Technical Specifications

Switch Specifications

The following table lists the environmental specifications for the Cisco MDS 9148T switch:

Table 1: Environmental Specifications for the Cisco MDS 9148T Switch

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 Cisco MDS 9148T switch.

Table 2: Physical Specifications for the Cisco MDS 9148T Switch

Description	Specification
Dimensions (HxWxD)	1.72 x 17.3 x 22.3 in. (4.37 x 43.94 x 56.64 cm) excluding PSU and fan module handles
Rack Space	Chassis requires 1 RU (1.75 in. or 4.45 cm)
Weight	18.73 lb (8.5 kg)
Fan Dimensions (WxH)	1.575 x 1.575 in. (4.0 x 4.0 cm)
Fan Slots Opening Dimensions (WxH)	1.614 x 1.602 in. (4.09 x 4.06 cm)

Description	Specification
Power Supply	• 650-W AC, port-side exhaust variant (up to 2 per switch) • 650-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)
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.

Power Specifications

General Power Supply Specifications

The following table lists the specifications for the Cisco MDS 9148T switch AC power supply:

Table 3: Power Supply Specifications

AC Input Power	Specification
AC input voltage	100 to 240 VAC
AC input frequency	Nominal = 50 to 60 Hz
Power supply output capacity	650 W
Output holdup time	20 ms

Power Supply Requirement Specifications

The following table provides a sample calculation of power for the Cisco MDS 9148T switch AC power supply:

Table 4: Power Dissipation for AC Power Supply

Power Mode	PSU	Traffic Rate	Temperature	Voltage	Optics Speed	Optics Number	Fan Trays	Power at 110V/60HZ (Watts)	Power at 220V/50HZ (Watts)
Typical	2	50%	25°C	Nominal	32G-SW	24	4	257	251
						48		305	297
Max	2	100%	25°C	Nominal	32G-SW	24	4	267	260
					32G-LW	48		323	315
			40°C		32G-SW			322	315
			55°C		32G-LW			374	348
				Nominal + 5%				403	385
Power consumption at 25°C with 48 ports and SW optics at 100% load	2	100%	25°C	Nominal	32G-SW	48	4	267	260
Power consumption at 25°C with 48 ports populated with SW optics but idle (no traffic)	2	0%	25°C	Nominal	32G-SW	48	4	267	260

Table 5: Power Supply Fuse Information

Part Number	PID	Type	Fuse Rated AMP	I2T	Fuse Melting Time
341-100716-02	DS-CAC-650W-I=	Fast acting	12.5 A	400	1000 s@20 A, 0.1 s@56 A
341-100717-02	DS-CAC-650W-E=				

Component Power Requirements and Heat Dissipation

Consider heat dissipation when sizing the air-conditioning requirements for an installation. The power and heat associated with a Cisco MDS 9148T 32-Gbps 48-Port Fibre Channel 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 Cisco MDS 9148T 32-Gbps 48-Port Fibre Channel Switch.

Table 6: Power Requirements and Heat Dissipation for the Cisco MDS 9148T 32-Gbps 48-Port Fibre Channel Switch

Module Type/Product Number	Power Required (watts)	Heat Dissipation (BTU/hr)	Input Current		
			85VAC(amps)	110VAC(amps)	220VAC(amps)
Cisco MDS 9148T 32-Gbps 48-Port Fibre Channel Switch	290 maximum	989	3.41	2.63	1.31