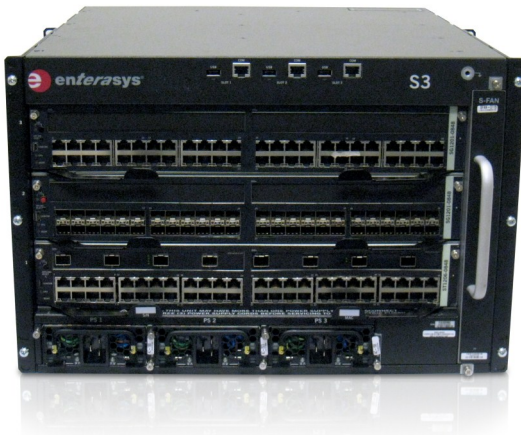


Enterasys S-Series[®] S140 Class

High Performance, Modular Switch for Edge-to-Core and Data Center Deployments



Product Overview

The S140 Class of I/O modules are the latest offering for the S-Series family. The new class compliments the existing S130/S150/S155 classes by introducing high performance, high density SFP+, 10GBase-T, Triple Speed PoE and SFP options for the S3 chassis.

The Enterasys S-Series family of flow-based switches brings high performance distributed switching to the network access layer, distribution layer, enterprise/campus core, and data center. The S-Series family consists of the 8-slot S8, 6-slot S6, 4-slot S4, the 3-slot S3, 1-slot S1 and the fixed configuration S-Series Stand Alone (SSA). The S-Series delivers some of the highest switching port densities per rack unit available in the market and is future-proofed and scalable to provide overall system capacities of up to six Terabits. All chassis support 802.3af and 802.3at (high power) standards-based PoE via an integrated or field installable power system. There are a variety of I/O modules designed and optimized for deployment at the network access layer, distribution layer, network core and data center that provide a broad array of connectivity options for copper and fiber cabling infrastructures.

The S-Series provides a highly resilient distributed switching and routing architecture with management and control functions embedded in each module, delivering unsurpassed reliability, scalability, and fault tolerance. Organizations can cost-effectively add connectivity as needed while scaling performance capacity with each new module. The highly available architecture makes forwarding decisions, and enforces security policies and roles while classifying/prioritizing traffic at wire speed. All I/O modules provide the highest Quality of Service (QoS) features for critical applications such as voice and HD video even during periods of high network traffic load while also proactively preventing Denial of Service (DoS) attacks and malware propagation.

The S-Series implements our custom packet processor technology, CoreFlow2, which provides and industry-leading, flow-based switching architecture to intelligently manage individual user and application conversations—far beyond the capabilities of switches that are limited to using VLANs, ACLs, and ports to implement role-based access controls. Users are identified and roles are applied to ensure each individual user can access their business-critical applications no matter where they connect to the network.

Enterasys S-Series S140 Highlights

High performance S3-Chassis configurations with granular traffic visibility and control

Up to 96 ports of SFP+ and 72 ports of 10GBase-T per S3-Chassis

Support for Data Center Bridging

Automated network provisioning for virtualized, cloud, and converged voice/video/data environments

High availability features including self-healing maximize business continuity for critical applications

Versatile high density solution with highly flexible connectivity and power options reduces cost of ownership

Greater than 6 Tbps backplane capacity with 2.56 Tbps switching capacity and 1920 Mpps throughput

There is nothing more important than our customers.

S-Series policy rules combined with deep packet inspection can intelligently sense and automatically respond to security threats while improving reliability and quality of the user experience.

A significant differentiator for the S-Series is the ability to collect NetFlow data at wire-speed on every port, providing total visibility into network resource consumption for users and applications. The S-Series is the only enterprise switch to support multi-user, multi-method authentication on every port — absolutely essential when you have devices such as IP phones ,computers, printers, copiers, security cameras, badge readers, and virtual machines connected to the network. When quality of service, device and application prioritization, and security matters there is no better choice than the Enterasys S-Series.

Forwarding Architecture

The Enterasys S-Series chassis utilize both fabric-based point-to-point and fabric-less meshed forwarding architectures. The S1, S4, S6, and S8 chassis use a fabric-based forwarding architecture that provides multiple high bandwidth data paths between I/O modules, while the S3 chassis provides a high performance, fabric-less meshed forwarding architecture ideally suited to scale from the highly available network edge with S130 class modules up to distribution and small wiring closet deployments with S140 class modules. All chassis are optimized for redundant high performance switching and routing as well as providing flexible connectivity and the ability to add features and scale performance as required and as new technologies become available.

