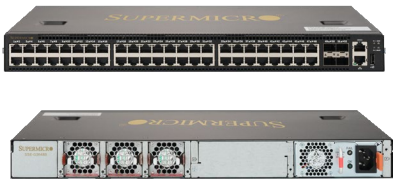


ONIE-Based Top-of-Rack Ethernet Switches

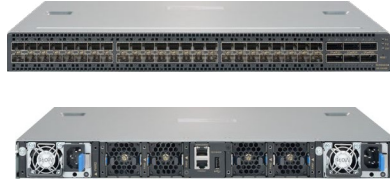
Technical Specifications

Supermicro embraces *Open Networking* with its line of “bare metal” Ethernet switches. Open Networking provides the ability to maximize efficient and flexible use of valuable data center resources while providing an ideal platform for managing and maintaining those resources in a manner in tune with organizational needs. Hardware can be selected in a “best of breed” approach to match with the Operating System of choice enabled by the *Open Networking Install Environment* (ONIE). A range of port speeds from 1 Gbps to 100 Gbps is fully supported by Supermicro ONIE-based switches.

1G RJ45 and 10G SFP+



10G SFP+ and 40G QSFP+



100/40G QSFP28



	SSE-G3648B(R)	SSE-X3648S(R)	SSE-C3632S(R)
Port Specifications	<ul style="list-style-type: none"> 48 x One-Gigabit Ethernet RJ45 ports 4 x Ten-Gigabit Ethernet SFP+ ports RJ45 (for console cable) RJ45 One-Gigabit Ethernet management port USB 	<ul style="list-style-type: none"> 48 x Ten-Gigabit Ethernet ports – SFP+ 6 x Forty-Gigabit Ethernet ports – QSFP+ RJ45 (for console cable) RJ45 One-Gigabit Ethernet Management Port USB 	<ul style="list-style-type: none"> 32 x QSFP28 Ethernet ports (100G or 40G) 1 x Ten-Gigabit Ethernet SFP+ port RJ45 (for console cable) RJ45 One-Gigabit Ethernet Management Port USB
General	<ul style="list-style-type: none"> Bare metal - ONIE Pre-installed Supermicro SMIS Operating System Optionally Available 1U form factor for flexible installation Mounting Flanges (included) 	<ul style="list-style-type: none"> Bare metal - ONIE Pre-installed 1U form factor for flexible installation Mounting Rails (included) 	<ul style="list-style-type: none"> Bare metal - ONIE Pre-installed 1U form factor for flexible installation Mounting rails (included)
Data Forwarding	<ul style="list-style-type: none"> Switching Capacity – 176 Gbps Broadcom Helix4 Switch Chip Wire-speed Layer 3 Routing 1:1 Non-blocking connectivity 	<ul style="list-style-type: none"> Switching Capacity - 1440 Gbps Broadcom Trident II Switch Chip Wire-speed Layer 3 Routing 1:1 Non-blocking connectivity 	<ul style="list-style-type: none"> Full-Duplex 3.2Tbps Switching Capacity Broadcom Tomahawk Switch Chip Wire-speed Layer 3 Routing 1:1 Non-blocking connectivity
Control Plane	<ul style="list-style-type: none"> Intel Rangeley CPU 2 GB DRAM 8 GB SSD ONIE Cumulus Linux Ready Supermicro SMIS Ready 	<ul style="list-style-type: none"> Intel Rangeley CPU 4G DRAM 16G SSD ONIE Cumulus Linux Ready 	<ul style="list-style-type: none"> Intel Rangeley CPU 4G DRAM 16G SSD ONIE Cumulus Linux Ready
Power and Cooling	<ul style="list-style-type: none"> Hot-pluggable 200W power supply Optional second hot-pluggable power supply for redundancy AC Input: 100-127/200-240 V, 50/60 Hz Power Consumption: < 85.2 Watts Regular and Reverse Airflow Models 	<ul style="list-style-type: none"> Redundant, hot-pluggable, 460W power supplies AC Input: 100-127/200-240 V, 50/60 Hz Power Consumption: 305 Watts Regular and Reverse Airflow Models 	<ul style="list-style-type: none"> Redundant, hot-pluggable, 800W power supplies AC Input: 100-127/200-240 V, 50/60 Hz Power Consumption: 650 Watts Regular and Reverse Airflow Models
Weight	Net weight: 8.18 kg (with 2 PSUs)	Net weight: 10.13 kg (22.29 lb with 2 PSUs)	Net weight: 10.18 kg (22.29 lb with 2 PSUs)
Dimensions (WxDxH)	434 x 320 x 44 mm (17.1 x 11.2 x 1.73 inches)	434 x 550 x 44 mm (17.1 x 21.6 x 1.73 inches)	434x 520 x 44 mm (17.1 x 20.47 x 1.73 inches)
Operating Environment	<ul style="list-style-type: none"> Temperature: Operating 0°C to 45°C (32°F to 113°F) Humidity - Operating: 5% to 95% (non-condensing) 	<ul style="list-style-type: none"> Temperature: Operating 0°C to 40°C (32°F to 104°F) Humidity - Operating: 5% to 95% (non-condensing) 	<ul style="list-style-type: none"> Temperature: Operating 0°C to 40°C (32°F to 104°F) Humidity - Operating: 5% to 95% (non-condensing)

