



System Specifications

- [Environmental Specifications, page 1](#)
- [Switch Dimensions, page 2](#)
- [Weights and Quantities for the Chassis, Modules, Fan Trays, and Power Supplies, page 2](#)
- [Power Requirements for Switch Modules and Fan Trays, page 3](#)
- [Maximum Power Available to the Switch, page 4](#)
- [Transceivers, Connectors, and Cables, page 5](#)
- [3-kW AC Power Cord Specifications, page 6](#)

Environmental Specifications

Environment		Specification
Temperature	Ambient operating temperature	32 to 104°F (0 to 40°C)
	Ambient operating temperature (when using SFP10G-USR transceivers)	50 to 140°F (10 to 60°C)
	Ambient nonoperating	–40 to 158°F (–40 to 70°C)
Relative humidity	Ambient (noncondensing)	5 to 95%
Altitude	Operating	0 to 13,123 feet (0 to 4,000 meters)

Switch Dimensions

Switch Component	Width	Depth ¹	Height
Cisco Nexus 9504 chassis	17.3 inches (43.9 cm)	32.4 inches (82.3 cm) ²	12.2 inches (31.0 cm) (7 RU)

¹ Depth measurements for the chassis include fan tray handles.

² With fan tray handles, the depth from the front of the chassis to the handles is 33.5 inches (85.1 cm)

Weights and Quantities for the Chassis, Modules, Fan Trays, and Power Supplies

Component	Weight per Unit	Quantity
Cisco Nexus 9504 Chassis (N9K-C9504)	84.0 lb (38.2 kg)	1
Supervisor Modules	—	1 or 2
– Supervisor A module (N9K-SUP-A)	4.8 lb (2.2 kg)	
– Supervisor B module (N9K-SUP-B)	6.0 lb (2.7 kg)	
System Controller Module (N9K-SC-A)	1.9 lb (0.9 kg)	2
I/O Modules	—	1 to 4
– 48-port 1-/10-Gigabit SFP+ plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9464PX)	10.8 lb (4.9 kg)	
– 48-port 1-/10-GBASE-T plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9464TX)	10.0 lb (4.5 kg)	
– 48-port 1-/10-GBASE-T plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9564TX)	12.6 lb (5.7 kg)	
– 48-port 1-/10-Gigabit SFP+ plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9564PX)	11.5 lb (5.2 kg)	
– 36-port 40-Gigabit QSFP+ aggregation I/O module (N9K-X9636PQ)	11.5 lb (5.2 kg)	
– 36-port 40-Gigabit QSFP+ I/O module (N9K-X9536PQ)	12.0 lb (5.4 kg)	
– 32-port 40-Gigabit QSFP+ I/O module (N9K-X9432PQ)	10.9 lb (4.9 kg)	

Component	Weight per Unit	Quantity
Fabric Modules	—	3 to 6
– Fabric-1 module (N9K-C9504-FM)	5.8 lb (2.6 kg)	
Fan Trays (N9K-C9504-FAN)	6.4 lb (2.9 kg)	3
Power Supplies	—	1 to 4
– 3-kW AC power supply (N9K-PAC-3000W-B)	6.2 lb (2.8 kg)	

Power Requirements for Switch Modules and Fan Trays

The following table lists the maximum amount of power required for each switch module and fan tray. Typically, power consumption is less for each module.

Component	Quantity	Maximum Power	Typical Power
Supervisor Modules	1 or 2 (must be same type)	—	—
– Supervisor A module (N9K-SUP-A)		80 W	69 W
– Supervisor B module (N9K-SUP-B)		90 W	75 W
System Controller Modules	2	—	—
– System Controller (N9K-SC-A)		25W	13 W

Component	Quantity	Maximum Power	Typical Power
I/O Modules	1 to 4 (can mix types)	—	—
– 48-port 1-/10-Gigabit SFP+ plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9464PX)		430 W	300 W
– 48-port 1-/10-GBASE-T plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9464TX)		200 W	160 W
– 48-port 1-/10-GBASE-T plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9564TX)		550 W	450 W
– 48-port 1-/10-Gigabit SFP+ plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9564PX)		430 W	300 W
– 36-port 40-Gigabit QSFP+ aggregation I/O module (N9K-X9636PQ)		400 W	260 W
– 36-port 40-Gigabit QSFP+ I/O module (N9K-X9536PQ)		420 W	360 W
– 32-port 40-Gigabit QSFP+ I/O module (N9K-X9432PQ)	300 W	240 W	
Fabric Modules (N9K-C9504-FM)	3 to 6	137 W	95 W
Fan Tray (N9K-C9504-FAN)	3	137 W	95 W

Maximum Power Available to the Switch

The maximum power available for operations depends on the input power from your power source, the number and output capabilities of your power supplies, and the power redundancy mode that you use. The following table lists the amount of power available for 3-kW power supplies depending on power inputs, numbers of power supplies, and the mode used.