I/O fabric modules provide scalable, high performance data paths as well as a full complement of front panel interfaces with flexible modular interface options. A single I/O fabric may be used in either an S1, S4, S6, or an S8 chassis, however, the use of two I/O fabrics creates a load sharing fabric pair that provides up to 2560 Gbps switching capacity and adds high-availability features. The S8 and S6 chassis augment the load sharing fabric pair by allowing the addition of a third I/O fabric module, increasing the system reliability and performance in the unlikely event of an I/O fabric failure. An S8 system with two I/O fabrics installed will gracefully reduce the fabric switching capacity by 50 percent. In the event of an I/O fabric failure, however, when a third I/O fabric is installed the system will maintain a full 2560 Gbps of switching performance. The load sharing fabric architecture ensures the highest availability and performance for the most demanding and mission-critical networks.

S140 I/O Module Specifications

| | S140 I/O Modules | | | |
|------------------------|--|-------------|-------------|-------------|
| | Distribution Layer, Server Aggregation, Data Center Core, Enterprise | | | |
| Part Number | ST2206-0848 | SG2201-0848 | SK2008-0832 | SK2009-0824 |
| Used in | S3 Chassis | S3 Chassis | S3Chassis | S3 Chassis |
| Port Type | RJ45 | SFP | SFP+ | 10GBase-T |
| Port Quantity | 48 | 48 | 32 | 24 |
| Port Speed | 10/100/1000 Mbps | 1000 Mbps | 10 Gbps | 10 Gbps |
| PoE Support | 802.3af, 802.3at | - | - | - |
| Option Module Slots | 2, (Type 2) | 2, (Type 2) | - | - |
| Module Throughput | 90 Mpps | 90 Mpps | 90 Mpps | 90 Mpps |
| I/O Switching Capacity | 120 Gbps | 120 Gbps | 120 Gbps | 120 Gbps |

S140 Class I/O Modules

The S140 class delivers a high performance, mid-tier switching solution that provides increased density and a lower-cost alternative in 10G aggregation scenarios. These modules offer the option for a high density, fabric-less aggregation solution by deploying gigabit and ten gigabit aggregation in the S3 chassis.

S140 Class I/O modules are available with 10/100/1000Base-TX, 1000BASE SFP, 10GBASE SFP+ and, 10GBase-T port types to address varied network requirements. All triple speed copper I/O modules are PoE-enabled. The 10/100/1000Base-TX, 1000Base SFP I/O modules include two option-module slots; option-module slot provide additional media and port speed connectivity via triple speed copper, Gigabit SFP, 10 Gigabit SFP+ or a combination of gigabit and SFP+ Ethernet ports. This further simplifies network design and reduces the cost of network deployments. S140 Class I/O modules include deep packet buffers per port to avoid dropped packets in the event of network congestion.

All 10 Gigabit Ethernet SFP+ ports are dual speed and will also accept standard Gigabit SFP transceivers. This capability enables a smooth migration path from Gigabit Ethernet for connecting devices to 10 Gigabit Ethernet in the future. Customers can use Gigabit Ethernet optical uplinks today and migrate to 10 Gigabit at their own pace. In addition, all Gigabit SFP ports will accept Fast Ethernet 100BASE-FX SFPs to enable connection of legacy devices.

S140 Performance/Capacity

Switching Throughput

360 Mpps (64-byte packets)

IPv4/IPv6 Routing Throughput

360 Mpps (64-byte packets)

Capacities above are for an S3 System

Address Table Size

65K MAC Addresses

VLANs Supported

4094

Transmit Queues

12 for S140

Classification Rules

57K per chassis

Memory

Main Memory : 2 GB Per Module

Flash Memory: 1 GB Per Module

Packet Buffering

Buffer Size (Max.) 1.5 GB

Distributed, Flow-Based Architecture

In order to ensure granular visibility and manage traffic without sacrificing performance, the Enterasys S-Series implements our CoreFlow2 distributed, flow-based architecture. This architecture ensures that when a specific communications flow is being established between two end points. The first packets in that communication are processed through the multilayer classification engines in the switch I/O modules and I/O fabric modules. In this process, the role is identified, the applicable policies are determined, the packets are inspected, and the action is determined. After the flow is identified, all subsequent packets associated with that flow are automatically handled in the CoreFlow2 ASICs without any further processing. In this way the Enterasys S-Series is able to apply a very granular level of control to each flow at full line rate.

