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 C1.6Ghz dual-core CPU
- 8GB DDR4 DRAM with ECC
- 16GB 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
- 800W 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

System and Platform Infrastructure Features
- Dynamic Port Breakout
- DOM Information Display
- System Locator LED Support (Beacon)
- CMIS 4.0 Optics Support
- Hardware Watchdog
- CoPP (Control Plane Policing)
- Transceiver Parameter Tuning
- Third-Party Container Management
- PDDF and PDK Framework
- Interface Aliasing (IS-Standard and IS-Standard-Extended Interface Naming)
- Kdump Support
- Maintenance Mode
  - LACP Graceful Shut
  - BGP Graceful Shut
  - OSPFv2 Maximum Metrics
- Multi-Instance Redis DB
- Hardware Resource Allocation and Reservation
- Zero Touch Provisioning (ZTP)
- Auto Negotiation and Link Training
- Link Statistics Enhancements
- Link-Down Reason Codes
- Link Flap Error-Disable
- Forwarding Plane Drop Counters
- Time Zone Command Support
- 2 × 50G Speed Support
- Broadcom Debug Tool
- Memory Histogram
- System Ready for Services and Applications
- Secure Boot Process and Reference Implementation
- Syslog High Threshold notifications and clear for CPU/Temperature
- Per Platform CoPP
- Interface Beacon LED
- 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

- 4K L3 VLAN Interface Scale for SAG and Unique-IP Cases
- Nexthop resolution using default route
- MC-LAG Peer Gateway
- 1 Million Route Scale
- Route Updates Performance Improvements
- Drop Neighbor Entry to Protect CPU from Unknown IP Packets Hitting the CPU
- CPU Offload for Neighbor Suppression
- CPU Offload for Slowpath ARP Flooding
- OSFPv2 GR
- Router Advertisement KLISH/REST/gNMI Support
  - CLI Commands for RA Retransmission Interval, RADv Disable
  - RFE-8106

ACL and Flow-Based Services
- PBR Enhancements for Service Chaining
- ACL-based CoPP
- ACL DSCP Map/Remarking
- ACL Rate Limiting
- Control Plane ACL
- Policy-based Routing (IPv4 and IPv6)
- ACL-based Packet Replication
- ACL Consistency Checker

Security Features
- RADIUS and TACACS
- RADIUS/TACACS Password Obfuscation
- NTP Server and NTP Authentication
- NTP Prefer Option
- LDAP Integration
- AAA Authorization support with TACACS+

Manageability Features
- Industry Standard CLI (IS-CLI)
- REST and gNMI Interfaces via OpenConfig 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,

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
- 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
  - DHCP Relay Over IPv4 Unnumbered Interfaces
  - DHCP Relay Option 82, Sub Option 151 VRF Name/ID Option
  - DHCP Relay Option 82, Sub Option 5 Link-Selection Option RFC3527
  - Support for Circuit-Id Formats
  - DHCP Relay Circuit-Id Option

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,
- Thresholds, and Snapshots
- Linux PTP (KNETSync)

SONiC readiness for Campus use case
- Port Access Control
  - 802.1X
  - MAC Authentication Bypass (MAB)

- o DHCP Relay and DHCP snooping support on the same VLAN
- Support for 4K L3 VLAN Interfaces
- Dynamic BGP Neighbor
- IP Fabric over IPv6 underlay RFC5549
- IP Helper
- L3 MC-LAG
- L3 VXLAN
- L3 LVTEP
- Routing Subinterface
- Advertise PIP for both ACT-ACT and ACT-STBY on the Same Leaf Pair
- Route Leaking across VRFs including Management VRF
- BGP Docker Warm Restart
- Avoid Netlink for Handling IPv6 Link-Local Address
- BFD Optimizations to Support 5x100msec Aggressive Timers in SW
- IP SLA (ICMP and TCP tracker)
- IPv4 Unnumbered Interfaces
- RPVST+ over MC-LAG
- RPVST+ Scaling to 3500 VLAN Ports
- Symmetric Hashing
- VXLAN over SVI Interface
- BGP for EVPN (with MLAG)
- BFD IS-CLIs
- BFD with VRF
- VRF support for syslog
- VRF support for SSH.in
- VRRPv3, VRRP/VRRPv3 over VRF
- Management VRF Hardening
- NAT
- OSPFv2
- Multi Site Data Center Interconnect (DCI)
- RIB/FIB Consistency Checker
- Next Hop Group (NHG) Support
- RIF Counters for L3 Interfaces
- BFD Profile

- o RADIUS Support
    - Multiple RADIUS Servers
    - RFC 2865 — RADIUS Client
    - RFC 2868 — RADIUS Attributes for Tunnel Protocol Support
    - RFC 3579 — RADIUS Support for EAP
- o Authentication Tiering
- o Downloadable ACLs
- o Dynamic ACL
    - Named ACLs
    - Per-session ACLs
    - Filter-Id
- o Posture Assessment (Redirect ACL/URL, COA Using DAS)
- o Guest VLAN
- o Unauth VLAN
- o Open VLAN
- o Monitor Mode
- o STP
- o Port Default to Access VLAN

- MSTP
- Port MAC Security
- LLDP-MED
- Digital Optical Monitoring (DOM)
- Time Domain Reflectometry (TDR)
- EVPN VXLAN
- EVPN Multihoming

Warmboot

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.