



CHAPTER 1

Product Overview

The Cisco Secure Router 520 Series routers are designed for small businesses with up to 50 users and teleworkers who want secure connectivity to corporate LANs and to the Internet. These routers provide advanced security features that include secure Virtual Private Network (VPN) access and comprehensive threat defense with Cisco IOS Firewall, Intrusion Prevention Solution (IPS), and URL filtering. The Cisco Secure Router 520 Series routers also provide dynamic routing and advanced quality of service (QoS) features.

The following sections provide an overview of the Cisco Secure Router 520 Series routers:

- [Router Models, page 1-1](#)
- [Hardware Features, page 1-5](#)
- [Regulatory Compliance, page 1-9](#)

Router Models

The Cisco Secure Router 520 Series routers are available in Ethernet and DSL models. The following sections describe each of the routers:

- [Cisco Secure Router 520 Ethernet-to-Ethernet Routers, page 1-1](#)
- [Cisco Secure Router 520 ADSL-over-POTS Routers, page 1-3](#)
- [Cisco Secure Router 520 ADSL-over-ISDN Routers, page 1-4](#)

Cisco Secure Router 520 Ethernet-to-Ethernet Routers

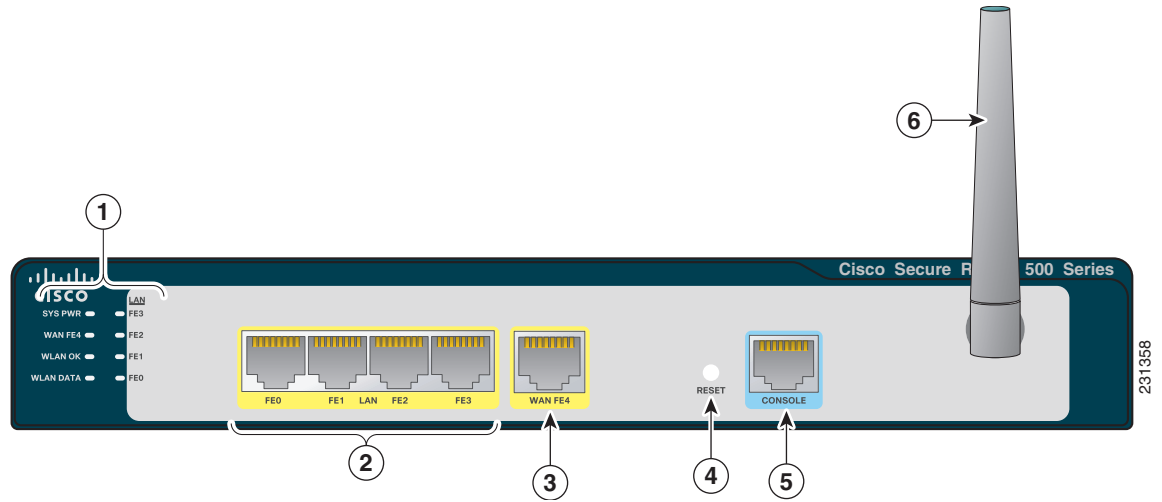
The Cisco Secure Router 520 Ethernet-to-Ethernet routers can connect a small business or a teleworker to a corporate LAN or to the Internet through an Internet service provider (ISP) over a broadband or Ethernet connection. These switch-capable routers provide a 4-port Fast Ethernet switch for the LAN. The routers are capable of bridging and multiprotocol routing between LAN and WAN ports.

Two router models are available:

- Cisco Secure Router 520 Ethernet-to-Ethernet (without wireless functionality).
- Cisco Secure Router 520 Ethernet-to-Ethernet Wireless (with wireless functionality). The wireless router supports the use of a single 2.4-GHz antenna.

Figure 1-1 shows the front panel of the Cisco Secure Router 520 Ethernet-to-Ethernet wireless router. The front panel contains the LEDs, ports, reset button, and antenna. The antenna is available only with the wireless router.

Figure 1-1 Cisco Secure Router 520 Ethernet-to-Ethernet Wireless Router—Front Panel



1	LEDs	2	Four 10/100BASE-T RJ-45 Fast Ethernet switch ports
3	10/100BASE-T RJ-45 WAN Fast Ethernet port	4	Reset button
5	RJ-45 console port	6	Antenna (wireless router only)

Figure 1-2 shows the back panel of the Cisco Secure Router 520 Series router. It contains the Kensington security slot for securing the router and the input jack for the AC adapter. The back panel is identical for all the Cisco Secure Router 520 Series routers.

