Extreme Networks 800-Series

Cost-effective fully-featured enterprise-class 10/100 and 10/100/1000 switch family

BENEFITS

Business Alignment

- Cost-effective and reliable edge connectivity

Operational Efficiency

- Consolidated management capabilities

- Fully featured CLI,web- based, TACACS+ or NetSight management enabling ease of management thereby lowering Total Cost of Ownership (TCO)

Security

- Network accesssecured by 802.1x, MAC address and web- based authentication methods

Support and Service

- Industry leading customer satisfaction and first call resolution rates.

- Comprehensive lifetime warranty

- Fully featured 10/100 and 10/100/1000 edge connectivity solution

- Line rate L2 switching

- IEEE 802.3at high power PoE options

- Optional redundant power for all models

- Extreme Networks award-winning Lifetime Warranty support

Product Overview

The Extreme Networks 800-Series is a highly reliable Fast Ethernet and Gigabit Ethernet family of edge switches that provides scalable, wire-rate performance in support of the bandwidth-intensive and delay-sensitive requirements of today's demanding applications.

The 800-Series is comprised of ten models (four 10/100 switches and six 10/100/1000 switches):

- 24 port 10/100 with four SFP uplinks and two 10/100/1000 ports

- 24 port 10/100 PoE with four SFP uplinks and two 10/100/1000 ports

- 48 port 10/100 with four SFP uplinks and two 10/100/1000 ports

- 48 port 10/100 PoE with four SFP uplinks and two 10/100/1000 ports

- 8 port 10/100/1000 with two SFP uplinks

- 8 port 10/100/1000 PoE with two SFP uplinks

- 24 port 10/100/1000 with four SFP uplinks

- 24 port 10/100/1000 PoE with four SFP uplinks

- 48 port 10/100/1000 with four SFP uplinks

- 48 port 10/100/1000 PoE with four SFP uplinks

Up to eight switches can be interconnected to form a single managed entity thereby creating a virtual switch that can be managed with a single IP address to help minimize management requirements. An integral power supply is the primary

source of power for all 800-Series switches and complete power redundancy is provided by optional external power supplies.

All PoE switches support IEEE 802.3at which allows up to 30 watts of PoE power to be provided to a single port. Dynamic power allocation is supported which allows unused allocated PoE power to be returned to the central pool for use on other ports. Up to 375 watts of PoE power are available on the 24 port and 48 port PoE models.

End users can be authorized via IEEE 802.1X, MAC address or web-based authentication. Class of service, bandwidth control and Access Control Lists(ACLs) are standard features on all switches.

Most models have fans (the 24 port 10/100 switch is fan-less) but the fans on most of the non- PoE models do not run unless the temperature exceeds 36°C thereby providing quiet operation. There is also built in temperature monitoring that provides high temperature alerts to the end user so that the optimal operating environment can be maintained.

800-Series switches can be managed via a Command Line Interface (CLI), an excellent web interface or via NetSight, Extreme Networks' advanced management application.

The 800-Series carries an industry-leading Lifetime Warranty which provides next day shipment, telephone support for one year, bug fixes and web-based support or five years after the product goes end of sale.

Features/Standards and Protocols

MAC ADDRESS TABLE SIZE

16,000

VLANS

4,094 VLAN IDs
Up to 4094 Static VLANs
Up to 255 Dynamic VLANs

SWITCHING SERVICES

IEEE 802.1AB – LLDP
ANSI/TIA – 1057 – LLDP – MED

      Inventory & Capabilities Only

IEEE 802.1D – MAC Bridges
IEEE 802.1s – Multiple Spanning Trees
IEEE 802.1t – 802.1D Maintenance
IEEE 802.1w – Rapid Spanning Tree IEEE 802.3 – Ethernet
IEEE 802.3ab – GE over Twisted Pair IEEE 802.3ad –
Link Aggregation

      8 ports per group

      8–port models: 5 groups

      24–port models: 14 groups

      48–port models: 26 groups

IEEE 802.3af – PoE

IEEE 802.3at High Power PoE

      Up to 30W per port

IEEE 802.3az Energy Efficient Ethernet

      08G models only

IEEE 802.3i – 10Base – T
IEEE 802.3u – 100Base – T, 100Base - FX
IEEE 802.3z – GE over Fiber
Full/half duplex auto – sense support on all ports (Auto – MDIX)
ERPS – Ethernet Ring Protection Switching L2 Multicast Control
IGMP Snooping v1/v2/v3
MLD Snooping
Jumbo Frame support (12,288 bytes)
Loop Protection
One–to–One and Many–to–One Port Mirroring Port Description
Root Guard
STP Pass – Thru

