN 2.4GHz (Wireless	Green On—Radio is connected, SSID ¹ is configured, signal is being transmitted, and client is associated, but no data is being received or being transmitted.		Front panel
Models)		Slow blinking—Radio is connected, SSID is configured, and beacons are being transmitted.	
		Fast blinking—Data is either being received or being transmitted.	
		Off—Radio is shut down, and no SSID is configured.	
WLAN 5GHz (Wireless Models)	Green	On—Radio is connected, SSID is configured, signal is being transmitted, and client is associated, but no data is being received or being transmitted.	Front panel
		Slow blinking—Radio is connected, SSID is configured, and beacons are being transmitted.	
		Fast blinking—Data is either being received or being transmitted.	
		Off—Radio is shut down, and no SSID is configured.	

Table 1-4 Summary of Cisco 1900 Series LED Indicators

LED	Color	Description	Location	
WLAN	Green	Autonomous Mode	Front panel	
		On—Wireless link is up.		
		Blinking—Ethernet link is up and data is either being received or being transmitted.		
		Off—Wireless link is down.		
		Unified Mode		
On—Ether communic link is up, LWAPP co		On—Ethernet link is up, wireless access point is communicating with LWAPP controller. Blinking—Ethernet link is up, wireless access point is not communicating with LWAPP controller.		
		Off—Ethernet link is down.		
ISM/WLAN	Green	Initialized.	Rear panel	
	Amber	Initialized with error.		
Flash (1905 and 1921 only)	Green	Blinking means software is accessing the internal USB Flash (eUSB ²) device.	Rear panel	
	Amber	Initialized with error.		
CF 1	Green	Flash memory is busy.	Next to the	
		Note Do not remove the CompactFlash memory card when this light is on.	CF1 slot	
	Amber	Initialized with error.		
	Blinking Green then turns off	CompactFlash is ready for removal. Note Remove the CompactFlash when the light turns off.		
CF 0	Green	Flash memory is busy.	Next to the	
		Note Do not remove the CompactFlash memory card when this light is on.	CF0 slot	
	Amber	Initialized with error.		
	Blinking Green	CompactFlash is ready for removal.NoteRemove the CompactFlash when the light turns off.		
	turns off			
S (Speed)	1 blink + pause	GE port operating at 10 Mb/s.	Rear panel	
	2 blink + pause	GE port operating at 100 Mb/s.		
	3 blink + pause	GE port operating at 1000 Mb/s.		
L (Link)	Green	GE link is established.	Rear panel	
	Off	No GE link is established.		

 Table 1-4
 Summary of Cisco 1900 Series LED Indicators (continued)

LED	Color	Description	Location
EN (RJ-45 console port)	Green	The RJ-45 console port is active.	Rear panel, next to the console port
EN (USB serial console port)	Green	The USB console port is active.	Rear panel, next to the USB console port

Table 1-4 Summary of Cisco 1900 Series LED Indicators (continued)

1. SSID = Service Set Identifier

2. eUSB = embedded USB

Chassis Ventilation

An internal 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 the higher speeds when necessary under conditions of higher ambient temperature. See the "Chassis Airflow Diagram" section on page 4-3.

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 1900 series router has a lithium battery. This battery lasts the life of the router under the operating environmental conditions specified for the router, and is not field-replaceable.



If the lithium battery in a Cisco 1900 ISR 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:



Dispose of used batteries according to the manufacturer's instructions. Statement 1015

Chassis Security

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

Wireless LAN Connectivity

The embedded Wi-Fi CERTIFIED[™], 802.11a/b/g/n-compliant wireless access point is preinstalled in the router as an optional feature. The Cisco 1900 routers support both autonomous and unified features and network configurations.

The wireless access point does not have an external console port for connections. To configure the wireless device, you must use a console cable to connect a PC to the host router's console port as described in Chapter 3, "Cable Information and Specifications for Cisco 1900 Series Routers," and then use the Cisco IOS command-line interface (CLI) to access the interface.

Table 1-5 describes the radios and antennas for the wireless routers.

Baud Reset Button

The Cisco 1905 and Cisco 1921 ISRs have a baud reset button on the back panel. When the button is pressed during power on, ROMMON resets the router to the default console port configuration. If the baud reset button is pressed for longer than 30 seconds, the router defaults to the read-only ROMMON image. The default console port configuration is 9600 baud, 8 data bits, 1 stop bit, no parity, and flow control is set to none.