Model	SMIS Compatible	Cumulus Linux Compatible	Software Ordering Part Number	
			SMIS	Cumulus
SSE-G3648B(R)	YES	YES	SFT-SMCPL1G Bundle: SSE-G3648B-SMCPL1G-1P (SMIS installed, single PS forward airflow) SSE-G3648B-SMCPL1G-2P (SMIS installed, dual PS, forward airflow) SSE-G3648BR-SMCPL1G-1P (SMIS installed, single PS, reverse airflow) SSE-G3648BR-SMCPL1G-2P (SMIS installed, dual PS, reverse airflow)	SFT-CLSNWPL-1G-3Y SFT-CLSNWEXT-1G1Y (1-year extension of support)
SSE-X3648S(R)	NO	YES	-	SFT-CLSMWPL-10G-3Y SFT-CLSNWEXT-10G1Y (1-year extension of support)
SSE-C3632S(R)	NO	YES	-	SFT-CLSNWPL-100G-3Y SFT-CLSNWEXT-100G1Y (1-year extension of support)

SSE-G3648B(R) Ordering Options		1/10G Ethernet Switch - Bundled Options	
PWS-FRU-G3648-1F	Second (for redundancy) power supply for SSE-G3648B Ethernet Switch. Forward Airflow	Customers may now order the SSE-G3648B or the SSE-G3648BR switch with Supermicro's SMIS network operating system pre-installed. They also have a choice of having a single power supply or of having a second redundant power supply installed.	
PWS-FRU-G3648-1R	Second (for redundancy) power supply for SSE-G3648BR Ethernet Switch. Reverse Airflow	SSE-G3648B-SMCPL1G-1P	SSE-G3648B switch with SMIS installed. Regular air flow (front to rear). Single Power Supply
		SSE-G3648B-SMCPL1G-2P	SSE-G3648B switch with SMIS installed. Regular air flow (front to rear). Dual Power Supplies
		SSE-G3648BR-SMCPL1G-1P	SSE-G3648BR switch with SMIS installed. Reverse air flow (rear to front). Single Power Supply
		SSE-G3648BR-SMCPL1G-2P	SSE-G3648BR switch with SMIS installed. Reverse air flow (rear to front). Dual Power Supplies



