



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	Nonoperating	5 to 95%
	Operating	5 to 90%
Altitude	Operating	0 to 13,123 feet (0 to 4,000 meters)

Switch Dimensions

Chassis or Module	Width	Depth	Height
Cisco Nexus 9504 chassis	17.5 inches (44.5 cm)	33.15 inches (84.20 cm) for chassis and handles	12.25 inches (31.1 cm) (7 RU)
Supervisor modules	Without mounting brackets: 7.0 inches (17.78 cm) With mounting brackets: 8.0 inches (20.32 cm)	Inside chassis: 20.67 inches (52.5 cm) Ejector levers outside chassis: 0.75 inches (1.9 cm)	1.75 inches (4.4 cm)

Chassis or Module	Width	Depth	Height
System controller modules	Without mounting brackets: 6.81 inches (17.3 cm) With mounting brackets: 7.81 inches (19.84 cm)	Inside chassis: 10.74 inches (27.28 cm) Ejector levers outside chassis: 0.75 inches (1.9 cm)	1.42 inches (3.61 cm)
Line cards	17.0 inches (43.18 cm)	Inside chassis: 16.5 inches (41.91 cm) Ejector levers outside chassis: 2.5 inches (6.35 cm)	1.75 inches (4.4 cm)
Fabric modules	2.46 inches (6.25 cm)	11.7 inches (29.72 cm)	9.4 inches (23.88 cm)
Fan trays	5.05 inches (12.81 cm)	5.47 inches (13.9 cm)	Without mounting brackets: 9.0 inches (22.86 cm) With mounting brackets: 10.6 inches (26.93 cm)
Power supply	5.25 inches (13.33 cm)	Inside chassis: 17.75 inches (44.96 cm) Ejector levers outside chassis: 0.75 inches (1.9 cm)	1.75 inches (4.4 cm)

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

Component	Weight per Unit
Cisco Nexus 9504 Chassis (N9K-C9504)	84.0 lb (38.2 kg)
Supervisor Modules	—
– Supervisor A module (N9K-SUP-A)	4.84 lb (2.2 kg)
– Supervisor A+ module (N9K-SUP-A+)	5.2 lb (2.37 kg)
– Supervisor B module (N9K-SUP-B)	6.0 lb (2.72 kg)
– Supervisor B+ module (N9K-SUP-B+)	5.3 lb (2.39 kg)
System Controller Modules (N9K-SC-A)	1.9 lb (0.9 kg)
Line cards that the N9K-C9504-FM fabric modules support	—

Component	Weight per Unit
– 8-port 100-Gigabit Ethernet CFP2 line card (N9K-X9408PC-CFP2)	13.05 lb (5.92 kg)
– 32-port 40-Gigabit Ethernet QSFP+ line card (N9K-X9432PQ)	10.85 lb (4.92 kg)
– 36-port 40-Gigabit Ethernet QSFP+ line card (N9K-X9536PQ)	11.99 lb (5.44 kg)
– 36-port 40-Gigabit Ethernet QSFP+ aggregation line card (N9K-X9636PQ)	11.48 lb (5.2 kg)
– 48-port 1/10-GBASE-T and 4-port 40-Gigabit Ethernet QSFP+ line card (N9K-X9464TX)	10.01 lb (4.54 kg)
– 48-port 1/10-GBASE-T and 4-port 40-Gigabit Ethernet QSFP+ line card (N9K-X9464TX2)	10.01 lb (4.54 kg)
– 48-port 1/10-Gigabit Ethernet SFP+ and 4-port 40-Gigabit Ethernet QSFP+ line card (N9K-X9564PX)	11.48 lb (5.2 kg)
– 48-port 1/10-GBASE-T and 4-port 40-Gigabit Ethernet QSFP+ line card (N9K-X9564TX)	12.58 lb (5.7 kg)
Line cards that the N9K-C9504-FM-E fabric modules support	—
– 48-port 10/25-Gigabit Ethernet and 4-port 40/100-Gigabit Ethernet QSFP28 line card (N9K-X97160YC-EX)	12.75 lb (5.78 kg)
– 48-port 10-Gigabit Ethernet and 4-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9788TC-FX)	13.0 lb (5.9 kg)
– 36-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9736C-EX)	14.77 lb (6.7 kg)
– 36-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9736C-FX)	14.38 lb (6.5 kg)
– 36-port 40-Gigabit Ethernet QSFP28 line card (N9K-X9736Q-FX)	14.6 lb (6.62 kg)
– 32-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9732C-EX)	12.13 lb (5.5 kg)
– 32-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9732C-FX)	15.0 lb (6.8 kg)
Line cards that the N9K-C9504-FM-G fabric modules support	—
– 48-port 10/25-Gigabit Ethernet SFP28 and 4-port 40/100-Gigabit Ethernet QSFP28 line card (N9K-X97160YC-EX)	12.75 lb (5.78 kg)
– 32-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9732C-EX)	12.13 lb (5.5 kg)
– 36-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9736C-EX)	14.77 lb (6.7 kg)
– 36-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9732C-FX)	15 lb (6.8 kg)
– 36-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9736C-FX)	14.38 lb (6.5 kg)
– 48-port 1/100 BASE-T and 4-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9788TC-FX)	13.0 lb (5.9 kg)

