



System Specifications

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Environmental Specifications

Environment		Specification
Temperature	Ambient operating temperature	32 to 104°F (0 to 40°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	Height
Cisco Nexus 9516 chassis	17.5 inches (44.5 cm)	31.76 inches (80.67 cm) ¹	36.70 inches (93.41 cm) (21 RU)

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

Component	Weight per Unit	Quantity
Cisco Nexus 9516 Chassis (N9K-C9516)	192.0 lb (87.3 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 16
– 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)	
– 8-port 100-Gigabit QSFP+ I/O module (N9K-X9408PC-CFP2)	13.05 lb (5.92 kg)	
Fabric Modules	—	3 to 6
– Fabric-1 module (N9K-C9516-FM)	11.5 lb (5.2 kg)	
Fan Trays (N9K-C9516-FAN)	10.1 lb (4.6 kg)	3

Component	Weight per Unit	Quantity
Power Supplies	—	1 to 10
– 3-kW Standard AC Power Supply (N9K-PAC-3000W-B)	6.2 lb (2.8 kg)	
– 3-kW Universal AC/DC Power Supply (N9K-PUV-3000W-B)	5.9 lb (2.67 kg)	

Power Requirements for Switch Modules

To determine the number of power supplies required to operate all the modules in a switch, add together the maximum power amounts for each module in the switch, divide the sum by 3000 W, and if there is a fractional amount in the result, add 1 to the result. For $n+1$ redundancy, add one more power supply. For $n+n$ redundancy, double the number of power supplies and provision for a second power source.

To determine the typical consumption, add together the typical power amounts for each module in the switch.

If you order new power supplies, make sure that the new power supplies use the same type of power (AC or DC) as the rest of the power supplies in the same switch. Do not use a mix of AC and DC power sources for a switch.

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

Component	Quantity	Typical Power	Maximum Power
I/O Modules	1 to 16 (can mix types)	—	—
– 48-port 1-/10-Gigabit SFP+ plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9464PX)		300 W	360 W
– 48-port 1-/10-GBASE-T plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9464TX)		160 W	240 W
– 48-port 1-/10-GBASE-T plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9564TX)		450 W	540 W
– 48-port 1-/10-Gigabit SFP+ plus 4-port 40-Gigabit QSFP+ I/O module (N9K-X9564PX)		300 W	400 W
– 36-port 40-Gigabit QSFP+ I/O module (N9K-X9536PQ)		360 W	400 W
– 32-port 40-Gigabit QSFP+ I/O module (N9K-X9432PQ)		240 W	300 W
– 8-port 100-Gigabit CFP2 I/O module (N9K-X9408PC-CFP2)		310 W	432 W
Fabric Modules (N9K-C9516-FM)	3 to 6	330 W	504 W
Fan Tray (N9K-C9516-FAN)	3	330 W	450 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
	5	15000 W	12000 W	6000 W
	6	18000 W	15000 W	9000 W
	7	21000 W	18000 W	9000 W
	8	24000 W	21000 W	12000 W
	9	27000 W	24000 W	12000 W
	10	30000 W	27000 W	15000 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:

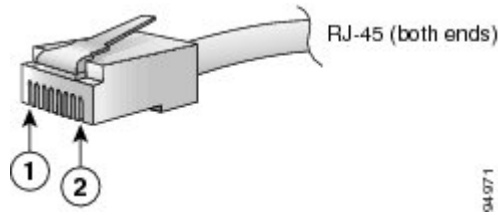
- Switch chassis
 - CONSOLE port
 - MGMT ETH port


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.

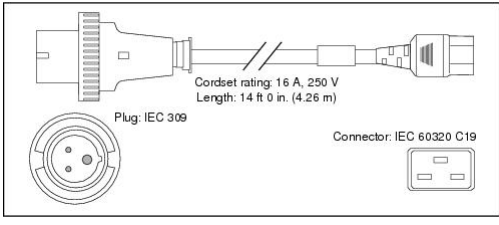
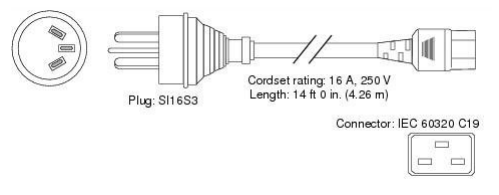
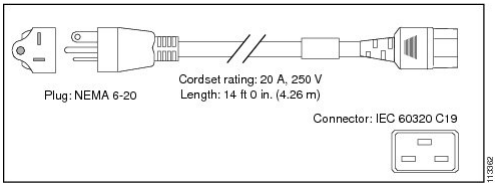
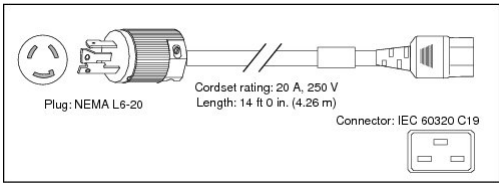
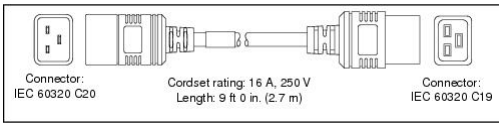
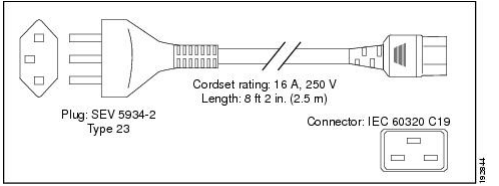
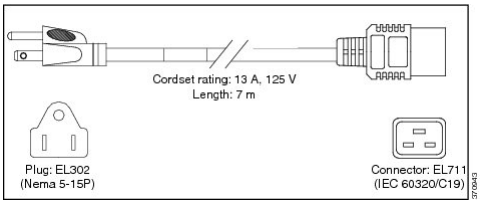
Figure 1: RJ-45 Connector



