Supermicro SSE-G3850 1G Ethernet Switch

The Premier Management Switch with Comprehensive Rack-Level Monitoring and Protection

Key Advantages for Data Center Applications:

- Robust 1RU form factor for flexible deployment options
- 560Gbps switch capacity
- Open Network OS supported system to maximize flexibility
- OOB and Sensor Connectivity Co-located in one location
- Flexible installation with ear mount as standard and rail kit as optional add-on
- Support both AC and DC PSU options with air cooling SKUs
- Utilizes Supermicro Enterprise SONiC (standard) or Supermicro Community SONiC with RMC Software Management (optional) for streamlined deployments in various scenarios

Multi-function Platform for Diverse Applications

The SSE-G3850 is a Layer 2/3 Ethernet Switch that expands the growing family of switches offered by Supermicro in the Open Networking arena. Offering 44 1Gbps RJ45 Ethernet ports, 6 environmental sensor ports, and two 100Gbps QSFP28 uplinks, the SSE-G3850 switch allows connectivity to servers while aggregating traffic for connection to higher speed servers, routers, and other backbone network switches. The SSE-G3850 series provides customers with the flexibility to use it as a dedicated IPMI/Management switch or a data switch providing an ideal platform for managing and maintaining those resources to suit the needs of the organization.

Compact Form Factor for Flexible Deployment Options

The compact 1U form factor allows users to optimize deployment in standalone or top-of-rack environments. The switch comes with redundant power supplies and includes ear-mount kit as well as an optional rail kit to facilitate rack-mounting installations. SSE-G3850 switches are ideal for deployment in Data Center, Cloud and Enterprise, capable of handling access for the most demanding applications.

RMC Software and Open-Network OS Support

Pre-loaded with Supermicro's Enterprise SONiC operating system or Supermicro SONiC plus RMC software, the SSE-G3850 offers extensive networking features plus hardware acceleration for routing and switching functions. The open-network OS provides a robust foundation for customization, enabling seamless integration into diverse data center ecosystems. Supermicro's user-friendly enhancements to SONiC simplify network management including an Industry-Standard CLI, streamline deployment, and ensure optimal performance for mission-critical applications.

Engineered for Seamless Integration with Existing Workflows

Standard server provisioning tools run directly on the SSE-G3850, so deployment fits existing server workflows rather than requiring separate network tooling. Whether you're consolidating out-of-band server management, tracking rack environmental conditions, or centralizing IPMI access across the data center,, the SSE-G3850 delivers premier rack-level monitoring, protection, and management, spanning server and switch health, power, temperature, humidity, liquid-leakage, and door-alarm status.

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Operating System / NOS

The SSE-G3850 series switch comes with either Supermicro Enterprise SONiC OS as standard or Supermicro SONiC OS plus RMC software as optional.
This comes in a 3-year or 5-year license and is required for software support including upgrades.

Download

Manuals	SSE-G3850 Manuals	[Download]
Firmware	SSE-G3850 Firmware	[Download]

Hardware Specifications

Physical Ports

- 44x 1GbE RJ45 ports
- 6x RJ45 sensor ports
- 2x 100GbE QSFP28 ports
- 1x RJ45 Console and 1x OOB Ethernet management port
- 1x USB 2.0 Type-A storage

Power

- Total power consumption 200W
- 1+1 Hot-pluggable redundant power supply
- 400W (F2R airflow) or 600W (R2F airflow AC PSU, support 1+1 hot-pluggable, load balancing, and redundant, input voltage: 100-127Vac, 200-240Vac, 50/60Hz
- 600W DC PSU, support 1+1 hot-pluggable, load balancing, and redundant, input voltage: 48-60Vdc

Onboard CPU Engine

- Intel Atom x86 CPU, 4C @ 2.4GHz
- 16GB DDR4
- 64GB SSD

Physical and Environmental

- 1RU, Mountable in 19" racks by front and rear ear-mount support
- EIA, HGX, ORV3 rack support
- Dimensions: (WxDxH) 438.4 x 457 x 43.5mm
- Weight: 8kg
- Front to Rear/Rear to Front airflow
- Hot-swappable 3+1 redundant load balancing Fan Modules
- Temperature: Operating 0°C to 45°C
- Humidity: Operating: 5% to 95%

Safety and Compliance

Safety

EU:
- EN 60950-1
- IEC 60950-1
- EN 62368-1
- IEC 62368-1

North America:
- UL 60950-1
- CAN/CSA-C22.2 No. 60950
- UL 62368-1
- CAN/CSA-C22.2 No. 62368-1