Component	Weight per Unit
– 16-port 400-Gigabit Ethernet QSFP-DD line card (N9K-X9716D-GX)	15.2 lb (6.8 kg)
Line cards that the N9K-C9504-FM-S fabric modules support	—
– 32-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9432C-S)	12.3 lb (5.58 kg)
Line cards that the N9K-C9504-FM-R fabric modules support	—
– 36-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9636C-RX)	15.9 lb (7.2 kg)
– 36-port 100-Gigabit Ethernet QSFP28 line card (N9K-X9636C-R)	15.0 lb (6.8 kg)
– 36-port 40-Gigabit Ethernet QSFP+ line card (N9K-X9636Q-R)	12.43 lb (5.64 kg)
– 16-port 1/10-Gigabit SFP, 32-port 10/25-Gigabit Ethernet SFP, and 4-port 40/100-Gigabit Ethernet QSFP line card (N9K-X96136YC-R)	12.78 lb (5.8 kg)
Fabric Modules	—
– 40-Gigabit N9K-C9504-FM fabric module	5.76 lb (2.6 kg)
– 100-Gigabit N9K-C9504-FM-E fabric module	6.6 lb (2.98 kg)
– 100-Gigabit N9K-C9504-FM-S fabric module supporting -S line cards	6.2 lb (2.8 kg)
– 100-Gigabit N9K-C9504-FM-R fabric module supporting -R and -RX line cards	6.2 lb (2.8 kg)
– 400-Gigabit N9K-C9504-FM-G fabric module	7.78 lb (3.53 kg)
Fan Trays	—
– (N9K-C9504-FAN2)	7.6 lb (3.45 kg)
– (N9K-C9504-FAN)	6.4 lb (2.9 kg)
Power Supplies	—
– 3-kW Universal AC/DC Power Supply (N9K-PUV-3000W-B)	5.9 lb (2.67 kg)
– 3.15-kW Dual Input Universal AC/DC Power Supply (N9K-PUV2-3000W-B)	5.9 lb (2.67 kg)
– 3-kW DC Power Supply (N9K-PDC-3000W-B)	6.4 lb (2.9 kg)
– 3-kW AC Power Supply (N9K-PAC-3000W-B)	6.2 lb (2.8 kg)

Power Specifications

Power specifications include the specifications for each type of power supply module.

Power Requirements for Switch Modules

Determine the number of power supplies required to operate all the modules in a switch by adding the maximum power amounts for each module in the switch. Then divide the sum by 3000 W. 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 the typical power amounts for each module in the switch.

Make sure that any new power supplies use the same type of power (AC or DC) as the rest of the power supplies in the switch. Do not use a mix of AC and DC power sources for a switch.

Maximum Power Available to the Switch

The maximum power available for operations depends on the input power from your power source. Also, 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.

Power Inputs	Power Supplies	Combined Mode	$n+1$ Redundancy Mode	$n+n$ Redundancy Mode
1 input (220 V)	1	3000 W	—	—
	2	6000 W	3000 W	3000 W
	3	9000 W	6000 W	3000 W
	4	12,000 W	9000 W	6000 W

Power Supply Specifications

The following subtopics list the specifications for each power supply that this switch supports.