VLAN SUPPORT

Generic Attribute Registration Protocol (GARP)
Generic VLAN Registration Protocol (GVRP)
IEEE 802.1p – Traffic classification
IEEE 802.1q – VLAN Tagging/Trunking
IEEE 802.1 Q–in–Q
Port – based VLAN
MAC – based VLAN
Protocol – based VLAN
Private VLAN
VLAN Trunking
Tagged-based VLAN
Q–in–Q

QUALITY OF SERVICE

8 Priority Queues per Port
802.3x Flow Control
Class of Service (CoS)
Rate Limiting/Bandwidth Control
Layer 2/3/4 Classification
Multi–layer Packet Processing with ACLs
Mixed Queuing Control – Strict and Weighted Round Robin
Source/Destination MAC Address with ACLs
Source/Destination IP address with ACLs
TCP/UDP port number with ACLs

SECURITY

ARP Spoof Protection
DHCP Spoof Protection EAP Pass Thru
IP Source Guard
IEEE 802.1X Port Authentication
MAC–based Port Authentication
Optional Local Database for Authentication
RADIUS Accounting for network access
RFC 3580 RADIUS Usage Guidelines—no authorization mechanism based on Filter–ID Secured Shell (SSHv2)

Features/Standards and Protocols

Secured Socket Layer (SSL v3)

Trusted Host

Denial of Service (DoS) Attack Prevention

BPDU Attack Protection

Multi–user Authentication Per Port

Web–based Port Authentication

ROUTING

IPv4 Static Routes

IPv6 Default Routing

MIB SUPPORT

ANSI/TIA – 1057 – LLDP – MED MIB

IEEE 802.1AB – LLDP MIB

IEEE 802.1X MIB – Port Access

IEEE 802.3ad MIB – LAG MIB

RFC 1213 – MIB/MIB II

RFC 1493, RFC 4188 – BRIDGE–MIB

RFC 1643 – Ethernet – like MIB

RFC 2571 – 2576 – SNMP Framework MIB

RFC 2618 – RADIUS Authentication Client MIB

RFC 2620 – RADIUS Accounting Client MIB

RFC 2674, RFC 4363 – 802.1p MIB

RFC 2674 – QBRIDGE – MIB VLAN Bridge MIB

RFC 2737 – Entity MIB (physical branch only)

RFC 2819 – RMON – MIB

RFC 2863 – IfMIB

RFC 2925 – Ping & Traceroute MIB

RFC 3413 – SNMP v3 Applications MIB

RFC 3414 – SNMP v3 User–based Security Module (USM) MIB

RFC 3415 – View–based Access Control Model for SNMP

RFC 3584 – SNMP Community MIB

RFC 3636 MAU MIB – Obsoletes RFC 2668

RFC 4022 – MIB for TCP

RFC 4113 – MIB for UDP

RFC 6101 - SSL v3

MANAGEMENT & OTHER RFCS

Command Line Interface (CLI) with four access levels

Configuration Upload/Download

Firmware Download

Dual IPv4/IPv6 Management Support

Editable Text–based Configuration File

TFTP Client

Command Logging

Connectivity Fault Management (CFM)

Multi–configuration File Support

System Power & Port Status LEDs

NMS Console

NMS Inventory Manager

Cable Diagnostics

Traceroute

Network Load Balancing

Operation, Administration & Maintenance – (OAM) support

RMON (Stats, History, Alarms, Events)

RSPAN – Remote Port Mirroring

Simple Network Management Protocol (SNMP) v1/v2c/v3

SSHv2

TACACS+ authentication

Web–based Management

SYSLOG – up to 4 servers supported Authentication,

Authorization and Accounting (AAA) management

RFC 768 – UDP

RFC 783 – TFTP

RFC 791 – IP

RFC 792 – ICMP

RFC 793 – TCP

RFC 826 – ARP and ARP Redirect

RFC 854 – Telnet

RFC 951, RFC 1542 – DHCP/BOOTP Relay

RFC 1157 – SNMP

RFC 1901 – Community-based SNMPv2

RFC 1981 – Path MTU for IPv6

RFC 2030 – Simple Network Time Protocol (SNTP)

