

Supermicro SSE-C4632 100G Ethernet Switch

The Premier 100G Leaf and Spine Solution with Deep Network Visibility for Data Center Fabrics



Key Advantages for Data Center Applications:

- The most optimized ethernet solution with leading low latency for Datacenter and Enterprise Industry in 1RU form factor
- Open Network OS supported system to maximize flexibility with Supermicro Enterprise Advanced SONiC OS
- High density, high efficiency, multi rate 100G/50G/40G/25G/10G switching through either direct or breakout cables in ToR application access with server/storage data center environments
- Supports multiple interface configurations: 32x100/40GbE, 64x50GbE, or 128x25/10GbE
- 3.2Tbps switch capacity with 32MB memory packet buffers
- Support AC and DC PSU options with air cooling SKUs

High-performance Switching

The Supermicro SSE-C4632 is a next-generation 32-port 100GbE switch, delivering non-blocking performance with 3.2 Tbps switching capacity. Housed in a compact 1RU form factor, it is ideally suited for data center leaf and spine deployments and includes proven Layer 2 and Layer 3 capabilities.

Various Speed Options for Deployment

The SSE-C4632 can operate at a variety of speeds such as 32x100GbE QSFP28 or 32x40GbE QSFP+ natively, or 128x25GbE SFP28 or 128x10GbE SFP+ using breakout cables. The switch comes with redundant power supplies and fans that are FRU capable. The included rail kit facilitates rack-mounting installations.

Added Agility from Flexible Management

Powered by the Enterprise Advanced SONiC distribution, the switch offers high performance and operational simplicity through industry-leading merchant silicon and a standards-based IP CLOS architecture. It also delivers agility via a flexible management framework with programmatic APIs and an extensible, container-based design.

Ready to Deploy for Data Center Applications

Pre-loaded with the Supermicro Enterprise Advanced SONiC OS, the SSE-C4632 offers extensive networking features plus hardware acceleration of routing and switching functions. The software support is included in the switch's standard warranty at no additional cost..

Operating System / NOS

The SSE-C4632 series switch comes with preloaded Supermicro Enterprise Advanced SONiC OS. This comes in a 3-year or 5-year license and is required for software support including upgrades.

Download

Manuals	SSE-C4632S/SR Manuals	[Download]
Manuals	SSE-C4632SB/SRB Manuals	[Download]
Firmware	SSE-C4632 Firmware	[Download]

Hardware Specifications

Physical Ports

- 32x100GbE QSFP28 ports
- 1xRJ45 Console and 1xOOB Ethernet management ports
- 1x USB 2.0 Type A interface

CPU Engine

- Intel Atom CPU, 2C at 1.6Ghz
- 128GB DDR4
- 64GB SSD

Data Forwarding

- Switch Fabric Capacity: 3.2Tbps
- Non-blocking, wire-speed
- 32MB memory packet buffer

Power

- 800W AC PSU, support 1+1 Hot-pluggable, redundant, Input Voltage: 100-240Vac, 47-63Hz

Physical and Environmental

- 1RU, Mountable in either 19" or 21" racks
- Dimensions: (WxDxH) 434 x 521 x 43.8 mm (17.1 x 20.52 x 1.72 inches)
- Weight: (Switch Unit) 10kg
- Front-to-Rear and Rear-to-Front airflow versions available
- 2x Redundant, Hot Swappable PSUs
- Hot Swappable 3+1 redundant Fan Modules
- Input Voltage: 100 to 240VAC at 47-63Hz
- 760W Maximum Power (with Pluggable Optic)
- Temperature: Operating 0°C to 45°C (32°F to 113°F)
- Humidity: Operating: 0% to 95% RH

Cables and Transceivers

- SR/VR MMF transceivers to 100m
- DR SMF transceivers to 500m

Safety and Compliance

Safety

Taiwan (BSMI):

- CNS15598-1

Korea (KCC):

- KC 62368-1

China (CCC):

- GB4943.1

Japan (VCCI):

- VCCI CISPR 32-1

Taiwan (BSMI):

- CNS 15936

Korea (KCC):

- KN32 Class A
- KN35

China (CCC):

- GB9254.1

Electromagnetic Compatibility

North America:

- 47CFR Part 15(CFR 47) Class A
- ICES003 issue7 Class A

EU:

- CISPR 32
- EN 55032
- BS EN 55032
- CISPR 35
- EN 55035
- BS EN 55035
- EN6100-3-2
- BS EN 6100-3-2
- EN6100-3-3
- BS EN 6100-3-3
- EN 300 386