3000-W AC Power Supply Specifications

Property	Specification
Power	3000 W
Input Voltage	200 to 240 VAC
Frequency	50 to 60 Hz
Efficiency	90% or greater (20 to 100% load)
Redundancy Modes	Combined, $n+1$, and $n+n$
RoHS Compliance	Yes
Hot Swappable	Yes
Airflow Direction	Port-side intake airflow

3000-W Universal AC/DC Power Supply Specifications

Property	Specification
Power	3000 W
Input Voltage	200 to 277 VAC or 240 to 380 VDC or
Frequency	47 to 63 Hz
Efficiency	90% or greater (20 to 100% load)
Redundancy Modes	Combined, $n+1$, and $n+n$
RoHS Compliance	Yes
Hot Swappable	Yes
Airflow Direction	Port-side intake airflow

3000-W Dual Input Universal AC/DC Power Supply Specifications

Property	Specification
Power	3150 W
Input Voltage	180 to 305 VAC or 192 to 400 VDC or
Frequency	50 to 60 Hz
Efficiency	90% or greater (20 to 100% load)
Redundancy Modes	Combined, $n+1$, and $n+n$
RoHS Compliance	Yes
Hot Swappable	Yes
Airflow Direction	Port-side intake airflow

3000-W DC Power Supply Specifications

Property	Specification
Power	3000 W
Input Voltage	-48 to -60 VDC
Frequency	-
Efficiency	90% or greater (20 to 100% load)

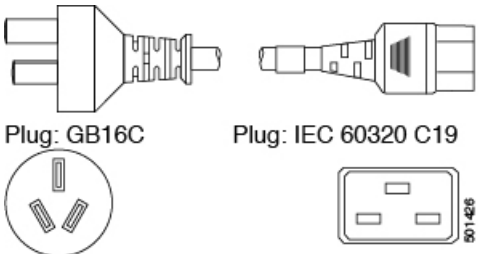
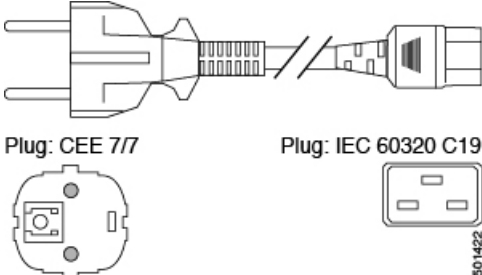
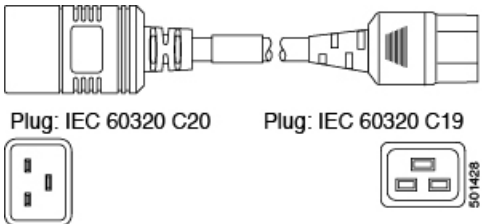
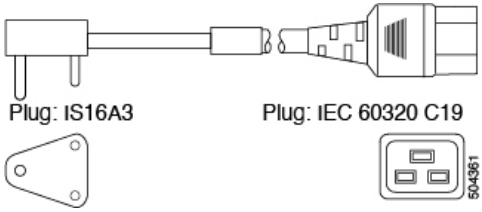
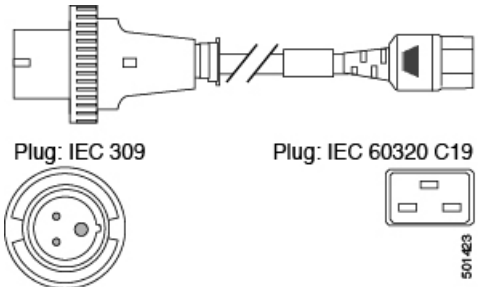
Property	Specification
Redundancy Modes	Combined, $n+1$, and $n+n$
RoHS Compliance	Yes
Hot Swappable	Yes
Airflow Direction	Port-side intake airflow