RFC 2131, RFC 3046 – DHCP Client/Relay

RFC 2465 – IPv6 MIB

RFC 2933 – IGMP MIB

RFC 3176 – sFlow

RFC 3413 – SNMP Applications MIB

RFC 3414 – SNMP User–based Security Module (USM) MIB

RFC 3415 – View–based Access Control

Model for SNMP

800-Series Switch Model Specifications

	08H20G4-24	08H20G4-24P	08H20G4-48	08H20G4-48P
Performance				
Switching Fabric Bandwidth	9.5 Mpps	9.5 Mpps	13.1 Mpps	13.1 Mpps
Switching Capacity	12.8 Gbps	12.8 Gbps	17.6 Gbps	
MAC Address Table	16K	16K	16K	16K
VLANs Supported	255	255	255	255
PoE Specifications				
802.3af Interoperable	N/A	Yes	N/A	Yes
802.3at Interoperable	N/A	Yes	N/A	Yes
System Power	N/A	375 watts per switch— up to 30 watts per port Per-port switch power monitor: Enable/disable Priority safety Overload & short circuit protection	N/A	375 watts per switch -up to 30 watts per port Per-port switch power monitor: Enable/disable Priority safety Overload & short circuit protection
Physical Specifications				
Dimensions (H x W x D), Rack Units	4.4 cm H x 44.1 cm W x 21.66 cm D 1.73"H x 17.36" W x 8.53" D 1U	4.4 cm H x 44.1 cm W x 36.8 cm D 1.73" H x 17.36" W x 14.51" D 1U	4.4 cm H x 44.1 cm W x 37.82 cm D 1.73" H x 17.36" W x 14.89" D 1U	4.4 cm H x 44.1 cm W x 36.8 cm D 1.73"Hx17.36"Wx 14.51" D 1U
Net Weight	2.30 kg (5.10 lb)	5.40 kg (11.9 lb)	4.45 kg (9.80 lb)	6.09 kg (13.4 lb)
MTBF	597,684 hours	272,651 hours	407,895 hours	219,440 hours
Physical Ports	(24) 10/100 ports (4) 1Gb SFP ports (2) 10/100/1000 ports (1) Console port Max: 28 active ports	(24) 10/100 PoE ports (4) 1Gb SFP ports (2) 10/100/1000 ports (1) Console port Max: 28 active ports	(48) 10/100 ports (4) 1Gb SFP ports (2) 10/100/1000 ports (1) Console port Max: 52 active ports	(48) 10/100 PoE ports (4) 1Gb SFP ports (2) 10/100/1000 ports (1) Console port Max: 52 active ports
Power				
Power Supplies	1 Internal, 1 optional RPS	1 Internal, 1 optional RPS	1 Internal, 1 optional RPS	1 Internal, 1 optional RPS
Normal Input Voltage	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC
Input Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Input Current	0.5A max	7.65A max	0.8A max	7.65A max
Power Consumption	19.8W	31.4 W	33.8 W	45.8W
Environmental				
Operating Temperature	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)
Non-Operating Temperature	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)
Heat Dissipation	66 BTUs/Hr	105 BTUs/Hr	114 BTUs/Hr	153 BTUs/Hr
Operating Relative Humidity	5% to 95% (non-condensing)	5% to 95% (non- condensing)	5% to 95% (non-condensing)	5% to 95% (non- condensing)
Acoustics	Fanless: 0dB	Fan Low Speed: 36dB Fan High Speed: 49dB	Fan Off: 0dB Fan On: 42dB	Fan Low Speed: 39dB Fan High Speed: 49dB