Hardware-Based High Availability Features

The S-Series includes many standard high availability features. These hardware-based features allow the S-Series to be deployed in mission critical environments that require 24/7 availability.

High Availability Summary:

- Passive chassis backplane
- Hot swappable fan trays with multiple cooling fans
- Separate system and PoE power supplies
- Hot swappable power supplies
- Multiple AC input connections for power circuit redundancy
- Load sharing/redundant I/O fabrics in the S4, S6, and S8 chassis
- N+1 fabric redundancy in the S8 and S6 chassis
- Hot swappable I/O fabrics and I/O modules
- Multiple host CPU for N+X redundancy
- Virtual Switch Bonding

Features / Standards and Protocols

Switching/VLAN Services

Generic VLAN Registration Protocol (GVRP)
802.3u Fast Ethernet
802.3ab Gigabit Ethernet (copper)
802.3z Gigabit Ethernet (fiber)
802.3ae 10 Gigabit Ethernet (fiber)
802.1aq (SPB) Shortest Path Bridging (Ready)
802.3an 10GBASE-T (copper)
802.1Q VLANs
802.1D MAC Bridges
Provider Bridges (IEEE 802.1ad) Ready
802.1w Rapid re-convergence of Spanning Tree
802.1s Multiple Spanning Tree
802.1t – Path Cost Amendment to 802.1D
802.1AX-2008 / 802.3ad Link Aggregation
802.3ae Gigabit Ethernet
802.3x Flow Control
IP Multicast (IGMPv1,v2,v3)
IGMP v1/v2/v3 Snooping and Querier
Jumbo Packet with MTU Discovery Support for Gigabit (9216 bytes)
Link Flap Detection
Dynamic Egress (Automated VLAN Port Configuration)
802.1ab LLDP-MED
Data Center Bridging
- 802.1Qaz
ETS (Enhanced Transmission Selection)
DCBx (Data Center Bridge Exchange Protocol)
- 802.1Qbb PFC (Priority Flow Control)
- 802.1Qau Congestion Notification
802.3-2008 Clause 57 (Ethernet OAM – Link Layer OAM)
MLD IPv6 Snooping and Querier
Virtual Switch Bonding (VSB)

IP Routing Features

Static Routes
Standard ACLs
OSPF with Multipath Support
OSPF Passive Interfaces
IPv6 Routing Protocol
Extended ACLs
Policy-based Routing
NAT Network Address Translation
TWCB Transparent Web Cache Redirect
VRF Virtual Routing and Forwarding (IPv6 and IPv4)
Border Gateway Routing Protocol - BGPv4
PIM Source Specific Multicast - PIM SSM
RFC 792 ICMP
RFC 826 ARP
RFC 1027 Proxy ARP
RFC 1112 IGMP
RFC 1195 Use of OSI IS-IS for Routing in TCP/IP
RFC 1265 BGP Protocol Analysis
RFC 1266 Experience with the BGP Protocol
RFC 1519 CIDR
DHCP Server RFC 1541/ Relay RFC 2131
RFC 1583/RFC 2328 OSPFv2
RFC 1587 OSPFv2 NSSA
RFC 1657 Managed Objects for BGP-4 using SMLv2
RFC 1723 RIPv2 with Equal Cost Multipath Load Balancing
RFC 1745 OSPF Interactions
RFC 1746 OSPF Interactions
RFC 1765 OSPF Database Overflow
RFC 1771 A Border Gateway Protocol 4 (BGP-4)
RFC 1772 Application of BGP in the Internet
RFC 1773 Experience with the BGP-4 protocol
RFC 1774 BGP-4 Protocol Analysis
RFC 1812 General Routing/RIP Requirements
RFC 1853 IP in IP Tunneling
RFC 1886 DNS Extensions to support IP version 6

