SUPERMICRO®

# Layer 2 & 3 Ethernet Switches

## Enterprise-Class Performance with Advanced Switching Capabilities in a 1U Form Factor for 1GbE, 1/10GbE, 10GbE, and 10/40GbE Networking

***New!***

**48-port 10-Gigabit Switches**
**10GBASE-T or SFP+**

**SSE-X3348T**
**SSE-X3348TR**

- 48 Ten-Gigabit Ethernet ports - 10GBASE-T RJ45 connectors
- 4 Forty-Gigabit Ethernet ports - QSFP Connectors
- 2 One-Gigabit Ethernet ports - RJ45 Connectors

**SSE-X3348S**
**SSE-X3348SR**

- 48 Ten-Gigabit Ethernet ports - SFP+ Connectors
- 4 Forty-Gigabit Ethernet ports - QSFP Connectors
- 2 One-Gigabit Ethernet ports - RJ45 Connectors

**SSE-X24S/SR**
Layer 2/3; 24 Ten-GbE Ports
1 One-GbE port

**SSE-G24-TG4**
Layer 2/3; 24 One-GbE Ports;
4 Ten-GbE Ports

**SSE-G48-TG4**
Layer 2/3; 48 One-GbE Ports;
4 Ten-GbE Ports

**SSE-G2252P**
Layer 2; 52 One-GbE ports;
48 with Power-over-Ethernet

**SSE-G2252**
Layer 2; 52 One-GbE ports

**Key Features:**

- ✓ **Standards-based Ethernet with a Full Set of Popular Options**
  - **VLANs**
  - **Jumbo Frames**
  - **Link Aggregation**
- ✓ **1:1 Non-blocking Connectivity**
- ✓ **Power-over-Ethernet (SSE-G2252P model)**
- ✓ **Energy-Efficient-Ethernet: IEEE 802.3az (some models)**
- ✓ **Management Ease**
  - **CLI**
  - **Web-based GUI**
- ✓ **1U Form Factor for Flexible Installation**
- ✓ **50°C Maximum Operating Temperature (SSE-G2252 and SSE-G2252P models)**

**www.supermicro.com/networking**

**March 2013**

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| | Layer 2 | Layer 2 | Layer 2/3 |
|---|---|---|---|
| |  |  |  |
| Rear View |  |  |  |