ONIE-Based Top-of-Rack Ethernet Switches

High Speed Direct Attach Copper Cables

Part Number	Description
CBL-NTWK-0347	Twinax copper cable, 1.0M, 10GbE SFP+ TO SFP+
CBL-0456L	Twinax copper cable, 2.0M, 10GbE SFP+ TO SFP+
CBL-NTWK-0456	Twinax copper cable, 2.0M, 10GbE SFP+ TO SFP+
CBL-0348L	Twinax copper cable, 3.0M, 10GbE SFP+ TO SFP+
CBL-0349L	Twinax copper cable, 5.0M, 10GbE SFP+ TO SFP+
CBL-NTWK-0944-MS28C10M	Twinax copper cable, 1.0M 25GbE, SFP28 to SFP28
CBL-NTWK-0944-MS28C15M	Twinax copper cable, 1.5M 25GbE, SFP28 to SFP28
CBL-NTWK-0944-MS28C20M	Twinax copper cable, 2.0M 25GbE, SFP28 to SFP28
CBL-NTWK-0944-MS28C25M	Twinax copper cable, 2.5M 25GbE, SFP28 to SFP28
CBL-NTWK-0944-MS28C30M	Twinax copper cable, 3.0M 25GbE, SFP28 to SFP28
CBL-NTWK-0325-02	Twinax copper cable, 2.0M, 40 GbE QSFP+ to QSFP+
CBL-NTWK-0417-01	Twinax copper cable, 1.0M, 40 GbE QSFP+ to QSFP+
CBL-NTWK-0422-01	Twinax copper cable, 5.0M, 40 GbE QSFP+ to QSFP+
CBL-NTWK-0446-01	Twinax copper cable, 3.0M, 40 GbE QSFP+ to QSFP+
CBL-NTWK-0942-MQ28C05M	Twinax copper cable, 0.5M100GbE,QSFP28 to QSFP28
CBL-NTWK-0944-MS28C05M	Twinax copper cable, 0.5M100GbE,QSFP28 to QSFP28
CBL-NTWK-0942-MQ28C10M	Twinax copper cable, 1.0M100GbE,QSFP28 to QSFP28
CBL-NTWK-0943-SQ28C10M	Twinax copper cable, 1.0M100GbE,QSFP28 to QSFP28
CBL-NTWK-0942-MQ28C15M	Twinax copper cable, 1.5M100GbE,QSFP28 to QSFP28
CBL-NTWK-0942-MQ28C20M	Twinax copper cable, 2.0M100GbE,QSFP28 to QSFP28
CBL-NTWK-0942-MQ28C25M	Twinax copper cable, 2.5M100GbE,QSFP28 to QSFP28
CBL-NTWK-0942-MQ28C30M	Twinax copper cable, 3.0M100GbE,QSFP28 to QSFP28

Splitter Cables

Part Number	Description
CBL-NTWK-0719	Twinax copper cable, 1.0M,40GbE/QSFP+ to 4x 10GbE/ SFP+, 25AWG
CBL-NTWK-0720	Twinax copper cable, 3.0M,40GbE/QSFP+ to 4x 10GbE/ SFP+, 30AWG
CBL-NTWK-0721	Twinax copper cable, 5.0M,40GbE/QSFP+ to 4x 10GbE/ SFP+, 25AWG
CBL-NTWK-0988-Q28M1	Twinax copper cable,1.0M,100GbE/QSFP28 to 4x 25GbE/ SFP28, 30AWG
CBL-NTWK-0932-Q452M	Twinax copper cable, 2.0M,100GbE/QSFP28 to 4x 25GbE/ SFP28,25AWG
CBL-NTWK-0988-Q28M3	Twinax copper cable,3.0M,100GbE/QSFP28 to 4x 25GbE/ SFP28,30AWG
CBL-NTWK-0988-QS28C30M-2	Twinax copper cable,3.0M,100GbE/QSFP28 to 4x 25GbE/ SFP28,25AWG
CBL-NTWK-0988-Q28M5	Twinax copper cable,5.0M,100GbE/QSFP28 to 4x 25GbE/ SFP28,26AWG

Transceivers

Part Number	Description
AOC-E10GSFSPSR	SFP+ Transceiver for use with 10GbE fiber cable connections, 850nm, MMF, LC
AOM-AQS-107-B0C2-CX	SFP+ to RJ45 Interface Converter
AOM-SFP28-25GbE-SR-1-MLN	SFP28 Transceiver for use with 25GbE fiber cable connections, 850nm, MMF, LC
AOM-TQSFP-79EQDZ-AVG	QSFP+ Transceiver for use with 40GbE fiber cable connections, 850nm, MMF, LC
TRX-100GbE-SR4-FIN	QSFP28 Transceiver for use with 100GbE fiber cable connections, 850nm, MMF, LC

The above lists of compatible cables and transceivers sold by Supermicro are accurate as of the time of this printing. The latest list can be found on our website: www.supermicro.com. In general, our Ethernet switches can operate with the appropriate cable or transceiver from any reputable supplier. A more extensive list of cables validated by Cumulus Networks for operation with Cumulus Linux is available on their website at <https://support.cumulusnetworks.com>. If you require a particular one not on this list and would like for us to validate it before making a purchase, please advise your Supermicro sales representative. We will be happy to arrange compatibility testing.

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