

## SSE-C4632SB SSE-C4632SRB



### High-performance Open Networking 100GbE aggregation switch

Supermicro SSE-C4632 is the new generation 32 port 100Gbps switch designed to provide high performance and non-blocking with 6.4Tbps Switching capacity, best suitable for data center leaf and spine deployments. The SSE-C4632 is an extremely compact 1RU form factor with proven layer 2 and layer 3 features.

The Enterprise SONiC distribution offers benefits such as high performance and simplicity based on industry leading merchant silicon and standards based IP CLOS architecture. It also provides agility based on a flexible management framework with programmatic APIs and an extensible, container-based architecture.

SSE-C4632 can operate at variety of speeds such as 32x100Gbps QSFP28 or 32x40G QSFP+ or by using the breakout cables 64x50G QSFP56 or 128x25Gbps SFP28 or 10G SFP+. Switch comes with dual and redundant power supplies and FANs that are FRU capable. The included rail kit facilitates rack-mounting installations.

Pre-loaded with the Broadcom Enterprise Distribution SONiC OS, the SSE-C4632 is ready with extensive networking features plus hardware acceleration of routing and switching functions. And the software support is included in the switch standard warranty at no additional cost.

### Operating System / NOS

The SSE-C4632 series switch comes with preloaded **Broadcom Advanced Enterprise SONiC OS**.  
**No additional licensing is required.**

### Specifications

#### Key Switch Specs

- Form Factor: 1 RU
- Capacity: 6.4Tbps
- Interfaces Speeds: 10, 25, 40, 50, 100GbE
- Supported default Configurations: 32x100GbE
- Operating System: Broadcom Advanced Enterprise SONiC OS

#### Key Capabilities and Advantages

- Form Factor: 1 RU

- Switch Fabric Capacity: 6.4Tbps
- Interfaces Speeds: 100, 50, 40, 25 & 10GbE
- Supported Configurations: 32x100GbE or 40GbE, 64x50GbE, 128x25/10GbE.
- 32MB memory packet buffer
- Operating System: SONiC OS (Broadcom Enterprise SONiC Distribution)

## Hardware Features

### Physical Ports

- 32 x QSFP28 Ports
- 1 x RJ45 Serial Console
- 1 x RJ45 100/1000BASE-T Management
- 1 x USB Type A Storage

### OnBoard CPU Engine

- INTEL Atom C2.1Ghz quad-core CPU
- 16MB DDR4 DRAM with ECC
- 64GB SSD

## 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 240V AC at 5-60Hz
- 550W Maximum Power (with Pluggable Optic)
- Temperature: Operating 0°C to 45°C (32°F to 113°F)
- Humidity: Operating: 0% to 95% RH

## Software Features

<p><b>System and Platform Infrastructure Features</b></p> <ul style="list-style-type: none"><li>• Dynamic Port Breakout</li><li>• DOM Information Display</li><li>• System Locator LED Support (Beacon)</li><li>• CMIS 4.0 Optics Support</li><li>• Hardware Watchdog</li><li>• CoPP (Control Plane Policing)</li><li>• Transceiver Parameter Tuning</li><li>• Third-Party Container Management</li><li>• PDDF and PDK Framework</li><li>• Interface Aliasing (IS-Standard and IS-Standard-Extended Interface Naming)</li><li>• Kdump Support</li><li>• Maintenance Mode</li><li>• LACP Graceful Shut</li><li>• BGP Graceful Shut</li><li>• OSPFv2 Maximum Metrics</li><li>• Multi-Instance Redis DB</li><li>• Hardware Resource Allocation and Reservation</li><li>• Zero Touch Provisioning (ZTP)</li><li>• Auto Negotiation and Link Training</li><li>• Link Statistics Enhancements</li><li>• Link-Down Reason Codes</li><li>• Link Flap Error-Disable</li><li>• Forwarding Plane Drop Counters</li><li>• Time Zone Command Support</li><li>• 2 × 50G Speed Support</li><li>• Broadcom Debug Tool</li><li>• Memory Histogram</li><li>• System Ready for Services and Applications</li><li>• Secure Boot Process and Reference Implementation</li><li>• Syslog High Threshold notifications and clear for CPU/Temperature</li><li>• Per Platform CoPP</li><li>• Interface Beacon LED</li></ul>	<ul style="list-style-type: none"><li>• 4K L3 VLAN Interface Scale for SAG and Unique-IP Cases</li><li>• Nexthop resolution using default route</li><li>• MC-LAG Peer Gateway</li><li>• 1 Million Route Scale</li><li>• Route Updates Performance Improvements</li><li>• Drop Neighbor Entry to Protect CPU from Unknown IP Packets Hitting the CPU</li><li>• CPU Offload for Neighbor Suppression</li><li>• CPU Offload for Slowpath ARP Flooding</li><li>• OSFPv2 GR</li><li>• Router Advertisement KLISH/REST/gNMI Support<ul style="list-style-type: none"><li>○ CLI Commands for RA Retransmission Interval,</li><li>○ RADv Disable</li><li>○ RFE-8106</li></ul></li></ul> <p><b>ACL and Flow-Based Services</b></p> <ul style="list-style-type: none"><li>• PBR Enhancements for Service Chaining</li><li>• ACL-based CoPP</li><li>• ACL DSCP Map/Remarking</li><li>• ACL Rate Limiting</li><li>• Control Plane ACL</li><li>• Policy-based Routing (IPv4 and IPv6)</li><li>• ACL-based Packet Replication</li><li>• ACL Consistency Checker</li></ul> <p><b>Security Features</b></p> <ul style="list-style-type: none"><li>• RADIUS and TACACS</li><li>• RADIUS/TACACS Password Obfuscation</li><li>• NTP Server and NTP Authentication</li><li>• NTP Prefer Option</li><li>• LDAP Integration</li><li>• AAA Authorization support with TACACS+</li></ul> <p><b>Manageability Features</b></p> <ul style="list-style-type: none"><li>• Industry Standard CLI (IS-CLI)</li><li>• REST and gNMI Interfaces via OpenConfig</li></ul>
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- ZTP Provisioning using a USB Drive
- Flexible DPB
- Support Option to Bind the Third Party Container to the Management VRF
- Limiting CPU/Memory/Disk Usage for Third Party Containers
- Patching Support in SONiC (Patch Host/Containers)
- Option to Send Audit Log Messages to Syslog Server
- Ability to Filter Logs based on Facility and Severity
- Media AutoFEC for FEC Type automation