Environmental

- EU (RoHS)
- EU (REACH)
- EU (WEEE)
- Taiwan (RoHS)
- China (RoHS)

Supermicro Enterprise Advanced Software Features

System and Platform Infrastructure Features

- System locator and interface LED
- Hardware watchdog
- Third-party container management
- Interface aliasing (IS-standard and IS-standard-extended interface naming)
- Maintenance mode
 - LACP graceful shut
 - BGP graceful shut
 - OSPFv2 maximum metrics
- Multi-instance Redis DB
- Hardware resource allocation and reservation
- DOM information display
- Dynamic port breakout
- Port auto-breakout and auto-detect for port speed
- Transceiver parameter tuning
- Link flap error-disable
- CPU/memory histogram
- System ready for services and applications
- Secure boot process and reference implementation
- Syslog high threshold notifications and clear for CPU/temperature
- Patching support in SONiC (patch host/containers)
- Media AutoFEC for FEC type automation

Layer 2 Features

- LAG and MLAG (static and LACP)
- ESI-based multihoming
- LLDP
- UDLD
- PVST, RPVST+, and MSTP
- DHCP snooping
- IGMP
- IGMP snooping (v1, v2, v3)

Layer 3 Features

- MLAG
- ESI-based multihoming
- DHCP relay and IP helper
- Proxy ARP
- VRRP
- VXLAN EVPN
- Route leaking
- IP SLA (ICMP and TCP tracker)
- IPv4 unnumbered interfaces
- Many hashing algorithms to support a range of traffic patterns
- Static routing, BGP, OSPFv2 and OSPFv3
- BFD
- Multi-site Data Center Interconnect (DCI)
- RIB/FIB consistency checker
- Next Hop Group (NHG)
- L3 PIM (operates on L3 interfaces only)
- IPv4 PIM-SSM

ACL and Flow-Based Services

- PBR and service chaining
- Layer 2 and Layer 3 ACLs
- Policy-based routing (IPv4 and IPv6)
- ACL consistency checker

Security Features

- AAA – RADIUS, TACACS, LDAP, MFA
- CAC-PIV over SSH
- Federal certs common criteria
- Role-Based Access Control (RBAC)

Manageability Features

- Industry Standard CLI (IS-CLI)
- NTP client and server
- SCP, SFTP, TFTP, FTP
- Syslog and audit logs
- Remote logging
- In-memory debug logging
- SPAN/ERSPAN
- Zero Touch Provisioning (ZTP)

QoS

- Configurable queue and buffer size
- L2 and L3 QoS maps
- Traffic priority scheduling
- Rate limiting
- ACL-based DSCP and PCP remarking
- DSCP marking preservation for VXLAN
- CoPP (Control Plane Policing)

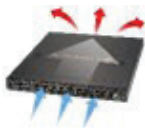
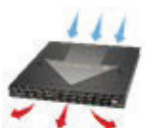
Telemetry and Instrumentation

- sFlow
- gNMI
- REST
- SNMP

AI/ML Focused Features

- RoCEv2
- RoCEv2 with cut-through mode support
- RoCEv2 over VXLAN
- PFC, ECN, ETS optimizations
- Enhanced DCQCN
- Adaptive Routing Selection (ARS)/ Dynamic Load Balancing (DLB)
- Enhanced hashing and load balancing with 100mSec granularity
- Rich congestion and load balancing telemetry
- LLDP for DCBx
- RoCE buffer configurable based on cable length per interface

Switch Hardware SKUs

	Part Number	Description
Layer 2/3 100G Ethernet Switch	 SSE-C4632S	32 port 100G QSFP28 - 100-240VAC PSU Front-to-rear airflow - Air Cooling
	 SSE-C4632SR	32 port 100G QSFP28 - 100-240VAC PSU Rear-to-front airflow - Air Cooling

Switch Software SKUs

Product SKU	Description
SFT-BCM100G-3YR	Supermicro Enterprise Advanced 3-year Software Support
SFT-BCM100G-5YR	Supermicro Enterprise Advanced 5-year Software Support

*A 3-year or 5-year software SKU is mandatory per switch and will need renewal for software support including upgrades