Figure 1-2 Cisco Secure Router 520 Series Router—Back Panel



1	Kensington security slot	2	Input jack for the AC adapter
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Cisco Secure Router 520 ADSL-over-POTS Routers

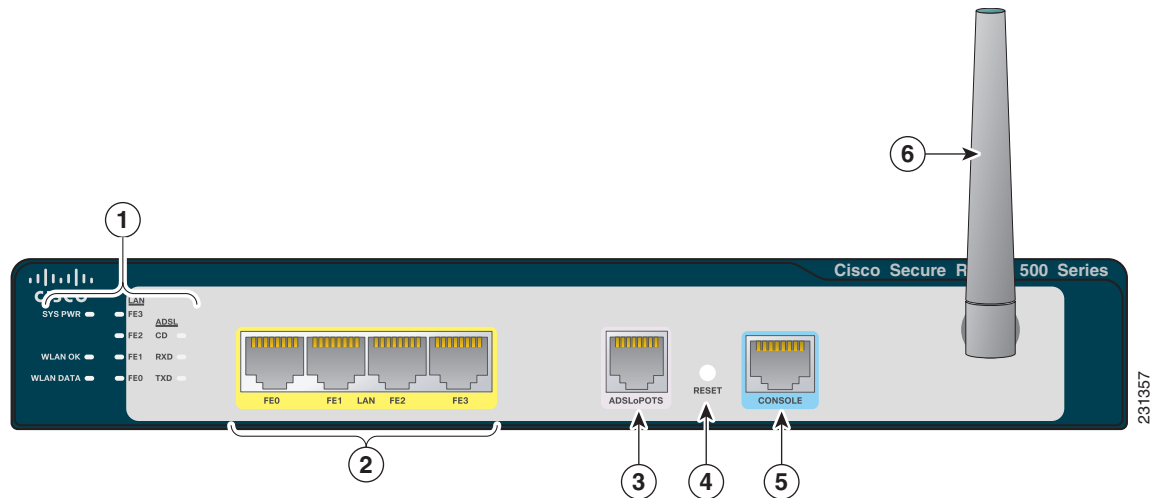
The Cisco Secure Router 520 ADSL-over-POTS routers use an asymmetric digital subscriber line (ADSL) over plain old telephone service (POTS). These secure routers have an integrated 4-port Fast Ethernet switch for the LAN and an ADSL-over-POTS physical interface for the WAN. This feature allows the router to connect a small business or a teleworker to a corporate LAN and to the Internet.

Two router models are available:

- Cisco Secure Router 520 ADSL-over-POTS (without wireless functionality).
- Cisco Secure Router 520 ADSL-over-POTS Wireless (with wireless functionality). The wireless router supports the use of a single 2.4-GHz antenna.

Figure 1-3 shows the front panel of the Cisco Secure Router 520 ADSL-over-POTS wireless router. The front panel contains the LEDs, ports, reset button, and antenna. The antenna is available only with the wireless router.

Figure 1-3 Cisco Secure Router 520 ADSL-over-POTS Wireless Router—Front Panel



1	LEDs	2	Four 10/100BASE-T RJ-45 Fast Ethernet switch ports
3	ADSL-over-POTS port	4	Reset button
5	RJ-45 console port	6	Antenna (wireless router only)

The back panel is identical for all the Cisco Secure Router 520 Series routers (see [Figure 1-2 on page 1-3](#)). The back panel contains the Kensington security slot for securing the router and the input jack for the AC adapter.