### Layer 2 Features

- VLAN Auto-state
- Interface Hold-Down
- LACP Graceful Shutdown
- link Tracking
- L2 MC-LAG
- L2 VXLAN
- L2 LVTEP
- LACP Fast Rate and LACP Fallback
- Static LAG
- LLDP
- UDLD
- MC-LAG Fallback
- MC-LAG Graceful Shutdown
- xSTP over MC-LAG
- MSTP
- PVST and RPVST+
- PVST and RPVST+ over MC-LAG
- DHCP snooping
- VLAN stacking (QinQ)
- Port Channel Min-Links configuration enhancement

### Layer 3 Features

- DHCP Relay Enhancements
  - DHCP Relay over VXLAN Overlay Interfaces
  - DHCP Relay Source Interface Selection (e.g. loopback)
  - DHCP Relay over IPv6 Link-Local Interfaces with RFC5549 Routes
  - DHCP Relay Hop Count Configuration

### YANG (OC-YANG)

- Role-Based Access Control (RBAC)
- RBAC and HAMd Enhancements
- SNMP Configuration Traps and OIDs
- Configuration Services – Chef for EVPN
- gNMI Subscription Support for Limited YANG Paths (OnChange, Interval, Once, Poll, Target defined)
- Bulking support in both REST(YANG patch) and gNMI
- Query parameter for REST and filtering support for gNMI
- Scalar encoding support for gNMI
- Support to Read Service Tag via SNMP
- SNMP Trap Enablement on Interface Instead of Global

### Multicast Features / Enhancements

- L3 Multicast with PIM operates on L3 interfaces only
- IGMP
- IGMP Snooping (v1, v2, v3) (with MLAG)
- IPv4 PIM-SSM Support

### Debuggability / Serviceability features

- In-memory Debug Logging
- Audit Logging and Syslogs
- Command to Return Interfaces to the Default Configuration
- Port Mirroring on Port Channel and VLAN

### Scalability improvements

- L3 VLAN Scale to 4K (for TD3-X7 based Platforms)
- Host Table Resource Reservation for Local Hosts

### QoS

- RoCE V2 Support
- DSCP Marking Preservation for VXLAN
- QoS Map Support for Remarking and SVI
- BUM Storm Control
- Port and Priority Shaping

### Telemetry and Instrumentation

- sFlow on Management VRF
- Inband Flow Analyzer (IFA) 2.0
- Drop Monitor
- Tail Stamping
- BST – Watermarks,