800-Series Switch Model Specifications

	08G20G2-08	08G20G2-08P	08G20G4-24
Performance			
Switching Throughput Mpps	14.9 Mpps	14.9 Mpps	41.7 Mpps
Switching Capacity	20 Gbps	20 Gbps	56 Gbps
MAC Address Table	16K	16K	16K
VLANs Supported	255	255	255
PoE Specifications			
802.3af Interoperable	N/A	Yes	N/A
802.3at Interoperable	N/A	Yes	N/A
System Power	N/A	104 watts per switch with up to 30 watts per port Per-port switch power monitor: Enable/disable Priority safety Overload & short circuit protection	N/A
Physical Specifications			
Dimensions (H x W x D), Rack Units	4.06 cm H x 20.95cm W x 22.2cm D "1.60 H x 8.25" W x 8.74" D 1U	4.06 cm H x 20.95 cm W x 22.2 cm D 1.60" H x 8.25" W x 8.74" D 1U	4.4 cm H x 44.1 cm W x 21.66 cm D 1.73" H x 17.36" W x 8.53" D 1U
Net Weight	1.50 kg (3.30 lb)	1.86 kg (4.10 lb)	2.35 kg (5.20 lb)
MTBF	865,139 hours	536,628 hours	532,023 hours
Physical Ports	(8) 10/100/1000 ports (2) 1Gb SFP ports (1) Console port Max: 10 active ports	(8) 10/100/1000 ports (2) 1Gb SFP ports (1) Console port Max: 10 active ports	(24) 10/100/1000 ports (4) 1Gb SFP ports (1) Console port Max: 28 active ports
Power			
Power Supplies	1 Internal, 1 optional RPS	1 Internal, 1 optional RPS	1 Internal, 1 optional RPS
Normal Input Voltage	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC
Input Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Input Current	0.4A max	2.0A max	0.8A max
Power Consumption	15.9 W	23.3 W	30.0 W
Environmental			
Operating Temperature	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)
Non-Operating Temperature	-40° to 70° C (-40° to 158° F)	40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)
Heat Dissipation	47 BTUs/Hr	80 BTUs/Hr	100 BTUs/Hr
Operating Relative Humidity	5% to 95% (non- condensing)	5% to 95% (non- condensing)	5% to 95% (non- condensing)
Acoustics	Fan Off: 0dB Fan On: 38dB	Fan Off*: 0db Fan Low Speed: 38dB	Fan Off: 0dB Fan On: 44dB

* requires firmware release 1.02.02 Hardware Rev 5C or higher - 60 watts or less at 30°C or less Hardware Rev lower than 5C—30 watts or less at 30°C or less

800-Series Switch Model Specifications

	08G20G4-24P	08G20G4-48	08G20G4-48P
Performance			
Switching Throughput Mpps	41.7 Mpps	77.4 Mpps	77.4 Mpps
Switching Capacity	56 Gbps	104 Gbps	104 Gbps
MAC Address Table	16K	16K	16K
VLANs Supported	255	255	255
PoE Specifications			
802.3af Interoperable	Yes	N/A	Yes
802.3at Interoperable	Yes	N/A	Yes
System Power	375 watts per switch with up to 30 watts per port Per-port switch power monitor: Enable/disable Priority safety Overload & short circuit protection	N/A	375 watts per switch with up to 30 watts per port Per-port switch power monitor: Enable/disable Priority safety Overload & short circuit protection
Physical Specifications			
Dimensions (H x W x D), Rack Units	4.4 cm H x 44.1 cm W x 37.82 cm D 1.73" H x 17.36" W x 14.89" D 1U	4.4 cm H x 44.1 cm W x 37.82cm D 1.73" H x 17.36" W x 14.89" D 1U	4.4 cm H x 44.1 cm W x 37.82 cm D 1.73" H x 17.36" W x 14.89" D 1U
Net Weight	5.54 kg (12.2 lb)	4.50 kg (9.90 lb)	6.14 kg (13.5 lb)
MTBF	275,199 hours	369,938 hours	225,591 hours
Physical Ports	(24) 10/100/1000 PoE ports (4) 1Gb SFP ports (1) Console port Max: 28 active ports	(48) 10/100/1000 ports (4) 1Gb SFP ports (1) Console port Max: 52 active ports	(48) 10/100/1000 PoE ports (4) 1Gb SFP ports (1) Console port Max: 52 active ports
Power			
Power Supplies	1 Internal, 1 optional RPS	1 Internal, 1 optional RPS	1 Internal, 1 optional RPS
Normal Input Voltage	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC
Input Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Input Current	7.65A max	1.2A max	7.65A max
Power Consumption	36.4 W	56.1 W	63.1 W
Environmental			
Operating Temperature	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)
Non-Operating Temperature	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)	40° to 70° C (-40° to 158° F)
Heat Dissipation	124 BTUs/Hr	190 BTUs/Hr	215BTUs/Hr
Operating Relative Humidity	5% to 95% (non- condensing)	5% to 95% (non- condensing)	5% to 95% (non- condensing)
Acoustics	Fan Low Speed: 38dB Fan High Speed: 50dB	Fan Low Speed: 37dB Fan High Speed: 42dB	Fan Low Speed: 38dB Fan High Speed: 51dB