RFC 1924 A Compact Representation of IPv6 Addresses
RFC 1930 Guidelines for creation, selection, and registration of an Autonomous System (AS)
RFC 1966 BGP Route Reflection
RFC 1981 Path MTU Discovery for IPv6
RFC 1997 BGP Communities Attribute
RFC 1998 BGP Community Attribute in Multi-home Routing
RFC 2003 IP Encapsulation within IP
RFC 2080 RIPng (IPv6 extensions)
RFC 2082 RIP-II MD5 Authentication
RFC 2113 IP Router Alert Option
RFC 2154 OSPF with Digital Signatures (Password & MD5)
RFC 2236 IGMPv2
DVMRP v3-10
RFC 2260 Support for Multi-homed Multi-prov
RFC 2270 Dedicated AS for Sites Homed to one Provider
RFC 2361 Protocol Independent Multicast - Sparse Mode RFC2373
RFC 2373 Address notation compression
RFC2374 IPv6 Aggregatable Global Unicast Address Format
RFC2375 IPv6 Multicast Address Assignments
RFC 2385 BGP TCP MD5 Signature Option
RFC 2391 Load Sharing Using Network Address Translation(LSNAT)
RFC2401 Security Architecture for the Internet Protocol
RFC2404 The Use of HMAC-SHA-1-96 within ESP and AH
RFC2406 IP Encapsulating Security Payload (ESP)
RFC2407 Internet IP Security Domain of Interpretation for ISAKMP
RFC2408 Internet Security Association and Key Management Protocol (ISAKMP)
RFC 2409 The Internet Key Exchange (IKE)
RFC 2439 BGP Route Flap Damping
RFC 2450 Proposed TLA and NLA Assignment Rule
RFC 2453 RIPv2
RFC 2460 IPv6 Specification
RFC 2461 Neighbor Discovery for IPv6
RFC 2462 IPv6 Stateless Address Auto-configuration
RFC 2463 ICMPv6
RFC 2464 Transmission of IPv6 over Ethernet
RFC 2473 Generic Packet Tunneling in IPv6 Specification
RFC 2474 Definition of DS Field in the IPv4/v6 Headers
RFC 2519 A Framework for Inter-Domain Route Aggregation
RFC 2545 BGP Multiprotocol Extensions for IPv6
RFC 2547 BGP/MPLS VPNs
RFC 2553 BasicSocket Interface Extensions for IPv6
RFC 2577 FTP Security Considerations
RFC 2581 TCP Congestion Control
RFC 2597 Assured Forwarding PHB Group
RFC 2685 Virtual Private Networks Identifier
RFC 2710 IPv6 Router Alert Option
RFC 2711 Multicast Listener Discovery (MLD) for IPv6
RFC 2715 Interoperability Rules for Multicast Routing Protocols
RFC 2740 OSPF for IPv6
RFC 2763 Dynamic Hostname Exchange Mechanism for IS-IS
RFC 2784 Generic Routing Encapsulation Ready
RFC 2796 BGP Route Reflection
RFC 2858 Multiprotocol Extensions for BGP-4
RFC 2890 Key and Sequence Number Extensions to GRE
RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers
RFC 2894 Router Renumbering
RFC 2918 Route Refresh Capability for BGP
RFC 2966 Prefix Distribution with Two-Level IS-IS
RFC 2973 IS-IS Mesh Groups
RFC 3031 Multi Protocol Label Switching Ready
RFC 3056 Connection of IPv6 Domains via IPv4 Clouds
RFC 3065 Autonomous System Confederations for BGP
RFC 3107 Carrying Label Information in BGP-4
RFC 3162 RADIUS and IPv6
RFC 3345 BGP Persistent Route Oscillation
RFC 3359 TLV Codepoints in IS-IS
RFC 3373 Three-Way Handshake for IS-IS
RFC 3376 IGMPv3