Optics & Cables Supported

Active/Passive Cabling P/N	Length	Description
CBL-NTWK-0943-SQ28C05M	0.5m	100G QSFP28 to QSFP28, DAC, 0.5m
CBL-NTWK-0943-SQ28C10M	1m	100G QSFP28 to QSFP28, DAC, 1m
CBL-NTWK-0943-SQ28C20M	2m	100G QSFP28 to QSFP28, DAC, 2m
CBL-NTWK-0943-SQ28C30M	3m	100G QSFP28 to QSFP28, DAC, 3m
CBL-NTWK-0943-SQ28C50M	5m	100G QSFP28 to QSFP28, DAC, 5m
CBL-QSFP28AOC-10M-CO	10m	100G QSFP28 to QSFP28, AOC, 10m
CBL-QSFP28AOC-FE-10M	10m	100G QSFP28 to QSFP28, AOC, 10m
CBL-QSFP28AOC-FE-15M	15m	100G QSFP28 to QSFP28, AOC, 15m
CBL-NTWK-0417-01	1m	40G QSFP+ to QSFP+, DAC, 1m
CBL-NTWK-0325-02	2m	40G QSFP+ to QSFP+, DAC, 2m
CBL-NTWK-0446-01	3m	40G QSFP+ to QSFP+, DAC, 3m
CBL-NTWK-0422-01	4m	40G QSFP+ to QSFP+, DAC, 4m
CBL-QSFP+AOC-7M	7m	40G QSFP+ to QSFP+, AOC, 7m
CBL-QSFP+AOC-10M	10m	40G QSFP+ to QSFP+, AOC, 10m
CBL-NTWK-0988-Q28M1	1m	100G QSFP28 to 4x25G SFP28, DAC, 1m
CBL-NTWK-0988-QS28C20M-3	2m	100G QSFP28 to 4x25G SFP28, DAC, 2m
CBL-NTWK-0988-Q28M3	3m	100G QSFP28 to 4x25G SFP28, DAC, 3m
CBL-NTWK-0988-Q28M5	5m	100G QSFP28 to 4x25G SFP28, DAC, 5m
CBL-NTWK-0719	1m	40G QSFP+ to 4x10G SFP+, DAC, 1m
CBL-NTWK-0720	3m	40G QSFP+ to 4x10G SFP+, DAC, 3m
CBL-NTWK-0721	5m	40G QSFP+ to 4x10G SFP+, DAC, 5m

Optics & Cables Supported

Transceivers P/N	Length	Description
TRX-100GbE-SR4-FIN	up to 100m	100G QSFP28 SR4 Transceiver, 850mm, MMF, MPO, HF
TRX-100G-DR1-03	up to 500m	100G QSFP28 DR1 Transceiver, 500m, LC, SMF
Fiber Cabling P/N	Length	Description
CBL-NTWK-0973-50M-P	5m	MPO12/MPO12, OM4, MMF, 50/125 5m APC
CBL-NTWK-0973-100M-P	10m	MPO12/MPO12, OM4, MMF, 50/125 5m APC
CBL-NTWK-0973-150M-P	15m	MPO12/MPO12, OM4, MMF, 50/125 5m APC
CBL-NTWK-0973-200M-P	20m	MPO12/MPO12, OM4, MMF, 50/125 5m APC
CBL-NTWK-0973-300M-P	30m	MPO12/MPO12, OM4, MMF, 50/125 5m APC
CBL-NTWK-0973-500M-P	50m	MPO12/MPO12, OM4, MMF, 50/125 5m APC
CBL-NTWK-0982-50M-P	5m	LC/LC, SMF, 5m
CBL-NTWK-0982-100M-P	10m	LC/LC, SMF, 10m
CBL-NTWK-0982-150M-P	15m	LC/LC, SMF, 15m
CBL-NTWK-0982-200M-P	20m	LC/LC, SMF, 20m
CBL-NTWK-0982-300M-P	30m	LC/LC, SMF, 30m
CBL-NTWK-0982-500M-P	50m	LC/LC, SMF, 50m
CBL-NTWK-0982-1K-P	100m	LC/LC, SMF, 100m
CBL-NTWK-0982-5K-P	500m	LC/LC, SMF, 500m

Warranty

SSE-C4632 comes with a standard (3-1-1) warranty which covers 3 years of labor, 1 year of parts, and 1 year of cross-shipment warranty. The warranty can be extended up to a total of 5 years. For more information, please visit the [warranty](#) page.

Onsite Services

Supermicro Hardware Maintenance provides flexible and customizable Service Level Agreements for remote help desk and rapid onsite support to cover Supermicro hardware solutions. Our Onsite Service Programs offer up to a 4-hour Onsite Response time option for mission-critical uptime or any tailored solution that will meet your specific business requirements. For more details, please visit the [Onsite Services](#) page.