800-Series Switch Model Specifications

ALL MODELS	
Agency Specifications	
Vibration	IEC 68-2-6, IEC68-2-36
Shock	IEC 68-2-29
Drop	IEC 68-2-32
Altitude – operating	Operational up to 2,000 m 6,561 feet
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)

Note: Switches do not ship with a console cable since every switch can be fully managed via a web browser.
If Command Line Interface (CLI) management is desired, please order the optional console cable.

Model Number Information

PART NUMBER	DESCRIPTION
800-Series 10/100 Switches	
08H20G4-24	24 port 10/100 800-Series Layer 2 switch with Quad 1Gb uplinks
08H20G4-24P	24 port 10/100 PoE (802.3at) 800-Series Layer 2 switch with Quad 1Gb uplinks
08H20G4-48	48 port 10/100 800-Series Layer 2 switch with Quad 1Gb uplinks
08H20G4-48P	48 port 10/100 PoE (802.3at) 800-Series Layer 2 switch with Quad 1Gb uplinks
800-Series 10/100/1000 Switches	
08G20G2-08	8 port 10/100/1000 800-Series Layer 2 switch with Dual 1Gb uplinks
08G20G2-08P	8 port 10/100/1000 PoE (802.3at) 800-Series Layer 2 switch with Dual 1Gb uplinks
08G20G4-24	24 port 10/100/1000 800-Series Layer 2 switch with Quad 1Gb uplinks
08G20G4-24P	24 port 10/100/1000 PoE (802.3at) 800-Series Layer 2 switch with Quad 1Gb uplinks
08G20G4-48	48 port 10/100/1000 800-Series Layer 2 switch with Quad 1Gb uplinks
08G20G4-48P	48 port 10/100/1000 PoE (802.3at) 800-Series Layer 2 switch with Quad 1Gb uplinks
Optional Redundant Power Supplies	
08A-RPS-24	Redundant Power Supply for 8 port non-PoE 800-Series switch
08A-RPS-130P	Redundant Power Supply for 8 port 802.3at PoE 800-Series switch
08A-RPS-150	Redundant Power Supply for 24 and 48 port non-PoE 800-Series switches (optional shelf mounting listed below)
08A-RPS-500P	Redundant Power Supply for 24 and 48 port 802.3at PoE 800-Series switches
Accessories	
08A-CON-CBL	Console Cable for 800-Series switch
Mounting Options for 8 Port Switches	
D2-RMT	Rack Mount Kit for D2/800-8 Ports
D2-TBL-MNT	Under Table Mount Kit for D2/800-8 Ports
D2-WALL-MNT	Wall Mount Kit for D2/800-8 Ports
Mounting Options for RPS Units	
STK-RPS-150CH2	2-slot modular power supply shelf (power supply 08A-RPS-150 sold separately)
STK-RPS-150CH8	8-slot modular power supply shelf (power supply 08A-RPS-150 sold separately)

POWER CORDS
In support of its expanding Green initiatives as of July 1st 2014, Extreme Networks will no longer ship power cords with products. Power cords can be ordered separately but need to be specified at the time order. Please refer to www.extremenetworks.com/product/powercords/ for details on power cord availability for this product.

Transceivers

Extreme Networks transceivers provide flexible connectivity options for Ethernet. All Extreme Networks 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: www.extremenetworks.com/product/transceivers

Warranty

As a customer-centric company, Extreme Networks is committed to providing quality products and solutions. In the event that one of our products fails due to a defect, we have developed a comprehensive warranty that protects you and provides a simple way to get your products repaired or media replaced as soon as possible.

All 800-Series switches come with the Extreme Networks lifetime warranty against manufacturing defects. For full warranty terms and conditions please go to: www.extremenetworks.com/support/policies

Service and Support

Extreme 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 Extreme Networks account executive for more information about Extreme Networks Service and Support.

Extreme networks

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