



APPENDIX **A**

Specifications

This appendix provides system, port, and cabling specifications for the Cisco Secure Router 520 Series routers. It contains the following sections:

- [Router Specifications, page A-1](#)
- [LAN Port Pinouts, page A-2](#)
- [Console Connector Pinouts, page A-3](#)
- [ADSL Port Connector Pinouts, page A-3](#)
- [Cable Specifications, page A-4](#)

Router Specifications

[Table A-1](#) provides the system specifications for the routers.

Table A-1 Router Specifications

Description	Design Specification
Physical Dimensions	
Dimensions (W x D x H)	<ul style="list-style-type: none">• With antenna connectors: 10.578 in. (268.68 mm) x 8.65 in. (219.72 mm) x 1.719 in. (43.66 mm)• Without antenna connectors: 10.578 in. (268.68 mm) x 8.289 in. (210.54 mm) x 1.719 in. (43.66 mm)
Weight (not including desktop power supply)	3.7 lb
Environmental Operating Ranges	
Nonoperating temperature	−4 to 149°F (−20 to 65°C)
Nonoperating humidity	5 to 95% relative humidity
Nonoperating altitude	0 to 15,000 ft (4570 m)
Operating temperature	32 to 104°F (0 to 40°C)
Operating humidity	10 to 85% relative humidity
Operating altitude	0 to 10,000 ft (3000 m)
Router Power	
AC input voltage	100 to 240 VAC

Table A-1 Router Specifications (continued)

Description	Design Specification
Frequency	50 to 60 Hz
Power output	26 W maximum
Output voltages	5 V and 12 V
Integrated 802.11b/g Radio Module	
Radio technology	IEEE 802.11b and 802.11g standard compliant
Operating frequency	2412 to 2484 MHz ISM ¹ band
Modulation schemes	OFDM ² , DQPSK ³ , DBPSK ⁴ 16 QAM ⁵ , 64 QAM, and CCK ⁶
Number of channels	11 channels for the U.S., 13 channels for Europe, 14 channels for Japan
Data rate	54 Mbps with fallback rates of 48, 36, 24, 18, 12, 9, and 6 Mbps
Media access protocol	CSMA/CA ⁷ with ACK ⁸
Power consumption (typical)	500 mA 3.3V at transmit mode, 320 mA/3.3V at receive mode

1. ISM = Industrial, Scientific, and Medical.
2. OFDM = orthogonal frequency-division multiplexing.
3. DQPSK = differential quaternary phase shift keying.
4. DBPSK = differential binary phase shift keying.
5. QAM = quadrature amplitude modulation.
6. CCK = complementary code keying.
7. CSMA/CA = carrier sense multiple access with collision avoidance.
8. ACK = acknowledgement.

LAN Port Pinouts

Table A-2 provides pinouts for the Ethernet LAN port on the routers.

Table A-2 Ethernet LAN Port Pinouts

Pin	Function
1	RX+
2	RX-
3	TX+
4	Unused
5	Unused
6	TX-
7	Unused
8	Unused

Console Connector Pinouts

Table A-3 provides pinouts for the console connector (for connecting a terminal or PC).

Table A-3 Console Connector Pinouts (RJ-45-to-DB-9)

RJ-45 Pin	Function	DB-9 Pin
1	RTS	8
2	DTR	6
3	TXD	2
4	GND	5
5	GND	5
6	RXD	3
7	DSR	4
8	CTS	7

The console port is configured as a data communications equipment (DCE) device. The default parameters for the console port are as follows:

- 9600 baud
- 8 data bits
- No parity
- One stop bit

ADSL Port Connector Pinouts

Table A-4 provides the ADSL connector pinouts.

Table A-4 ADSL Connector Pinouts (RJ-11-to-RJ-45)

RJ-11 Pin	Function	RJ-45 Pin	Function
1	Unused	1	Unused
2	Unused	2	Unused
3	Ring	3	Unused
4	Tip	4	Ring
5	Unused	5	Tip
6	Unused	6	Unused
		7	Unused
		8	Unused

Cable Specifications

This section provides specifications for the following Ethernet cables, which you might need to provide:

- Straight-through cable
- Crossover cable

Because of the autocrossover (autosensing) function, both straight-through and crossover cables can be used for the Ethernet LAN port.

Ethernet Cable Specifications

Table A-5 provides specifications that apply to both straight-through and crossover Ethernet cables.

Table A-5 **Ethernet Cable Specifications**

Type	Category
10BASE-T	Category 3 or 5
100BASE-T	Category 5 or higher

Maximum Cable Length

The maximum length for the Ethernet cables that connect the equipment to the router is 328 ft (100 m). This length is also the maximum distance between the router and the equipment connected to it.