<ul style="list-style-type: none"> <li>○ DHCP Relay Over IPv4 Unnumbered Interfaces</li> <li>○ DHCP Relay Option 82, Sub Option 151 VRF Name/ID Option</li> <li>○ DHCP Relay Option 82, Sub Option 5 Link-Selection Option RFC3527</li> <li>○ Support for Circuit-Id Formats</li> <li>○ DHCP Relay Circuit-Id Option</li> <li>○ DHCP Relay and DHCP snooping support on the same VLAN</li> </ul> <ul style="list-style-type: none"> <li>● Dynamic BGP Neighbor</li> <li>● IP Fabric over IPv6 underlay RFC5549</li> <li>● IP Helper</li> <li>● L3 MC-LAG</li> <li>● L3 VXLAN</li> <li>● L3 LVTEP</li> <li>● Routing Subinterface</li> <li>● Advertise PIP for both ACT-ACT and ACT-STBY on the Same Leaf Pair</li> <li>● Route Leaking across VRFs including Management VRF</li> <li>● BGP Docker Warm Restart</li> <li>● Avoid Netlink for Handling IPv6 Link-Local Address</li> <li>● BFD Optimizations to Support 5x100msec Aggressive Timers in SW</li> <li>● IP SLA (ICMP and TCP tracker)</li> <li>● IPv4 Unnumbered Interfaces</li> <li>● RPVST+ over MC-LAG</li> <li>● RPVST+ Scaling to 3500 VLAN Ports</li> <li>● Symmetric Hashing</li> <li>● VXLAN over SVI Interface</li> <li>● BGP for EVPN (with MLAG)</li> <li>● BFD IS-CLIs</li> <li>● BFD with VRF</li> <li>● VRF support for syslog</li> <li>● VRF support for SSH.in</li> <li>● VRRPv3, VRRP/VRRPv3 over VRF</li> <li>● Management VRF Hardening</li> <li>● NAT</li> <li>● OSPFv2</li> <li>● Multi Site Data Center Interconnect (DCI)</li> <li>● RIB/FIB Consistency Checker</li> <li>● Next Hop Group (NHG) Support</li> <li>● RIF Counters for L3 Interfaces</li> </ul>	<ul style="list-style-type: none"> <li>● BFD Profile</li> <li>● Thresholds, and Snapshots</li> <li>● Linux PTP (KNETSync)</li> </ul> <p><b>SONiC readiness for Campus use case</b></p> <ul style="list-style-type: none"> <li>● Port MAC Security</li> <li>● LLDP-MED</li> <li>● DOM Information Display</li> <li>● EVPN VXLAN</li> <li>● EVPN Multihoming</li> </ul> <p><b>Warmboot</b></p>
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## **Safety**

Taiwan (BSMI):

- CNS15598-1

Korean (KCC):

- KC 62368-1

China (CCC):

- GB4943.1

## Electromagnetic Compatibility

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

North America

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

Japan (VCCI)

- VCCI CISPR 32-1

Taiwan (BSMI)

- CNS 15936

Korean (KCC)

- KN32 Class A
- KN35

China (CCC):

- GB9254.1

Environmental

EU (RoHS)

EU (REACH)

EU (WEEE)

Taiwan (RoHS)

China (RoHS)

# Parts List

	Part Number	Description
Layer 2/3 100G Ethernet Switch	SSE-C4632SB	 AC Power Supply with Regular Airflow (front to back)
	SSE-C4632SRB	 AC Power Supply with Reverse Airflow (back to front)

## Optics & Cables Supported

Cable Type	Cable Model	Length	SMC P/N
100G DAC	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 0.5m	0.5M	CBL-NTWK-0942-MQ28C05M
100G DAC	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 1m	1M	CBL-NTWK-0942-MQ28C10M
100G DAC	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 1.5m	1.5M	CBL-NTWK-0942-MQ28C15M
100G DAC	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 2m	2M	CBL-NTWK-0942-MQ28C20M
100G DAC	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 2.5m	2.5M	CBL-NTWK-0942-MQ28C25M
100G DAC	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 3m	3M	CBL-NTWK-0942-MQ28C30M
100G to 25G DAC splitter	100GbE/QSFP28 to 4x 25GbE/SFP28	3M	CBL-NTWK-MFA7A50-C003
100G to 25G DAC splitter	100GbE/QSFP28 to 4x 25GbE/SFP28	5M	CBL-NTWK-MFA7A50-C005
100G to 25G DAC splitter	100GbE/QSFP28 to 4x 25GbE/SFP28	3M	CBL-NTWK-MFA7A50-C003
100G to 25G DAC splitter	100GbE/QSFP28 to 4x 25GbE/SFP28	5M	CBL-NTWK-MFA7A50-C005
100G to 25G DAC splitter	100GbE/QSFP28 to 4x 25GbE/SFP28	10M	CBL-NTWK-MFA7A50-C010
100G Transceivers	TXCVR, QSFP28,100GBASE-DR1,	Up to 500M	TRX-100G-DR1-03

## Warranty & Support

Supermicro standard warranty for all our switches is 3 years parts and labor with cross-ship for the first year (3-3-1)

Extension of the warranty is available up to total 5 years. DOA period is initial 90 Days.