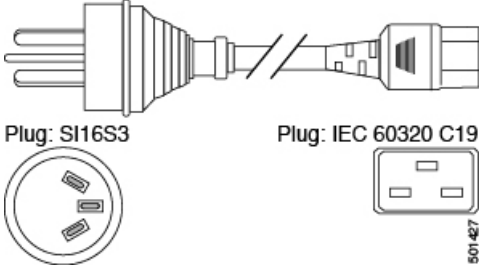
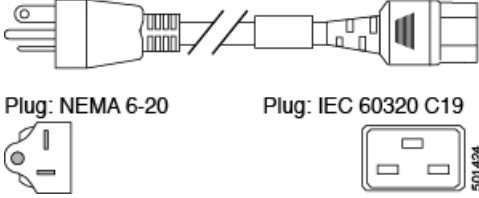
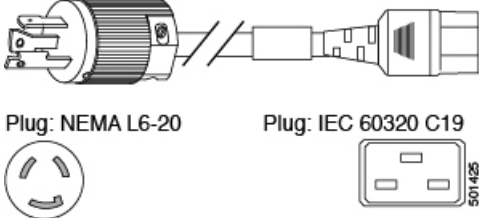
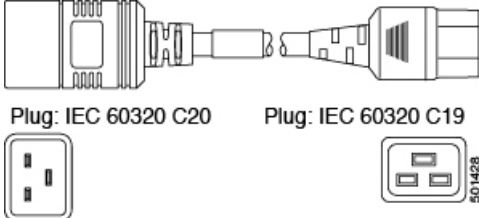
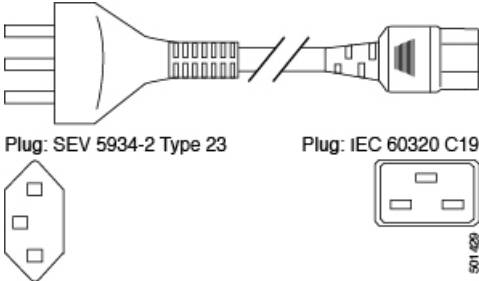
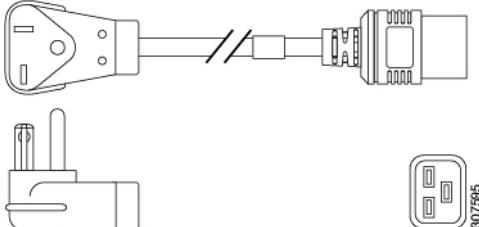
Power Cable Specifications

The following subtopics list the specifications for supported power cables.

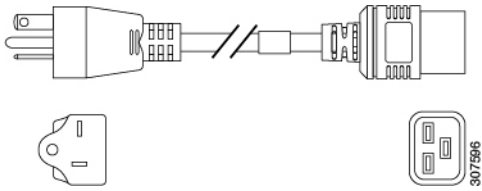
3-kW AC Power Cable Specifications

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
Argentina	CAB-9K16A-ARG	16 A, 250 VAC	
Brazil	CAB-9K16A-BRZ	16 A, 250 VAC	
Korea	CAB-9K16A-KOR	16 A, 250 VAC	
South Africa	CAB-9K16A-SA	16 A, 250 VAC	TBD
Australia and New Zealand	CAB-AC-16A-AUS	16 A, 250 VAC	<p>Plug: AU20S3 Plug: IEC 60320 C-19</p>