Cisco Secure Router 520 ADSL-over-ISDN Routers

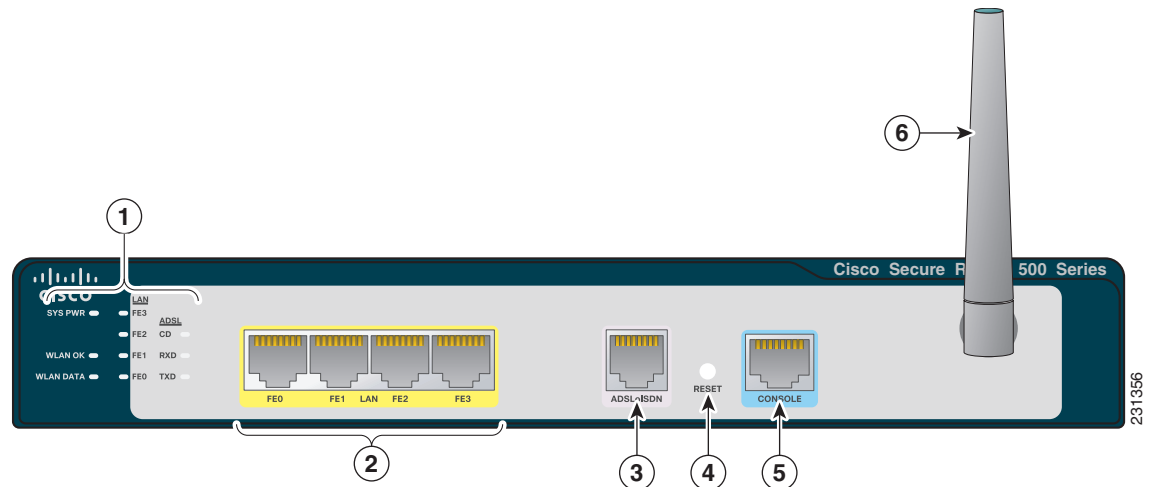
The Cisco Secure Router 520 ADSL-over-ISDN router is a routing device that uses an asymmetric digital subscriber line (ADSL) over integrated services digital network (ISDN). These routers have an integrated 4-port Fast Ethernet switch for connecting to the LAN and an ADSL-over-ISDN physical interface for connecting to the WAN. This feature allows the router to connect a small business or a teleworker to a central office or an Internet service provider (ISP) over an ADSL interface.

Two router models are available:

- Cisco Secure Router 520 ADSL-over-ISDN (without wireless functionality).
- Cisco Secure Router 520 ADSL-over-ISDN Wireless (with wireless functionality). The wireless router supports the use of a single 2.4-GHz antenna.

Figure 1-4 shows the front panel of the Cisco Secure Router 520 ADSL-over-ISDN wireless router. The front panel contains the LEDs, ports, reset button, and antenna. The antenna is only available with the wireless router.

Figure 1-4 Cisco Secure Router 520 ADSL-over-ISDN Wireless Router—Front Panel



1	LEDs	2	Four 10/100BASE-T RJ-45 Fast Ethernet switch ports
3	ADSL-over-ISDN port	4	Reset button
5	RJ-45 console port	6	Antenna (wireless router only)

The back panel is identical for all the Cisco Secure Router 520 Series routers (see [Figure 1-2 on page 1-3](#)). The back panel contains the Kensington security slot for securing the router and the input jack for the AC adapter.

Hardware Features

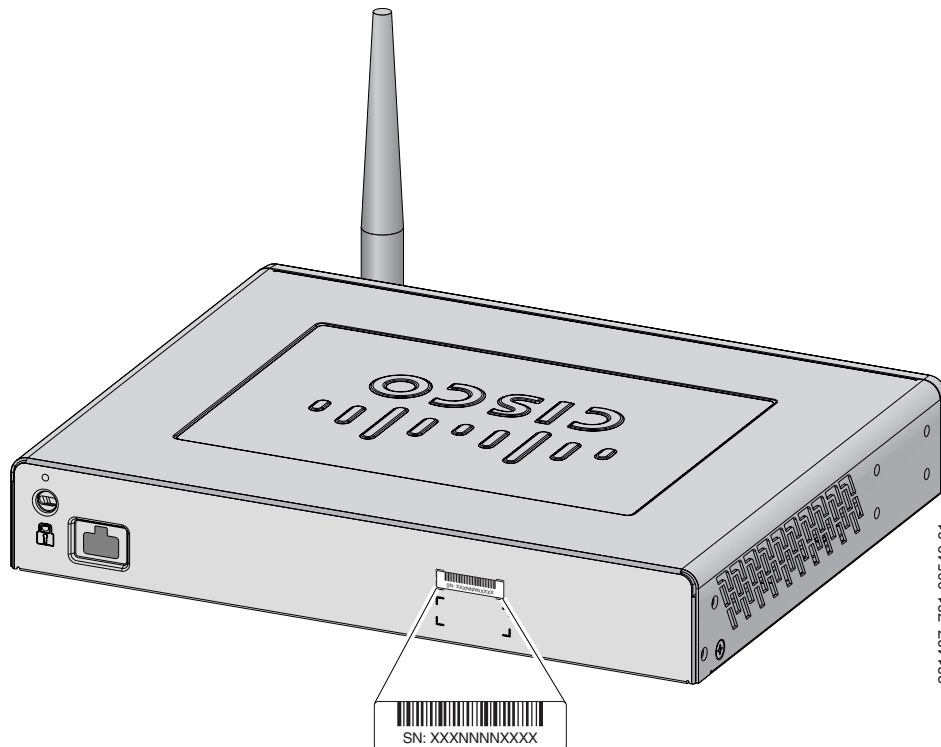
The following sections provide information about the hardware features of the Cisco Secure Router 520 Series routers:

- [Serial Number Label Location](#)
- [LED Indicators on the Routers](#)
- [Integrated 802.11b/g Radio Module—Wireless Routers Only](#)
- [Router Memory](#)
- [Router Hardware Security](#)
- [Feature Summary](#)

Serial Number Label Location

Figure 1-5 shows the serial number label, which is located on the back of the Cisco Secure Router 520 Series routers.

Figure 1-5 Serial Number Location on the Back of the Cisco Secure Router 520 Series Router



LED Indicators on the Routers

The LEDs, which are located on the router's front panel, indicate the status or activity on the router. Table 1-1 describes the LEDs.

Table 1-1 LED Indicators on the Routers

LED	Color	Description	Router
SYS PWR	Green	On when DC power is being supplied to the router. The light blinks if an error occurs during bootup.	All Cisco Secure Router 520 Series routers
WAN FE4	Green	On when a device connects to the Ethernet WAN FE4 port. Blinks when the Ethernet WAN FE4 port receives or sends data, or when data passes through the port.	Cisco Secure Router 520 Ethernet-to-Ethernet router
WLAN OK	Green	Shows whether the wireless link status is operational. Blinks if no client is associated. Solid green if at least one client is associated.	Cisco Secure Router 520 Series wireless routers only

Table 1-1 LED Indicators on the Routers (continued)

LED	Color	Description	Router
WLAN DATA	Green	Wireless LAN link traffic. Blinks when there is traffic on the wireless LAN. Off when there is no traffic.	Cisco Secure Router 520 Series wireless routers only
LAN			
FE0	Green	On when a device connects to the Ethernet LAN 0 port. Blinks when the Ethernet LAN 0 port receives or sends data, or when data passes through the port.	All Cisco Secure Router 520 Series routers
FE1	Green	On when a device connects to the Ethernet LAN 1 port. Blinks when the Ethernet LAN 1 port receives or sends data, or when data passes through the port.	All Cisco Secure Router 520 Series routers
FE2	Green	On when a device connects to the Ethernet LAN 2 port. Blinks when the Ethernet LAN 2 port receives or sends data, or when data passes through the port.	All Cisco Secure Router 520 Series routers
FE3	Green	On when a device connects to the Ethernet LAN 3 port. Blinks when the Ethernet LAN 3 port receives or sends data, or when data passes through the port.	All Cisco Secure Router 520 Series routers
ADSL			
ADSL CD	Green	On if the ADSL carrier detects status and connects to the digital subscriber line access multiplexer (DSLAM).	Cisco Secure Router 520 ADSL-over-POTS and Cisco Secure Router 520 ADSL-over-ISDN routers
ADSL RXD	Green	Blinks when the ADSL interface receives data. Off when there is no data.	Cisco Secure Router 520 ADSL-over-POTS and Cisco Secure Router 520 ADSL-over-ISDN routers
ADSL TXD	Green	Blinks when the ADSL interface transmits data. Off when no data is being uploaded.	Cisco Secure Router 520 ADSL-over-POTS and Cisco Secure Router 520 ADSL-over-ISDN routers

Integrated 802.11b/g Radio Module—Wireless Routers Only

The Cisco Secure Router 520 Series wireless router has an integrated IEEE 802.11b/g radio module that operates as a wireless access point in infrastructure mode. The wireless routers have one reverse-polarity threaded Neill-Concelman (RP-TNC) connector on the front panel on the right side. The swivel-mount, dipole, 2.4-GHz antenna, which is shipped with the router, connects to the RP-TNC connector to operate the 802.11b/g radio module. For more information, see the *Cisco 2.4-GHz Swivel-Mount Dipole Antenna (23.7786.51)* document.