Features / Standards and Protocols

RFC 3562 Key Mgt Considerations for TCP MD5 Signature Opt
RFC 3567 IS-IS Cryptographic Authentication
RFC 3587 IPv6 Global Unicast Address Format
RFC 3590 RFC 3590 MLD Multicast Listener Discovery
RFC 3595 Textual Conventions for IPv6 Flow Label
RFC3596 DNS Extensions to Support IP Version 6
RFC 3719 Recommendations for Interop Networks using IS-IS
RFC 3768 VRRP
RFC 3769 Requirements for IPv6 Prefix Delegation
RFC 3787 Recommendations for Interop IS-IS IP Networks
RFC 3810 MLDv2 for IPv6
RFC 3847 Restart signaling for IS-IS
RFC 3879 Deprecating Site Local Addresses
RFC 3956 Embedding the RP Address in IPv6 MCAST Address
RFC 4007 IPv6 Scoped Address Architecture
RFC 4023 Encapsulating MPLS in IP
RFC 4109 Algorithms for IKEv1
RFC 4191 Default Router Preferences and More-Specific Routes
RFC 4193 Unique Local IPv6 Unicast Addresses
RFC 4213 Basic Transition Mechanisms for IPv6
RFC 4222 Prioritized Treatment of OSPFv2 Packets
RFC 4264 BGP Wedgies
RFC 4265 Definition of Textual Conventions for (VPN) Management
RFC 4271 A Border Gateway Protocol 4 (BGP-4)
RFC 4272 BGP Security Vulnerabilities Analysis
RFC 4273 Managed Objects for BGP-4 using SMIv2
RFC 4274 BGP-4 Protocol Analysis
RFC 4276 BGP-4 Implementation Report
RFC 4277 Experience with the BGP-4 protocol
RFC 4291 IP Version 6 Addressing Architecture
RFC 4294 IPv6 Node Requirements
RFC 4301 Security Architecture for IP
RFC 4302 IP Authentication Header
RFC 4303 IP Encapsulating Security Payload (ESP)
RFC 4305 Crypto Algorithm Requirements for ESP and AH
RFC 4306 Internet Key Exchange (IKEv2) Protocol
RFC 4307 Cryptographic Algorithms for Use in IKEv2
RFC 4308 Cryptographic Suites for IPSec
RFC 4360 BGP Extended Communities Attribute
RFC 4364 BGP/MPLS IP VPNs
RFC 4365 Applicability Statement for BGP/MPLS IP VPNs
RFC 4384 BGP Communities for Data Collection
RFC 4443 ICMPv6 for IPv6
RFC 4456 BGP Route Reflection
RFC 4486 Subcodes for BGP Cease Notification Message
RFC 4451 BGP MULTI_EXIT_DISC (MED) Considerations
RFC 4541 MLD Snooping
RFC 4552 Authentication/Confidentiality for OSPFv3
RFC 4601 PIM-SM
RFC 4604 IGMPv3 & MLDv2 & Source-Specific Multicast
RFC 4607 Source-Specific Multicast for IP
RFC 4608 PIM-SSM in 232/8
RFC 4610 Anycast-RP Using PIM
RFC 4611 MSDP Deployment Scenarios
RFC 4632 Classless Inter-Domain Routing (CIDR)
RFC 4659 BGP-MPLS (VPN) Extension for IPv6 VPN
RFC 4724 Graceful Restart Mechanism for BGP
RFC 4760 Multiprotocol Extensions for BGP-4
RFC 4835 CryptoAlgorithm Requirements for ESP and AH
RFC 4861 Neighbor Discovery for IPv6
RFC 4862 IPv6 Stateless Address Autoconfiguration
RFC 4884 Extended ICMP Multi-Part Messages
RFC 4893 BGP Support for Four-octet AS Number Space
RFC 5059 Bootstrap Router (BSR) Mechanism for (PIM)
RFC 5065 Autonomous System Confederations for BGP
RFC 5095 Deprecation of Type 0 Routing Headers in IPv6
RFC 5186 IGMPv3/MLDv2/MCAST Routing Protocol Interaction
RFC 5187 OSPFv3 Graceful Restart

RFC 5240 PIM Bootstrap Router MIB
RFC 5250 The OSPF Opaque LSA Option
RFC 5291 Outbound Route Filtering Capability for BGP-4
RFC 5292 Address-Prefix-Outbound Route Filter for BGP-4
RFC 5301 Dynamic Hostname Exchange Mechanism for IS-IS
RFC 5302 Domain-wide Prefix Distribution with IS-IS
RFC 5303 3Way Handshake for IS-IS P2P Adjacencies
RFC 5304 IS-IS Cryptographic Authentication
RFC 5306 Restart Signaling for IS-IS
RFC 5308 Routing IPv6 with IS-IS
RFC 5309 P2P operation over LAN in link-state routing
RFC 5310 IS-IS Generic Cryptographic Authentication
RFC 5340 OSPF for IPv6
RFC 5396 Textual Representation AS Numbers
RFC 5398 AS Number Reservation for Documentation Use
RFC 5492 Capabilities Advertisement with BGP-4
RFC 5668 4-Octet AS Specific BGP Extended Community
RFC 5798 Virtual Router Redundancy Protocol (VRRP) Version 3
RFC 6164 Using 127-Bit IPv6 Prefixes on Inter-Router Links
RFC 6296 IPv6-to-IPv6 Network Prefix Translation
RFC 6549 OSPFv2 Multi-Instance Extensions