Table 1: Maximum Power Available for a Switch with 3-kW Power Supplies

Power Inputs	Power Supplies	Combined Mode	Power Supply ($n+1$) Redundancy Mode	Input Source ($n+n$) Redundancy Mode
1 input (220 V)	1	3000 W	—	—
	2	6000 W	3000 W	3000 W
	3	9000 W	6000 W	3000 W
	4	12000 W	9000 W	6000 W

Transceivers, Connectors, and Cables

Transceiver and Cable Specifications

To determine which transceivers and cables are supported by this switch, see <http://www.cisco.com/c/en/us/support/interfaces-modules/transceiver-modules/products-device-support-tables-list.html>.

To see the transceiver specifications and installation information, see <http://www.cisco.com/c/en/us/support/interfaces-modules/transceiver-modules/products-installation-guides-list.html>.

RJ-45 Connectors

The RJ-45 connector connects Category 3, Category 5, Category 5e, Category 6, or Category 6A foil twisted-pair or unshielded twisted-pair cable from the external network to the following module interface connectors:

- Switch chassis
 - CONSOLE port
 - MGMT ETH port

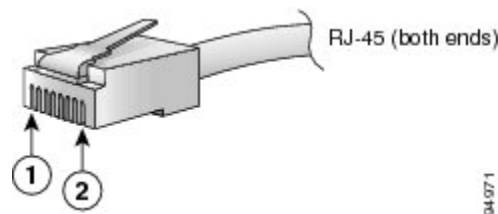


Caution

To comply with GR-1089 intrabuilding, lightning immunity requirements, you must use a foil twisted-pair (FTP) cable that is properly grounded at both ends.

The following figure shows the RJ-45 connector.

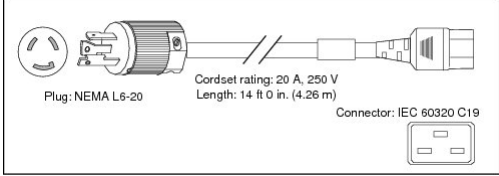
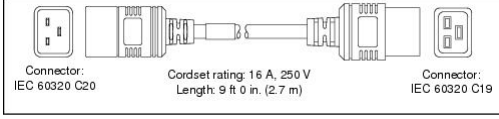
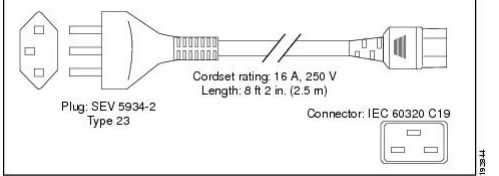
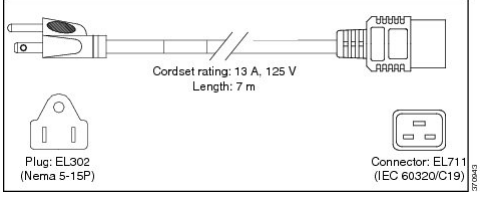
Figure 1: RJ-45 Connector



1	Pin 1	2	Pin 2
---	-------	---	-------

3-kW AC Power Cord Specifications

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
Australia and New Zealand	CAB-AC-16A-AUS	16A, 250 VAC	
Peoples Republic of China	CAB-AC-16A-CH	16A, 250 VAC	
Continental Europe	CAB-AC-2500W-EU	16A, 250 VAC	
International	CAB-AC-2500W-INT	16A, 250 VAC	
Israel	CAB-AC-2500W-ISRL	16A, 250 VAC	
Japan and North America (non locking) 200-240 VAC operation	CAB-AC-2500W-US1	16A, 250 VAC	

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
Japan and North America (locking) 200-240 VAC operation	CAB-AC-C6K-TWLK	16A, 250 VAC	 <p>Plug: NEMA L6-20</p> <p>Cordset rating: 20 A, 250 V Length: 14 ft 0 in. (4.26 m)</p> <p>Connector: IEC 60320 C19</p>
Power distribution unit (PDU)	CAB-C19-CBN	16A, 250 VAC	 <p>Connector: IEC 60320 C20</p> <p>Cordset rating: 16 A, 250 V Length: 9 ft 0 in. (2.7 m)</p> <p>Connector: IEC 60320 C19</p>
Switzerland	CAB-ACS-16	16A, 250 VAC	 <p>Plug: SEV 5934-2 Type 23</p> <p>Cordset rating: 16 A, 250 V Length: 8 ft 2 in. (2.5 m)</p> <p>Connector: IEC 60320 C19</p>
North America	CAB-L520P-C19-US	NEMA L5-20 to IEC-C19 6 feet (1.8 m)	 <p>Plug: EL302 (Nema 5-15P)</p> <p>Cordset rating: 13 A, 125 V Length: 7 m</p> <p>Connector: EL711 (IEC 60320/C19)</p>