You can configure the wireless operations by using the Cisco IOS command-line interface (CLI). For details, see the *Cisco Secure Router 520 Series Software Configuration Guide*.

Router Memory

The Cisco Secure Router 520 Series routers support the following types of memory:

- [Flash Memory](#)
- [SDRAM](#)

Flash Memory

Flash memory stores the image of the ROMMON boot code, the Cisco IOS software, and the router configuration file. By default, the router ships with 36 MB of flash memory, with no option for expansion. The router has enough memory to support the Cisco IOS Advanced IP Services image.

SDRAM

SDRAM stores the Cisco IOS software and provides memory for data that is created during packet processing. The router provides 128 MB of onboard SDRAM.

Router Hardware Security

Each Cisco Secure Router 520 Series router has a Kensington security slot on the back panel. To secure the router to a desktop or other surface, use the Kensington lockdown equipment.

Feature Summary

[Table 1-2](#) summarizes the features of the Cisco Secure Router 520 Series routers.

Table 1-2 Cisco Secure Router 520 Series Feature Summary

Feature	Description
Security features	Provides advanced security features, including secure VPN access and comprehensive threat defense with Cisco IOS Firewall, IPS, and URL filtering. The Cisco Secure Router 520 Series routers also provides dynamic routing and advanced QoS features.
IPsec hardware accelerator	The security processor implements symmetric key encryption, public key encryption, authentication, and data compression in hardware.
Integrated 802.11b/g radio module	(Wireless routers only) Provides connectivity to a wireless LAN using IEEE 802.11b/g standards. Enables the router to act as an access point (AP) in infrastructure mode.
Flash memory	36 MB of flash memory (default) with no option for expansion. The router has enough memory to support the Cisco IOS Advanced IP Services image.
SDRAM	128 MB of SDRAM on board.
Dying gasp	Detects whether the router is about to lose power, and then sends a signal to warn the digital subscriber line access multiplexer (DSLAM) about the impending line drop.

Table 1-2 Cisco Secure Router 520 Series Feature Summary (continued)

Feature	Description
Autosensing function	Eliminates the need for a crossover cable and allows the router to detect medium-dependent interface (MDI) in normal mode or medium-dependent interface in crossover mode (MDIX) in any other PC or hub by means of a straight-through cable or a crossover cable. The router is capable of bridging and multiprotocol routing between the LAN and WAN ports.
10BASE-T/100BASE-T built-in switch ports	Provides connection to 10/100BASE T (10/100-Mbps) Ethernet networks. Compatible with 10/100-Mbps devices.
Fast Ethernet WAN port	Cisco Secure Router 520 Ethernet-to-Ethernet routers only. Provides connection to 10/100BASE T. Can be connected to other network devices, such as cable modem and routers.
ADSL-over-POTS port	Cisco Secure Router 520 ADSL-over-POTS routers only. Provides connection to an ADSL network. Does not support the autoswitch function.
ADSL-over-ISDN port	Cisco Secure Router 520 ADSL-over-ISDN routers only. Provides connection to an ADSL-over-ISDN network. Does not support the autoswitch function.
Console port	Provides connection to a terminal or PC for software configuration or for troubleshooting using the CLI. The console port may be configured as a virtual auxiliary port (using the CLI) for dial backup and remote management.
Router Reset button	Resets the router configuration to the factory default.
Wall-mount feature	Allows the router to be mounted on a wall or vertical surface.
Rack-mount feature	Allows use of brackets to mount the router in a 19-inch rack.
Kensington security slot	Allows the router to be secured to a desktop or other surface by using the Kensington lockdown equipment.

Regulatory Compliance

For compliance and safety information, see the *Regulatory Compliance and Safety Information for Cisco Secure Router 500 Series*.