Australia/New Zealand (ACMA):
- AS/NZS 60950-1
- AS/NZS 62368-1

Korea (KCC):
- KC 62368-1

Taiwan (BSMI):
- NS 15598-1

Environmental

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

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

Japan:
- VCCI CISPR 32-1

North America:
- 47CFR Part 15(CFR 47) Class A
- ICES003 issue7 Class A

Australia/New Zealand:
- AS/NZS CISPR 32

Taiwan (BSMI):
- CNS 15936

Korea (KCC):
- KN32 Class A
- KN35

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Supermicro Enterprise Advanced Software Features

System and Platform Infrastructure Features

- System locator and interface LED
- Hardware watchdog
- 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 MCLAG (static and LACP)
- ESI-based multihoming
- LLDP
- UDLD
- PVST, RPVST+, and MSTP
- DHCP snooping
- IGMP
- IGMP snooping (v1, v2, v3)

Layer 3 Features

- MCLAG
- 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

- 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

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Supermicro RMC Software Features

Account Management
- Admin/user accounts

Hardware Inventory
- Get the FRU information of the rack manager and node

Rack Power Status and Control
- Obtain the power status and usage of the rack
- Set the power usage limit of the rack
- Power lost policy

PSU Status/Health
- Obtain the status and health of the PSU

Node Power Status and Control
- Determine the power state of the node
- Obtain the power readings of the node
- Set the power usage limit of the node
- Obtain the temperature of the node

Node Status/Health
- Obtain the status and health of the node
- Status and health of the CPU, memory
- Obtain the status of the LED
- Retrieve the logs from the node

System and Firmware
- Obtain the firmware revision of the rack manager, BIOS, BMC, PSU
- Update firmware on the rack manager and nodes

Group Operations
- Reset a temporary group of nodes
- Create and reset a persistent group of nodes

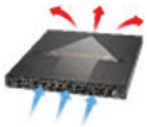
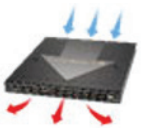
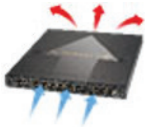
Leakage Protection - External Sensor Support
- Rack level liquid leakage detection and protection

Temperature Protection - External Sensor Support
- Monitoring rack level internal and external rack ambient temperature

Humidity Protection - External Sensor Support
- Monitors rack level humidity levels within the rack

Contact Closure Protection - External Sensor Support
- Monitoring rack door status

Switch Hardware SKUs

	Part Number	Description
Layer 2/3 1G Ethernet Switch	 SSE-G3850S	44 port 1GTP - 100-240VAC PSU Front-to-rear airflow - Air Cooling
	 SSE-G3850SR	44 port 1GTP - 100-240VAC PSU Rear-to-front airflow - Air Cooling
	 SSE-G3850D	44 port 1GTP, 40-60VDC busbar input Front-to-rear airflow - Air Cooling

Switch Software SKUs

Product SKU	Description
SFT-BCM1G-3YR	Supermicro Enterprise Advanced 3-year Software Support
SFT-BCM1G-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*	

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Sensor SKUs

Product SKU	Description
TBD	Liquid leakage sensor
TBD	Temperature and humidity sensor
TBD	Door sensor

Optics & Cables Supported

SMC P/N	Length	Description
CBL-NTWK-0943-SQ28CxxM (xx = 05,10,20,30,50)	0.5-5.0m	ETHERNET, 100GbE/QSFP28 to QSFP28, DAC, 0.5-5.0M
SMC P/N	Length	Description
CBL-QSFP28AOC-FE-xxM (xx = 10,15)	10, 15m	ETHERNET, 100GbE/QSFP28 to QSFP28, AOC, 10, 15M
SMC P/N	Length	Description
TRX-100GbE-SR4-FIN	up to 100m	SR4 MMF TRX (*MPO12 FIBER CABLE)
SMC P/N	Length	Description
TRX-100G-DR1-03	up to 500m	DR1 SMF TRX (*LC FIBER CABLE)
SMC P/N	Length	Description
CBL-NTWK-0988-Q28Mx (x=1,3,5)	1-5m	ETHERNET, 100GbE/QSFP28 to 4x 25GbE/SFP28, DAC, 1-5M
*1GTP ports can use CAT5 or above level cables		

Warranty

SSE-G3850 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.

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