| Model | SSE-G2252 (52 ports) | SSE-G2252P (52 ports; 48 with Power-over-Ethernet) | SSE-G24-TG4 |
|---|---|---|---|
| **General Specifications** | • 48 RJ45 10/100/1000 Mbps Ports<br>• 4 SFP 1-G Ports<br>• Non-Blocking<br>• Standard L2 Features<br>• IPv4 and IPv6<br>• RJ45 Console Port: Web Management GUI, CLI | • 48 RJ45 10/100/1000 Mbps Ports<br>• 4 SFP 1-G Ports<br>• Non-Blocking<br>• Standard L2 Features<br>• IPv4 and IPv6<br>• RJ45 Console Port: Web Management, CLI<br>• Power-over-Ethernet (802.3at)<br>- Up to 30W per port<br>- Up to 400W total PoE budget | • 24 One Gigabit Ethernet ports<br>- 24 RJ45 Copper ports<br>- Four fiber SFP combo ports<br>• Up to four 10-Gigabit Ethernet uplinks<br>• Up to two stacking ports<br>• Out-of-band RS-232 Management port |
| **Switching Capacity** | • 104 Gb/s | • 104 Gb/s | • 136 Gbps |
| **Energy Efficient Ethernet** | • 802.3az | • 802.3az | - |
| **Stacking Performance** | - | - | • Up to 48 Gbps |
| **Power Consumption** | • 65W | • 500W | • 105W |
| **Weight** | • 6.8 lbs / 3.1kg | • 11.7 lbs / 5.3kg | • 12.6 lbs / 5.70 kg (w/ modules)<br>• 12.2 lbs /5.54 kg (w/o modules) |
| **Dimensions (WxDxH)** | • 440 x 279 x 43mm (17.3" x 11" x 1.7") | • 440 x 379 x 43mm (17.3" x 14.9" x 1.7") | • 440 x 387 x 43mm (17.3" x 15.2" x 1.7") |
| **Availability** | • Spanning Tree (802.1D)<br>• Rapid Spanning Tree (802.1w) | • Multiple Spanning Trees (802.1s) | • Spanning Tree (802.1D)<br>• Rapid Spanning Tree (802.1w) |
| **VLAN** | • 256 active VLANs<br>• Voice VLAN support | • 802.1Q tagging, port and protocol based<br>• Dynamic VLAN Support (GVRP) | • 802.1Q tagging, port and protocol based<br>• Dynamic VLAN Support (GVRP) |
| **Quality of Service and DiffServ** | • IPv4/v6 DiffServ<br>• Per port bandwidth management<br>- Resolution 64KB<br>• Packet prioritization based on ingress/egress ports using pre-defined value<br>• Ingress/Egress metering at 64KB increments<br>- Ingress/egress policer<br>- Ingress and egress co-work | • L2/L3/L4Traffic Classification/Priority Management<br>• Deficit WRR and Strict Priority Scheduling<br>• Traffic shaping<br>- IP based (all ports)<br>- Port based (all ports)<br>- Port based shaping QoS aware<br>• 4 priority queues per port | • 8 priority queues per port<br>• Adjusted WRR and Strict Priority Scheduling<br>• Marking |
| **Security Features** | • 802.3x Port-Based Authentication<br>• Switch access password protection<br>• Layer 2, 3, 4 Access Control List (512 rules) | • RADIUS and TACACS+ Authentication<br>• SSH/SSL Encryption | • 802.3x Port Based Authentication<br>• Switch access password protection<br>• Layer 2, 3, 4 Access Control Lists (256 rules) |
| **Management** | • Web-based management interface – HTTP/HTTPS<br>- Telnet (4 sessions)<br>- SNMP | • Industry standard CLI with telnet, SSH, or local management port<br>- Scripting capability<br>- Command completion<br>- Context-sensitive "Help" | • Web-based management interface – HTTP/HTTPS<br>- Telnet (7 sessions)<br>- SNMP |
| **Switch Features** | • Link Aggregation<br>- 802.3ad with LACP<br>- Up to 12 aggregation groups<br>- up to 8 ports per group<br>• Double tagging:<br>- 802.1 Q-in-Q<br>- 802.1ad provider bridge<br>- Unqualified learning and forwarding | • Storm protection<br>- Broadcast<br>- Multicast<br>• IGMP:<br>- IGMP snooping v1/v2/v3<br>• 16K MAC address entries | • Link Aggregation<br>- 802.3ad with LACP<br>- Up to 24 aggregation<br>- Up to 8 ports per group |
| **Routing Features** | | | • Static Routing, RIP v1/v2, RIPng, OSPF v1/v2/v3 and BGP<br>• IPv4 and IPv6 Routing |
| **PoE Features** | | • Compliant with IEEE 802.3af-2003 & IEEE 802.3at-2009<br>• Power start/stop (remote sense)<br>• Power feeding over 1/2 and 3/6 data twisted pair of Cat. 5 UTP/STP cable<br>• Independent overload and short-circuit protection for each port<br>• LED indicators for power status per port<br>• Per port configuration<br>• IEEE 802.3af/IEEE 802.3at MIB for Power over Ethernet function | |
| **Multicast** | • IGMP Snooping v1, v2, v3 | | • IGMP Snooping v1, v2, v3<br>• IGMP v1, v2, v3 |
| **Operating Temperature** | • 0 ~ 50°C | • 0 ~ 50°C | • 0 ~ 40°C |