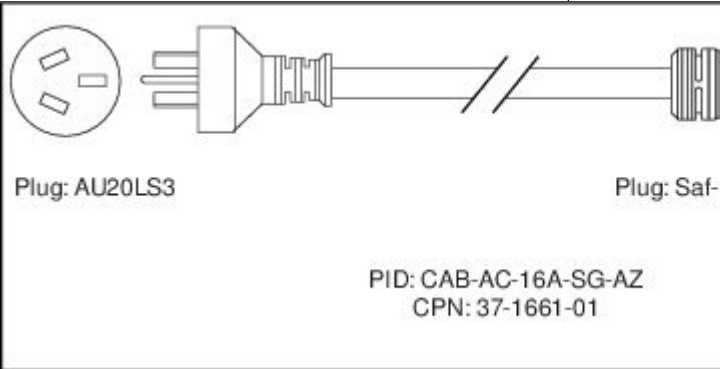
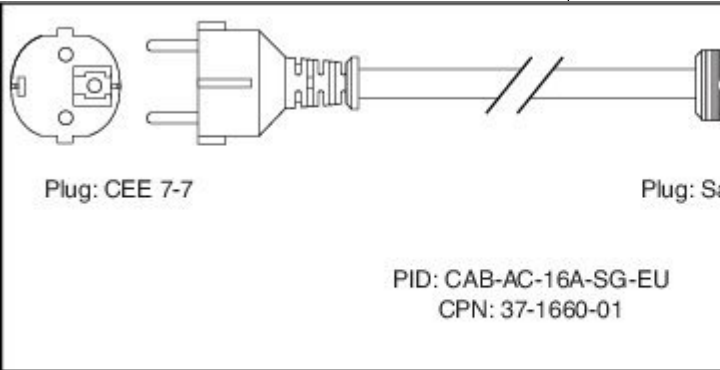
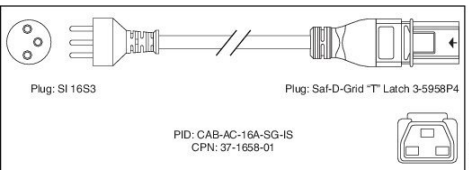
Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
Peoples Republic of China	CAB-AC-16A-CH	16 A, 250 VAC	 <p>Plug: GB16C Plug: IEC 60320 C19</p>
Continental Europe	CAB-AC-2500W-EU	16 A, 250 VAC	 <p>Plug: CEE 7/7 Plug: IEC 60320 C19</p>
India	CAB-C19-C20-IND	16 A, 250 VAC	 <p>Plug: IEC 60320 C20 Plug: IEC 60320 C19</p>
India	PWR-CORD10-IND	16 A, 250 VAC	 <p>Plug: IS16A3 Plug: IEC 60320 C19</p>
International	CAB-AC-2500W-INT	16 A, 250 VAC	 <p>Plug: IEC 309 Plug: IEC 60320 C19</p>

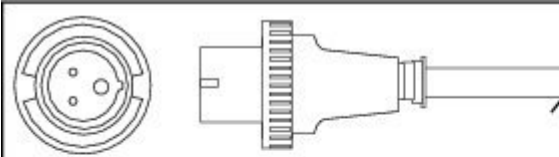
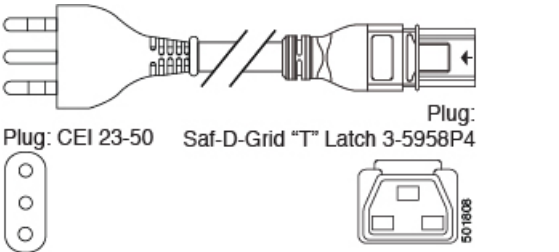
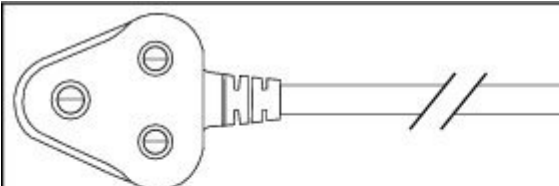
Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
Israel	CAB-AC-2500W-ISRL	16 A, 250 VAC	 <p>Plug: SI16S3 Plug: IEC 60320 C19</p> <p>501427</p>
Japan and North America (nonlocking) 200-240 VAC operation	CAB-AC-2500W-US1	16 A, 250 VAC	 <p>Plug: NEMA 6-20 Plug: IEC 60320 C19</p> <p>501424</p>
Japan and North America (locking) 200-240 VAC operation	CAB-AC-C6K-TWLK	16 A, 250 VAC	 <p>Plug: NEMA L6-20 Plug: IEC 60320 C19</p> <p>501425</p>
Power distribution unit (PDU)	CAB-C19-CBN	16 A, 250 VAC	 <p>Plug: IEC 60320 C20 Plug: IEC 60320 C19</p> <p>501428</p>
Switzerland	CAB-ACS-16	16 A, 250 VAC	 <p>Plug: SEV 5934-2 Type 23 Plug: IEC 60320 C19</p> <p>501429</p>
Taiwan	CAB-AC-C19-TW	16 A, 250 VAC (IEC 60320 C19 to EL 218)	 <p>307595</p>