Network Security and Policy Management

802.1X Port-based Authentication
Web-based Authentication
MAC-based Authentication
Convergence Endpoint Discovery with Dynamic Policy Mapping (Siemens HFA, Cisco VoIP, H.323, and SIP)
Multiple Authentication Types per Port Simultaneously
Multiple Authenticated users per Port with unique policies per user/
End System (VLAN association independent)
RFC 3580 IEEE 802.1 RADIUS Usage Guidelines, with VLAN to Policy Mapping
Worm Prevention (Flow Set-Up Throttling)
Broadcast Suppression
ARP Storm Prevention
MAC-to-Port Locking
Span Guard (Spanning Tree Protection)
Stateful Intrusion Detection System Load Balancing
Stateful Intrusion Prevention System and Firewall Load Balancing
Behavioral Anomaly Detection/Flow Collector (non-sampled Netflow)
Static Multicast Group Provisioning
Multicast Group, Sender and Receiver Policy Control

Class of Service

Strict Priority Queuing
Weighted Fair Queuing with Shaping
12 Transmit Queues per Port
Up to 3,072 rate limiters for S130 Class products and up to 12,288 rate limiters for S150 Class products
Packet Count or Bandwidth based Rate Limiters. (Bandwidth Thresholds between 8 Kbps and 4 Gbps)
IP ToS/DSCP Marking/Remarking
802.1D Priority-to-Transmit Queue Mapping

Enterasys Network Management Suite (NMS)

NMS Console
NMS Policy Manager
NMS Inventory Manager
NMS Automated Security Manager
NMS NAC Manager

Features / Standards and Protocols

Network Management

SNMP v1/v2c/v3
Web-based Management Interface
Industry Common Command Line Interface
Multiple Software Image Support with Revision Roll Back
Multi-configuration File Support
Editable Text-based Configuration File
COM Port Boot Prom and Image Download via ZMODEM
Telnet Server and Client
Secure Shell (SSHv2) Server and Client
Cabletron Discovery Protocol
Cisco Discovery Protocol v1/v2
Syslog
FTP Client
Simple Network Time Protocol (SNTP)
Netflow version 5 and version 9
RFC 2865 RADIUS
RFC 2866 RADIUS Accounting
TACACS+ for Management Access Control
Management VLAN
15 Many to-One-port, One-to-Many Ports, VLAN Mirror Sessions

Standard MIB Support

RFC 1156/1213 & RFC 2011 IP-MIB
RFC 1493 Bridge MIB
RFC 1659 RS-232 MIB
RFC 1724 RIPv2 MIB
RFC 1850 OSPF MIB
RFC 2012 TCP MIB
RFC 2013 UDP MIB
RFC 2096 IP Forwarding Table MIB
RFC 2276 SNMP-Community MIB
RFC 2578 SNMPv2 SMI
RFC 2579 SNMPv2-TC
RFC 2613 SMON MIB
RFC 2618 RADIUS Client MIB
RFC 2620 RADIUS Accounting MIB
RFC 2674 802.1p/q MIB
RFC 2737 Entity MIB
RFC 2787 VRRP MIB
RFC 2819 RMON MIB (Groups 1-9)
RFC 2863 IF MIB
RFC 2864 IF Inverted Stack MIB
RFC 2922 Physical Topology MIB
RFC 3273 HC RMON MIB
RFC 3291 INET Address MIB
RFC 3411 SNMP Framework MIB
RFC 3412 SNMP-MPD MIB
RFC 3413 SNMPv3 Applications
RFC 3414 SNMP User-Based SM MIB
RFC 3415 SNMP View Based ACM MIB
RFC 3417 SNMPv2-TM
RFC 3418 SNMPv2 MIB
RFC 3621 Power Ethernet MIB
RFC 3635 EtherLike MIB
RFC 3636 MAU MIB
RFC 4022 MIB for the Transmission Control Protocol
RFC 4022 MIB for the Transmission Control Protocol (TCP)
RFC 4087 IP Tunnel MIB
RFC 4113 MIB for the User Datagram Protocol (UDP)
RFC 4292 IP Forwarding MIB
RFC 4293 MIB for Internet Protocol (IP)
RFC 4382 MPLS/BGP Layer 3 Virtual Private Network (VPN) MIB
RFC 4444 MIB for IS-IS
RFC 4624 MSDP MIB
RFC 4560 DISMAN-PING-MIB
RFC 4560 DISMAN-TRACEROUTE-MIB
RFC 4560 DISMAN-NSLOOKUP-MIB