# Layer 2/3 Ethernet Switch Family

| | | | |
|---|---|---|---|
| *Layer 2/3* | *Layer 2/3* | ***New!** Layer 2/3* | ***New!** Layer 2/3* |
|  |  |  |  |
| **SSE-G48-TG4** | **SSE-X24S**<br>**SSE-X24SR** | **SSE-X3348S**<br>**SSE-X3348SR** | **SSE-X3348T**<br>**SSE-X3348TR** |
| • 48 One Gigabit Ethernet ports<br>- 48 RJ45 Copper ports<br>- Four fiber SFP combo ports<br>• Up to four 10-Gigabit Ethernet uplinks<br>• Up to two stacking ports<br>• Out-of-band RS-232 Management port | • 24 Ten Gigabit Ethernet ports<br>- SFP+ Connectors<br>• 1 One-Gigabit Ethernet port<br>- RJ45 Connector<br>• Out-of-band RS-232 Management port | • 48 Ten-Gigabit Ethernet ports<br>- SFP+ Connectors<br>• 4 Forty-Gigabit Ethernet ports<br>- QSFP Connectors<br>• 2 One-Gigabit Ethernet ports<br>- RJ45 Connectors<br>• Out-of-band RS-232 Management port | • 48 Ten-Gigabit Ethernet ports<br>- 10GBASE-T RJ45 connectors<br>• 4 Forty-Gigabit Ethernet ports<br>- QSFP Connectors<br>• 2 One-Gigabit Ethernet ports<br>- RJ45 Connectors<br>• Out-of-band RS-232 Management port |
| • 184 Gbps | • 480 Gb/s | • 1284 Gb/s | • 1284 Gb/s |
| - | - | - | • IEEE 802.3az |
| • Up to 48 Gbps | - | - | - |
| • 145W | • 176W (Redundant Power Supplies)<br>• Reverse airflow model available | • 326W (Redundant Power Supplies)<br>• Reverse airflow model available | • 357W (Redundant Power Supplies)<br>• Reverse airflow model available |
| • 13.7 lbs / 6.20 kg (w/ modules)<br>• 13.4 lbs / 6.06 kg (w/o modules) | • 16.7 lbs / 7.58 kg | • 18.1 lbs / 8.2 kg | • 18.1 lbs / 8.2 kg |
| • 440 x 387 x 43mm (17.3" x 15.2" x 1.7") | • 440 x 387 x 43mm (17.3" x 15.2" x 1.7") | • 438 x 473 x 43mm (17.3" x 18.6" x 1.7") | • 438 x 473 x 43mm (17.3" x 18.6" x 1.7") |
| • Multiple Spanning Trees (802.1s)<br>• Virtual Redundant Routing Protocol (VRRP) | • Spanning Tree (802.1D)<br>• Rapid Spanning Tree (802.1w) | • Multiple Spanning Trees (802.1s)<br>• Virtual Redundant Routing Protocol (VRRP) | |
| • 1K static VLANs | • 802.1Q tagging, port and protocol based<br>• Dynamic VLAN Support (GVRP) | • 4K Static VLANs | |
| • Metering / Rate limiting<br>• Layer 2, 3, 4 Prioritization | • 8 priority queues per port<br>• Adjusted WRR and Strict Priority Scheduling<br>• Layer 2, 3, 4 Prioritization | • Marking<br>• Metering / Rate limiting | |
| • RADIUS and TACACS+ Authentication<br>• SSH, SSL Encryption | • 802.3x Port Based Authentication<br>• Switch access password protection<br>• Layer 2, 3, 4 Access Control Lists (256 rules) | • RADIUS and TACACS+ Authentication<br>• SSH, SSL Encryption | |
| • Industry standard CLI with telnet, SSH, or local management port<br>- Scripting capability<br>- Command completion<br>- Context-sensitive "Help" | • Web-based management interface – HTTP/HTTPS<br>- Telnet (7 sessions)<br>- SNMP | • Industry standard CLI with telnet, SSH, or local management port<br>- Scripting capability<br>- Command completion<br>- Context-sensitive "Help" | |
| • Link Layer Discovery Protocol (802.1AB)<br>• Jumbo Frames up to 9KB<br>• Port Mirroring – N to 1. Tx & Rx Configurable | • Link Aggregation<br>- 802.3ad with LACP<br>- Up to 24 aggregation<br>- Up to 8 ports per group | • Link Layer Discovery Protocol (802.1AB)<br>• Jumbo Frames up to 9KB<br>• Port Mirroring – N to 1. Tx & Rx Configurable | |
| • VRRP (Virtual Router Redundancy Protocol)<br>• DVMRP (Distance Vector Multicast Routing Protocol | • Static Routing, RIP v1/v2, RIPng, OSPF v1/v2/v3 and BGP<br>• IPv4 and IPv6 Routing | • VRRP (Virtual Router Redundancy Protocol)<br>• DVMRP (Distance Vector Multicast Routing Protocol | |
| | | | |
| • PIM SM, PIM DM<br>• PIM SMv6 | • IGMP Snooping v1, v2, v3<br>• IGMP v1, v2, v3 | • PIM SM, PIM DM<br>• PIM SMv6 | |
| • 0 ~ 40°C | • 0 ~ 40°C | • 0 ~ 47°C | • 0 ~ 45°C |