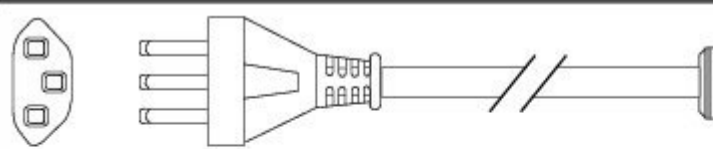
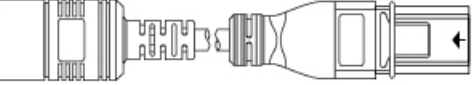





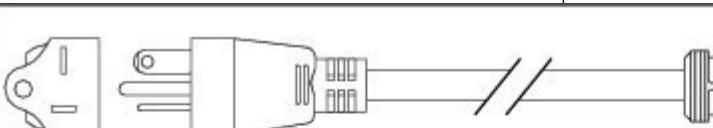
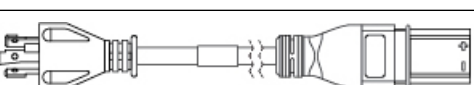


3-kW Universal AC/DC and 3-kW Dual Input Universal AC/DC Power Cable Specifications

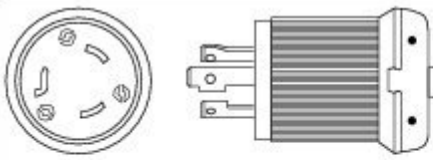
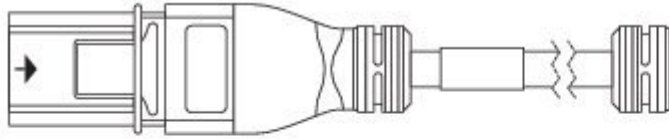

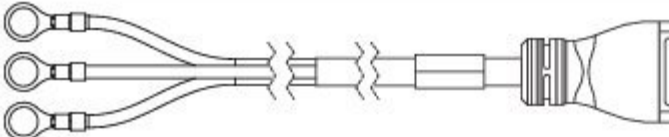
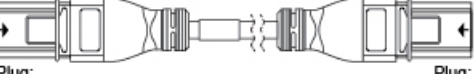


Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
US	CAB-AC-STRT-C19US	16 A, 250 VAC (straight blade NEMA 6-20 plug)	
All except Argentina, Brazil, and Japan	NO-PWR-CORD	No power cord is included with order.	N.A.

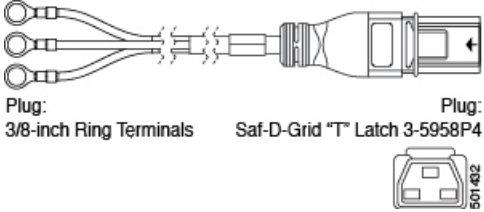
3-kW Universal AC/DC and 3-kW Dual Input Universal AC/DC Power Cable Specifications

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
Australia and New Zealand	CAB-AC-16A-SG-AZ	16 A, 250 VAC (AU20LS3/Saf-D-Grid)	 <p>Plug: AU20LS3</p> <p>Plug: Saf-D-Grid</p> <p>PID: CAB-AC-16A-SG-AZ CPN: 37-1661-01</p>
	CAB-AC-16A-SG-EU	16A, 250 VAC	 <p>Plug: CEE 7-7</p> <p>Plug: Saf-D-Grid</p> <p>PID: CAB-AC-16A-SG-EU CPN: 37-1660-01</p>
Israel	CAB-AC-16A-SG-IS	16 A, 250 VAC	 <p>Plug: SI 16S3</p> <p>Plug: Saf-D-Grid "T" Latch 3-5958P4</p> <p>PID: CAB-AC-16A-SG-IS CPN: 37-1658-01</p>