Interface Numbering

Each individual interface (port) on a Cisco 1900 series router is identified by a number. The Cisco 1900 series routers contains the following wide-area network (WAN) and local-area network (LAN) interface types:

- Two onboard Gigabit Ethernet (GE) LAN interfaces.
- Two slots in which you can install WICs, VWICs (data only), and HWICs. The Cisco 1905 comes with a factory installed EHWIC in the right slot.

The numbering format for the slots is *interface-type 0/slot-number/interface-number*. Table 1-6 summarizes the interface numbering. See Figure 1-5 to identify the slot numbers.

Slot Number	Slot Type	Slot Numbering Range
Onboard Ports	10/100/1000 Ethernet	0/0 and 0/1
Slot 0	EHWIC/HWIC/WIC	0/0/0 to 0/0/0 (single-wide)
Slot 1	EHWIC/WIC/VWIC	0/1/0 to 0/1/0 (single or double-wide)

Table 1-6 Interface Numbering



On the Cisco 1900 series router, the numbering format for configuring an async interface is *0/slot/port*. To configure the line associated with an async interface, simply use the interface number to specify the async line. For example, line 0/0/0 specifies the line associated with interface serial 0/0/0 on a WIC-2A/S in slot 0. Similarly, line 0/1/1 specifies the line associated with interface async 0/1/1 on a WIC-2AM in slot 1.

Specifications

Table 1-7 lists the specifications for Cisco 1905 and Cisco 1921 series routers. Table 1-8 lists the specifications for Cisco 1940 series routers.

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Description	Specification				
Physical					
Dimensions without rubber feet (H x W x D)	1.75 in x 13.5 in x 11.5 in (4.4 cm x 34.3 x 29.2 cm), 1 RU^2 height				
Rack-mount 19 in. (48.3 cm) EIA	Optional				
Weight (no modules installed)	Approximately 12 lbs				
Weight with PoE	12.8 lbs				
Maximum Weight-Fully Configured	14 lbs				
Power					
AC input power					
• Input voltage	100 to 240 VAC, autoranging				
• Frequency	47 to 63 Hz				
• Input current (max)	1.5 to 0.6 A				
• Typical power (no modules)	25 W				
• Power (max) with AC	60 W				
• Power (max) with PoE (platform only)	70 W				
• Maximum PoE device power capacity with PoE power supply	80 W				
• Surge current	<50 A				
Ports					
Console	One RJ-45 connector and one USB mini Type B, USB 2.0 compliant. Baud rates: 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200.				
Auxiliary ports	RJ-45 connector. Baud rates: 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200.				
USB port	One USB Type A, USB 2.0 compliant, 2.5 W (500 mA) max. ³				
10/100/1000 Gigabit Ethernet	Two RJ-45 connectors (GE0/GE1), Auto-MDIX ⁴				
Environmental	·				
Operating humidity	10 to 85% RH				
Operating temperature - up to 5906 ft (1800 m) elevation	32 to 104°F (0 to 40°C)				
Operating temperature - up to 9843 ft (3000 m) elevation	32 - 77°F (0 - 25°C)				
Operating altitude maximum	10,000 ft (3000 m)				
Transportation and Storage Enviro	nment				

 Table 1-7
 Cisco 1905 and 1921 Series Router Specifications¹

Description	Specification
Nonoperating temperature	-40 to 158°F (-40 to 70°C)
Nonoperating humidity	5 to 95% RH
Nonoperating altitude	15,000 ft (4570 m)
Acoustic	
Sound Pressure (Typ/Max)	32.9/58.3 dBA
Sound Power (Typ/Max)	41.9/67.2 dBA
Regulatory	
Electromagnetic compatibility (EMC)	 47 CFR, Part 15 ICES-003 Class A EN55022 Class A CISPR22 Class A AS/NZS 3548 Class A VCCI V-3 EN 300-386 EN 61000 (Immunity) EN 55024, CISPR 24 EN50082-1 For detailed compliance information, see <i>Regulatory Compliance</i>
Safety compliance	and Safety Information for Cisco 1900 Series Routers.UL 60950-1CAN/CSA C22.2 No. 60950-1EN 60950-1AS/NZS 60950-1IEC 60950-1For detailed compliance information, see Regulatory Complianceand Safety Information for Cisco 1900 Series Routers.
Telecom	TIA/EIA/IS-968 CS-03 ANSI T1.101 IEEE 802.3 RTTE Directive For detailed compliance information, see <i>Regulatory Compliance</i> <i>and Safety Information for Cisco 1900 Series Routers</i> .