RFC 4750 OSPFv2 MIB
RFC 5060 PIM MIB
RFC 5240 PIM Bootstrap Router MIB
RFC 5643 OSPFv3 MIB
IEEE 8023 LAG MIB
RSTP MIB
USM Target Tag MIB
U Bridge MIB
Draft-ietf-idmr-dvmrp-v3-10 MIB
Draft-ietf-pim-sm-v2-new-09 MIB
SNMP-REARCH MIB
IANA-address-family-numbers MIB
IEEE 802.1PAE MIB

Private MIB Support

Ct-broadcast MIB
Ctron-CDP MIB
Ctron-Chassis MIB
Ctron-igmp MIB
Ctron-q-bridge-mib-ext MIB
Ctron-rate-policing MIB
Ctron-tx-queue-arbitration MIB
Ctron-alias MIB
Cisco-TC MIB
Cisco-CDP MIB
Enterasys-configuration-management MIB
Enterasys-MAC-locking MIB
Enterasys-convergence-endpoint MIB
Enterasys-notification-authorization MIB
Enterasys-netflow MIB
Enterasys-license-key MIB
Enterasys-aaa-policy MIB
Enterasys-class-of-service MIB
Enterasys-multi-auth MIB
Enterasys-mac-authentication MIB
Enterasys-pwa MIB
Enterasys-upn-tc MIB
Enterasys-policy-profile MIB

Specifications

| Part Number | | Description | | | Rack Units | |
|--------------------------------------|---|---|-----------------|-------------------------|--------------|--|
| S3-Chassis A | | 31.11 cm x 44.70 cm x 47.32 cm (12.25" x 17.60" x 18.63") | | | 7U | |
| S3-Chassis-POEA | | 37.46 cm x 44.70 cm x 47.32 cm (14.75" x 17.60" x 18.63") | | | 9U | |
| Power Supplies | | | | | | |
| Model number | Current Rating | Input Voltage | Input Frequency | (100-120v) Power Output | (208-240v) | |
| S-AC-PS | 20A | 100 - 240 VAC | 50 - 60 Hz | 1,200W | 1,600W | |
| S-AC-PS-15A | 15A | 100 - 240 VAC | 50 - 60 Hz | 930W | 1,600W | |
| S-DC-PS | | 48-60 V DC | | 1200W | | |
| POE Power (802.3af, 802.3at) | | | | | | |
| S-POE-PS | 20A | 100 - 240 VAC | 50 - 60 Hz | 1,200W | 2,000W | |
| 4 Bay POE Power | | | | 4,800W (max) | 8,000W (max) | |
| Environmental | | | | | | |
| Operating Temperature | 5° to 40° C (41° to 104° F) | | | | | |
| Storage Temperature | -30° to 73° C (-22° to 164° F) | | | | | |
| Operating Relative Humidity | 5% to 95% (non-condensing) | | | | | |
| Planned Agency Specifications | | | | | | |
| Safety | UL 60950-1, FDA 21 CFR 1040.10 and 1040.11, CAN/CSA C22.2, No. 60950-1, EN 60950-1, EN 60825-1, EN 60825-2, IEC 60950-1, 2006/95/EC (Low Voltage Directive) | | | | | |
| Electromagnetic Compatibility | FCC 47 CFR Part 15 (Class A), ICES-003 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, EN 61000-3-3, AS/NZ CISPR-22 (Class A), VCCI V-3, CNS 13438 (BSMI), 2004/108/EC (EMC Directive) | | | | | |
| Environmental | 2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS) | | | | | |