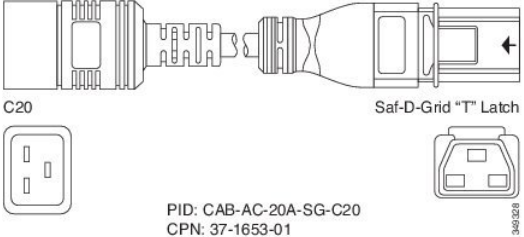
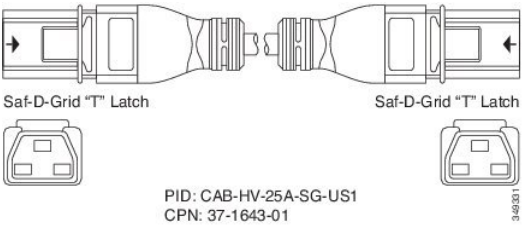
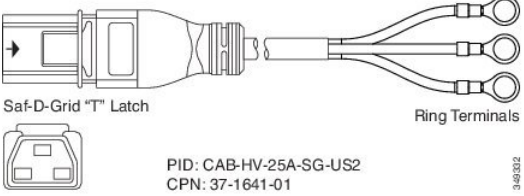
1	Pin 1	2	Pin 2
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3-kW Standard AC Power Supply Power Cord Specifications

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
Australia and New Zealand	CAB-AC-16A-AUS	16A, 250 VAC	<p>Plug: AU20S3 Cordset rating: 16 A, 250 V Length: 14 ft 0 in. (4.26 m) Connector: IEC 60320 C19</p>
Peoples Republic of China	CAB-AC-16A-CH	16A, 250 VAC	<p>Plug: GB16C Cordset rating: 16A, 250V Length: 14 ft 0 in. (4.26 m) Connector: IEC 60320-1 C19</p>
Continental Europe	CAB-AC-2500W-EU	16A, 250 VAC	<p>Plug: CEE 7/7 Cordset rating: 16 A, 250 V Length: 14 ft 0 in. (4.26 m) Connector: IEC 60320 C19</p>

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
International	CAB-AC-2500W-INT	16A, 250 VAC	 <p>Cordset rating: 16 A, 250 V Length: 14 ft 0 in. (4.26 m)</p> <p>Plug: IEC 309</p> <p>Connector: IEC 60320 C19</p>
Israel	CAB-AC-2500W-ISRL	16A, 250 VAC	 <p>Cordset rating: 16 A, 250 V Length: 14 ft 0 in. (4.26 m)</p> <p>Plug: SI16S3</p> <p>Connector: IEC 60320 C19</p>
Japan and North America (non locking) 200-240 VAC operation	CAB-AC-2500W-US1	16A, 250 VAC	 <p>Cordset rating: 20 A, 250 V Length: 14 ft 0 in. (4.26 m)</p> <p>Plug: NEMA 6-20</p> <p>Connector: IEC 60320 C19</p>
Japan and North America (locking) 200-240 VAC operation	CAB-AC-C6K-TWLK	16A, 250 VAC	 <p>Cordset rating: 20 A, 250 V Length: 14 ft 0 in. (4.26 m)</p> <p>Plug: NEMA L6-20</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>Cordset rating: 16 A, 250 V Length: 8 ft 2 in. (2.5 m)</p> <p>Plug: SEV 5934-2 Type 23</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>Cordset rating: 13 A, 125 V Length: 7 m</p> <p>Plug: EL302 (Nema 5-15P)</p> <p>Connector: EL711 (IEC 60320/C19)</p>

3-kW Universal AC/DC Power Supply Cables

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
NORTH AMERICA	CAB-AC-20A-SG-C20	250VAC 20A	 <p>C20</p> <p>Saf-D-Grid "T" Latch</p> <p>PID: CAB-AC-20A-SG-C20 CPN: 37-1653-01</p> <p>349328</p>
NORTH AMERICA	CAB-HV-25A-SG-US1	277VAC/ 240VDC/ 380VDC 25A	 <p>Saf-D-Grid "T" Latch</p> <p>Saf-D-Grid "T" Latch</p> <p>PID: CAB-HV-25A-SG-US1 CPN: 37-1643-01</p> <p>349331</p>
NORTH AMERICA	CAB-HV-25A-SG-US2	277VAC/ 240VDC/ 380VDC 25A	 <p>Saf-D-Grid "T" Latch</p> <p>Ring Terminals</p> <p>PID: CAB-HV-25A-SG-US2 CPN: 37-1641-01</p> <p>349332</p>