## Layer 2 Ethernet Switches - Keep IT Green

Supermicro extends its "We Keep IT Green®" initiative with a pair of powerful 52-port 1-Gigabit-per-second Energy-Efficient-Ethernet switches. The SSE-G2252 and its companion SSE-G2252P each provide 48 ports of 1-Gigabit Ethernet connectivity with RJ45 connections as well as an additional four 1-Gigabit ports with SFP connectors. The SSE-G2252P model also offers support of IEEE-802.3at - compliant Power-over-Ethernet (PoE) devices with what is perhaps the most flexible power budget allocation in the industry. Up to 30 Watts can be supplied on any RJ45 port (subject to a maximum PoE budget of 400 Watts), thus making the SSE-G2252P capable of supporting the broadest range of commercial PoE devices . Both support the latest Energy Efficient Ethernet standard (IEEE 802.3az).

These Layer 2 switches offer extremely cost-effective networking in SMB or data center environments. They provide a choice of management interfaces using either a Web-based GUI or an industry compatible command-line-interface. The PoE model makes possible rapid installation of PoE-based devices like wireless access points for conferences and shows, support for VoIP phones, as well as PoE surveillance cameras and a myriad of new PoE technologies becoming available on the market.

The SSE-G2252 and SSE-G2252P also offer a full range of popular Ethernet features like Jumbo Frames, Link Aggregation, VLANs, and Quality of Service. All of this is done in a compact 1U form factor for maximum flexibility in rack-mount installation.

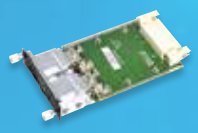
## Layer 2/3 Ethernet Switches

In today's computing environments, applications require access to more and more data – and they need it quickly. Supermicro paves the way for this data superhighway with its powerful and cost-effective 10-Gigabit Ethernet switching products. The top-of-rack twenty-four port SSE-X24S switch provides high-speed interconnect between 10-Gigabit Ethernet-enabled servers as well as giving them access to the high-speed backbone. And now, Supermicro's two new 48-port 10G switches, available with either SFP+(SSE-X3348S) or 10GBASE-T (SSE-X3348T) connectors, extend this capability to a whole new level of performance with their four 40-Gigabit uplinks. Each 10G switch model has a companion product which offers reverse airflow for optimal cooling in a datacenter rackmount environment. An optional rail kit further facilities the rackmount installation. For servers with lower-speed Ethernet connectivity the SSE-G24-TG4 and SSEG48-TG4 top-of-rack aggregation switches with up to four 10-Gigabit uplinks give a cost-effective access ramp onto the 10-Gigabit Ethernet superhighway.

The 1U form factor gives users the ability to optimize deployment in wiring closet environments in addition to top-of-rack installations. 10-Gigabit Ethernet routers, servers, backbones and data centers can all benefit from these cost-effective solutions.

A comprehensive routing and protocol software suite ensures optimal performance in even the most demanding enterprise-class networking environments. The switches are ideal for organizations with growing and consolidated data centers.

**Options** *(order at least one, maximum two with each SSE-G24-TG4 or SSE-G48-TG4)*



**AOM-SSE-X2C**

Two-port CX4 connector module for copper connections

**AOM-SSE-X2F**

Two-port XFP connector module for fiber connections

**AOM-SSE-X2S**

Two-port SFP+ connector module for copper or fiber connections

*Cabling Options:*

CX4 Cables - For Stacking or 10GE Interconnect
- CBL-0474L - One Meter Length
- CBL-0389L-01 - Three Meter Length

SFP+ Direct Attach Cables
- CBL-0347L - One-Meter length
- CBL-0348L - Three-Meter length
- CBL-0349L - Five-Meter length

SFP+ Transceiver for use with fiber cable connections
- AOC-E10GSFPSR - SFP+ Transceiver; or
- AOC-TSR-F - SFP+ Transceiver

*Optional Rail Kit*

For Secure Rack-Mount of 10G Switches (SSE-X24S/SR, SSE-X3348S/SR, and SSE-X3348T/TR):

- CSE-PT52L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