Chassis Model Number Information

| Part Number | Description |
|--------------------------------|--|
| S3 Chassis | |
| S3-ChassisA | S-Series S3 Chassis and fan tray (Power supplies ordered separately) |
| S3-Chassis-POEA | S-Series S3 Chassis and Fan Tray with 4 bay PoE subsystem (System and PoE Power supplies ordered separately) |
| S3-POE-4BAY-UGK | S-Series 4 bay PoE upgrade kit for the S3 (PoE Power supplies ordered separately) |
| S3-Midmount-Kit | S-Series S3 Chassis 19" midmount installation rack kit, can be used with all S3 Chassis types |
| Power Supplies and Fans | |
| S-AC-PS | S-Series AC power supply, 20A 100-240 VAC input (1200W/1600W) (For use w/S3/S4/S6/S8) |
| S-AC-PS-15A | S-Series AC power supply, 15A, 100-240 VAC input, (930W/1600W) (For use w/S3/S4/S6/S8) |
| S-POE-PS | S-Series POE power supply, 20A, 100-240 VAC input, (1200/2000 W) (For Use in 4/8 Bay PoE power subsystems) |
| S-DC-PS | S-Series 48-60v DC Power Supply (For Use w/ S3/S4/S6/S8) (1200W) |
| S-FAN | S-Series Fan Tray (For use w/ S3/S4/S8) |

I/O and I/O Fabric Model Number Information

| Part Number | Description |
|--------------------------|---|
| S140 I/O Modules | |
| ST2206-0848 | S-Series S140 I/O Module - 48 Ports 10/100/1000BASE-TX via RJ45 with PoE (802.3at) and two Type2 option slot (Used in S3/S4/S6/S8) |
| SG2201-0848 | S-Series S140 I/O Module - 48 Ports 1000BASE-X ports via SFP and two Type2 option slot (Used in S3) |
| SK2008-0832 | S-Series S140 Class I/O Module - 32 Ports 10GBASE-X via SFP+ (Used in S3) |
| SK2009-0824 | S-Series S140 Class I/O Module -24 Ports 10GBASE-T via RJ45 (Used in S3) |
| Option Modules | |
| SOK2208-0102 | S-Series Option Module (Type1) - 2 10GBASE-X Ethernet ports via SFP+ (Compatible with Type1 & Type2 option slots) |
| SOK2208-0104 | S-Series Option Module (Type1) - 4 10GBASE-X Ethernet ports via SFP+ (Compatible with Type1 & Type2 option slots) |
| SOK2208-0204 | S-Series Option Module (Type2) - 4 10GBASE-X Ethernet ports via SFP+ (Compatible with Type2 option slots) |
| SOG2201-0112 | S-Series Option Module (Type1) - 12 1000BASE-X ports via SFP (Compatible with Type1 & Type2 option slots) |
| SOT2206-0112 | S-Series Option Module (Type1) - 12 Ports 10/100/1000BASE-TX via RJ45 with PoE (802.3at) (Compatible with Type1 & Type2 option slots) |
| SOTK2268-0212 | S-Series Option Module (Type2) - 10 Ports 10/100/1000BASE-T via RJ45 with PoE and 2 ports 10GBASE-X via SFP+ (Compatible with Type2 option slots) |
| SOGK2218-0212 | S-Series Option Module (Type2) - 10 Ports 1000BASE-X via SFP and 2 ports 10GBASE-X via SFP+ (Compatible with Type2 option slots) |
| SOV3208-0202 | S-Series Option Module (Type2) - 2 port VSB Option Module (Compatible with Type2 option slots on S140 modules only) |
| Optional Licenses | |
| S-EOS-VSB | S-Series Multi-slot Virtual Switch Bonding License Upgrade (For use on S130/S140/S150 Class Modules) |

Transceivers

Enterasys transceivers provide flexible connectivity options for Ethernet. All Enterasys transceivers meet the highest quality for extended life cycle and the best possible return on investment. For detailed specifications, compatibility and ordering information please go to

<http://www.enterasys.com/products/transceivers-ds.pdf>.

Warranty

The Enterasys S-Series comes with a one year hardware warranty. For full warranty terms and conditions please go to

<http://www.enterasys.com/support/warranty.aspx>

Service and Support

Enterasys Networks provides comprehensive service offerings that range from Professional Services to design, deploy and optimize customer networks, customized technical training, to service and support tailored to individual customer needs. Please contact your Enterasys account executive for more information about Enterasys Service and Support.

Additional Details

For additional information on the Enterasys S-Series please visit

<http://www.enterasys.com/products/switching/>

Contact Us

For more information, call Enterasys Networks toll free at **1-877-801-7082**, or +1-978-684-1000 and visit us on the web at **enterasys.com**



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