Technical Specifications

Switch Specifications

The following table lists the environmental specifications for the switch:

Table 1: Environmental Specifications

Description	Specification
Temperature, ambient operating	32 to 104°F (0 to 40°C)
Temperature, ambient nonoperating and storage	-40 to 158°F (-40 to 70°C)
Humidity (RH), ambient (noncondensing) operating	10 to 90%
Humidity (RH), ambient (noncondensing) nonoperating and storage	10 to 95%
Altitude, operating	-197 to 6500 ft (-60 to 2000 m)

The following table lists the physical specifications for the switch:

Table 2: Physical Specifications

Description	Specification
Dimensions (HxWxD)	1.72 x 17.3 x 18 in. (4.37 x 43.94 x 45.72 cm) excluding PSU and fan module handles
Rack Space	Chassis requires 1 RU (1.75 in. or 4.45 cm)
Weight	21.8 lb (9.9 kg) unpopulated
Fan Dimensions (WxH)	1.575 x 1.575 in. (4.0 x 4.0 cm)

Description	Specification
Fan Slots Opening Dimensions (WxH)	1.614 x 1.602 in. (4.09 x 4.06 cm)
Power Supply	500-W • 500-W AC, port-side exhaust variant (up to 2 per switch) • 500-W AC, port-side intake variant (up to 2 per switch) • AC input—100 to 240 V AC (10% range) • Frequency—50 to 60 Hz (nominal) • 80 PLUS Platinum certified 1200-W • 1200W AC/ HVAC/ HVDC Bidirectional airflow (2 per switch) • Part Number: DS-CAC-1200W • AC input: 90V to 305V • DC input: 192V to 400V • Frequency – 50 to 60 Hz (nominal) • 80 PLUS Platinum certified
Airflow	• Back to front (toward ports) using port-side exhaust fans • Front to back (into ports) using port-side intake fans • 50 CFM (0.02 m^3/s) through system fan assembly at 25°C • 100 CFM (0.04 m^3/s) maximum We recommend that you maintain a minimum air space of 2.5 in. (6.4 cm) between walls and chassis air vents and a minimum horizontal separation of 6 in. (15.2 cm) between two chassis to prevent overheating. To prevent the switch from overheating and shutting down, you must position the air intake for the switch in a cold aisle.

Power Supply Requirement Specifications

The following table provides a sample calculation of power for the switch AC power supply:

Table 3: Power Dissipation for AC Power Supply

Power Mode	PSU	Traffic Rate	Temperature	Voltage	Optics Speed	Optics Number	Fan Trays	Power at 110 V/60 Hz (Watts)	Power at 220 V/50 Hz (Watts)
Typical	2	50%	25°C	Nominal	32G-SW	24	4	211	205
						48	4	247	240
					64G-SW	24	4	235	228
						48	4	295	286
Max	2	100%	25°C		32G-SW	24	4	213	207
					32G-SW	48	4	248	241
					64G-SW	24	4	236	229
					64G-SW	48	4	301	292
			40°C		32G-SW	48	4	286	278
					64G-SW	48	4	323	314

Table 4: Power Supply Fuse Information

PID	Fuse Type	Fuse Rating (Amp)	I2t (Amps^{2}seconds)	Fuse Melting Time
DS-CAC-500W-I	Time-lag	15	534	4 min@15 A 2 min@30 A
DS-CAC-500W-E			660	30 min@22.5 A 0.15 s@50 A

Component Power Requirements and Heat Dissipation

Consider heat dissipation when sizing the air-conditioning requirements for an installation. The power and heat associated with switch varies based on the following considerations:

- The environment (temperature) outside the chassis
- Internal chassis temperature

- Any hardware component failure in the chassis
- Average switching traffic levels

The following table lists the power requirements and heat dissipation for the components of the switch:

Table 5: Power Requirements (maximum) and Heat Dissipation for the Switch

Module Type/Product Number	Power Required (Watts)	Heat Dissipation (BTU/hr)	Input Current	
			110 VAC (Amps)	220 VAC (Amps)
Cisco MDS 9148V-K9 64-Gbps 48-port Switch	314 (Max)	986	2.94	1.42