Table 1-7	Cisco	1905 and	1921	Series	Router	Specifications ¹
	0.000	looo ana		001100	no ator	op oom out on o

1. Refer to the Cisco 1900 Series Integrated Services Routers Data Sheet for additional information.

2. Rack unit (RU

3. 480 Mb/s individually, bandwidth is shared when both are used.

4. Auto-MDIX=auto media-dependent interface cross over.

Description	Specification
Physical	
Dimensions without rubber feet (H x W x D)	3.5 x 13.5 x 11.5 in. (8.9 x 34.3 x 29.2 cm), 2 RU ² height
Rack-mount 19 in. (48.3 cm) EIA	Included
Weight (no modules installed)	Approximately 12 lbs
Weight with PoE	12.8 lbs
Maximum Weight-Fully Configured	14.0 lbs
Power	<u> </u>
AC input power	
• Input voltage	100 to 240 VAC, autoranging
• Frequency	47 to 63 Hz
• Input current (max)	1.5 to 0.6 A
• Typical power (no modules)	35 W
• Power (max) with AC	110 W
• Power (max) with PoE (platform only)	110 W
• Maximum PoE device power capacity with PoE power supply	80 W
• Surge current	<50 A
Power consumption	110 W maximum platform only
Ports	
Console	One RJ-45 connector and one USB mini Type B, USB 2.0 compliant. Baud rates: 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200.
Auxiliary ports	RJ-45 connector. Baud rates: 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200.
USB ports	Two USB Type A, USB 2.0 compliant, 2.5 W (500 mA) max. ³
10/100/1000 Gigabit Ethernet	Two RJ-45 connectors (GE0/GE1), Auto-MDIX ⁴
Environmental	
Operating humidity	10 to 85% RH
Operating temperature - up to 5906 ft (1800 m) elevation	32 to 104°F (0 to 40°C)
Operating temperature - up to 9843 ft (3000 m) elevation	32 - 77°F (0 - 25°C)
Operating altitude maximum	10,000 ft (3000 m)

Table 1-8 Cisco 1940 Series Router Specifications¹

Description	Specification			
Transportation and Storage Environment				
Nonoperating temperature	-40 to 158°F (-40 to 70°C)			
Nonoperating humidity	5 to 95% RH			
Nonoperating altitude	15,000 ft (4570 m)			
Acoustic				
Sound Pressure (Typ/Max)	26/46 dBA			
Sound Power (Typ/Max)	36/55 dBA			
Regulatory				
Electromagnetic compatibility (EMC)	 47 CFR, Part 15 ICES-003 Class A EN55022 Class A CISPR22 Class A AS/NZS 3548 Class A VCCI V-3 CNS 13438 EN 300-386 EN 61000 (Immunity) EN 55024, CISPR 24 EN50082-1 For detailed compliance information, see <i>Regulatory Compliance</i> 			
Safety compliance	and Safety Information for Cisco 1900 Series Routers.UL 60950-1CAN/CSA C22.2 No. 60950-1EN 60950-1AS/NZS 60950-1IEC 60950-1For detailed compliance information, see Regulatory Complianceand Safety Information for Cisco 1900 Series Routers.			
Telecom	TIA/EIA/IS-968 CS-03 ANSI T1.101 ITU-T G.823, G.824 IEEE 802.3 RTTE Directive For detailed compliance information, see Regulatory Compliance and Safety Information for Cisco 1900 Series Routers.			

Table 1-8 Cisco 1940 Series Router Specifications¹

1. Refer to the Cisco 1900 Series Integrated Services Routers Data Sheet for additional information.

2. Rack unit (RU

3. 480 Mb/s individually, bandwidth is shared when both are used.

4. Auto-MDIX=auto media-dependent interface cross over.

Regulatory Compliance

For compliance information, refer to *Regulatory Compliance and Safety Information for Cisco 1900* Series Routers.