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
International/UK	CAB-AC-16A-SG-IN	16 A, 250 VAC	 <p data-bbox="1003 472 1175 506">Plug: IEC60309</p> <p data-bbox="1372 573 1620 632">PID: CAB-AC-16A-SG-I CPN: 37-1659-01</p>
Italy	CAB-AC-16A-SG-IT	16 A, 250 VAC	 <p data-bbox="943 888 1414 921">Plug: CEI 23-50 Saf-D-Grid "T" Latch 3-5958P4</p> <p data-bbox="1365 867 1414 900">Plug:</p> <p data-bbox="1393 961 1414 1010">501808</p>
South Africa	CAB-AC-16A-SG-SA	16 A, 250 VAC	 <p data-bbox="1019 1255 1110 1289">Plug: EL</p> <p data-bbox="1498 1255 1620 1289">Plug: Saf-D-</p> <p data-bbox="1252 1346 1533 1404">PID: CAB-AC-16A-SG-SA CPN: 37-1647-01</p>

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
Switzerland	CAB-AC-16A-SG-SW	16 A, 250 VAC	 <p data-bbox="938 474 1133 506">Plug: SEV 5934-2</p> <p data-bbox="1549 474 1620 506">Plug: S</p> <p data-bbox="1297 564 1581 621">PID: CAB-AC-16A-SG-SW CPN: 37-1654-01</p>
North America	CAB-AC-20A-SG-C20	250 VAC 20 A	 <p data-bbox="902 779 1024 806">Plug: IEC C20</p> <p data-bbox="1057 779 1373 806">Plug: Saf-D-Grid "T" Latch 3-5958P4</p>  
North America	CAB-AC-20A-SG-US	16 A, 250 VAC	 <p data-bbox="902 1010 1024 1062">Plug: NEMA 5-20P</p> <p data-bbox="1073 1031 1373 1058">Saf-D-Grid "T" Latch 3-5958P4</p> <p data-bbox="1325 1010 1373 1037">Plug:</p>  
North America (non locking) 200-240 VAC operation	CAB-AC-20A-SG-US2	250 VAC 20 A	 <p data-bbox="935 1352 1122 1379">Plug: NEMA 6-20</p> <p data-bbox="1533 1352 1620 1379">Plug: Sa</p> <p data-bbox="1276 1442 1576 1499">PID: CAB-AC-20A-SG-US2 CPN: 37-1657-01</p>
North America	CAB-AC-20A-SG-US3	250 VAC 20 A	 <p data-bbox="951 1661 1317 1688">250 VAC 20A, twist lock, NEMA L6-20/Saf-D-Grid</p>  

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
North America 277 VAC operation	CAB-AC-20A-SG-US4	277 VAC 20 A	 <p>Plug: NEMA L7-20P</p> <p>PID: CAB-AC-20A-SG-US CPN: 37-1645-1</p>
International, Saf-D-Grid/Saf-D-Grid	CAB-HV-25A-SG-IN1	400 VAC 20 A	 <p>Plug: Saf-D-Grid "T" Latch 3-5958P4 Plug: Saf-D-Grid</p>  <p>PID: CAB-HV-25A-SG-IN1 CPN: 37-1642-01</p>
International, Ring Terminal source plug, Ring Terminal/Saf-D-Grid	CAB-HV-25A-SG-IN2	20A, 300 VAC/500 VDC	 <p>Plug: 3/8-inch Ring Terminals Plug: Saf-D-Grid "T" Latch</p> <p>PID: CAB-HV-25A-SG-IN2 CPN: 37-1640-01</p>
North America	CAB-HV-25A-SG-US1	277 VAC/ 240 VDC/ 380 VDC 25 A	 <p>Plug: Saf-D-Grid "T" Latch 3-5958P4 Plug: Saf-D-Grid "T" Latch 3-5958P4</p>  

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Illustration
North America	CAB-HV-25A-SG-US2	277 VAC/ 240 VDC/ 380 VDC 25 A	 <p>Plug: 3/8-inch Ring Terminals</p> <p>Plug: Saf-D-Grid "T" Latch 3-5958P4</p> <p>501482</p>
All except Argentina, Brazil, and Japan	NO-PWR-CORD	No power cord included with order	N.A.

3-kW DC Power Supply Power Cord Specifications

Each 3-kW DC power supply requires four customer-supplied power cables (two negative cables and two positive cables). We recommend using six gauge cables. Cisco supplies 6-gauge lugs for connections to the power supply. You supply the connectors that are required to connect the cables to the DC power source.