# **HP 3800 Switch Series**





### **Product overview**

The HP 3800 Switch Series is a family of nine fully managed Gigabit Ethernet switches available in 24-port and 48-port models, with or without PoE+, and with either SFP+ or 10GBASE-T uplinks. The 3800 Switch Series utilizes the latest HP ProVision ASIC technology and advances in hardware engineering to deliver one of the most resilient and energy-efficient switches in the industry. In addition, meshed stacking technology is implemented in this switch series to deliver chassis-like resiliency in a flexible, stackable form factor.

### A summary of the highlights of the 3800 Switch Series:

- Fully managed L3 stackable switch series
- Highly resilient low-latency architecture
- SFP+, 10GBASE-T, PoE+, and modular stacking
- Highly resilient meshed stacking technology
- Limited Lifetime Warranty 2.0 with 3 years 24x7 phone support

### **Features and benefits**

### Software-defined networking (SDN)

#### OpenFlow

Is a key technology that enables SDN by allowing separation of the data (packet forwarding) and control (routing decision) paths

### **Unified Wired and Wireless**

NEW HTTP redirect function

Supports HP Intelligent Management Center (IMC) bring your own device (BYOD) solution

### Quality of service (QoS)

• Advanced classifier-based QoS

Classifies traffic using multiple match criteria based on L2, L3, and L4 information; and applies QoS policies such as setting the priority level and rate limiting to selected traffic on a per-port or per-VLAN basis

• L4 prioritization

Enables prioritization based on TCP/UDP port numbers

• Class of service (CoS)

Sets the IEEE 802.1p priority tag based on the IP address, IP type of service (ToS), L3 protocol, TCP/UDP port number, source port, and DiffServ

- Bandwidth shaping
- Port-based rate limiting

Enabled per-port ingress/egress-enforced bandwidth increase

- Classifier-based rate limiting

Uses an access control list (ACL) to enforce increased bandwidth for ingress traffic on each port

- Reduced bandwidth

Provides per-port per-queue egress-based bandwidth reduction

- Remote intelligent mirroring
- Mirrors selected ingress/egress traffic based on an ACL, port, MAC address, or VLAN to a local or remote HP 8200 zl, 6600, 6200 yl, 5400 zl, or 3500 switch anywhere on the network
- Remote monitoring (RMON), Extended RMON (XRMON), and sFlow v5

Provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events

Traffic prioritization

Allows real-time traffic classification into eight priority levels that are mapped to eight queues

#### Management

• Friendly port names

Allows assignment of descriptive names to ports

• IEEE 802.1AB link-layer discovery protocol (LLDP)

Advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications

Command authorization

Leverages the RADIUS to link a custom list of CLI commands to an individual network administrator's login; an audit trail documents the activity

• Unidirectional link detection (UDLD)

Monitors the cable between two switches and shuts down the ports on both ends if the cable is broken, turning the bidirectional link into a unidirectional one; this helps prevent network problems such as loops

• Multiple configuration files

Are easily stored with a flash image

• Dual flash images

Provides independent primary and secondary operating system files for backup while upgrading

• Out-of-band Ethernet management port

Enables management over a separate physical management network; and keeps management traffic segmented from network data traffic

- Comware CLI
- Comware-compatible CLI

Bridges the experience of HP Comware CLI users who use the ProVision software CLI

- Display and fundamental Comware CLI commands

Are embedded in the switch CLI as native commands; display output is formatted as on Comware-based switches and fundamental commands provide a Comware-familiar initial switch setup

- Configuration Comware CLI commands

Elicit CLI help to formulate the correct ProVision software CLI command

#### Connectivity

Jumbo frames

Allow high-performance remote backup and disaster-recovery services on GbE and 10GbE ports

• IEEE 802.3at PoE+

Provides up to 30 W per port to IEEE 802.3at-complaint PoE/PoE+-powered devices such as video IP phones, IEEE 802.11n wireless access points, and advanced pan/zoom/tilt security cameras

Pre-standard PoE support

Detects and provides power to pre-standard PoE devices (refer to the list of supported devices in the product FAQs, which can be accessed at hp.com/networking)

- Choice of uplinks
- SFP+ uplink models

Provide fiber-optic (up to 70 km) or direct-attach-cable (DAC) connectivity

- 10GBASE-T uplink models

Offer 10GbE speeds, using standard RJ-45 connectors and standard twisted-pair cabling up to 100 m

Auto-MDIX

Provides automatic adjustments for straight-through or crossover cables on all RJ-45 ports

• IPv6

– IPv6 host

Enables switches to be managed in an IPv6 network

– Dual stack (IPv4 and IPv6)

Provides the transition mechanism from IPv4 to IPv6; and supports connectivity for both protocols

– MLD snooping

Forwards IPv6 multicast traffic to the appropriate interface

- IPv6 ACL/QoS

Supports ACL and QoS for IPv6 network traffic

– IPv6 routing

Supports static and open standard path first (OSPF) v3 routing protocols

– 6-in-4 tunneling

Supports encapsulation of IPv6 traffic in IPv4 packets

– Security

Provides RA guard, DHCPv6 protection, dynamic IPv6 lockdown

#### Performance

• Selectable queue configurations

Enables increased performance by selecting the number of queues and associated memory buffering that best meet the requirements of the network applications

- Energy-efficient design
- 80 PLUS Silver Certified power supply

Increases power efficiency and savings

- Energy-efficient Ethernet (EEE) support

Reduces power consumption in accordance with IEEE 802.3az

- Meshed stacking technology
   High-performance stacking
  - Provides up to 336 Gb/s of stacking throughput; each 4-port stacking module can support up to 42 Gb/s in each direction per stacking port
- Ring, chain, and mesh topologies

Support up to a 10-member ring or chain and 5-member fully meshed stacks; meshed topologies offer increased resiliency vs. a standard ring

Virtualized switching

Provides simplified management as the switches appear as a single chassis when stacked

• HP ProVision ASIC architecture

Is designed with the latest ProVision ASIC, providing very low latency, increased packet buffering, and adaptive power consumption

#### **Resiliency and high availability**

Virtual router redundancy protocol (VRRP)

Allows groups of two routers to dynamically back each other up to create highly available router environments in IPv4 and IPv6 networks

• Nonstop switching and routing

Improves network availability to better support critical applications, such as unified communication and mobility; traffic will continue to be forwarded during failovers, when the backup member of the stack becomes the commander

- IEEE 802.3ad link-aggregation-control protocol (LACP) and HP port trunking
- Support up to 24 trunks, each with up to eight links (ports) per trunk
- Multiple spanning tree protocol (STP) and IEEE 802.1s

Offers high link availability in multiple VLAN environments by allowing multiple spanning trees; and provides legacy support for IEEE 802.1D and IEEE 802.1w

- Dual hot-swappable power supplies
- Increased resiliency

Provides secondary power supply to enable complete switch power redundancy in case of power line or supply failure

- Increased PoE+ power

Provides the secondary power supply to increase the total available PoE+ power

Distributed trunking

Enables loop-free and redundant network topology without using STP; and allows a server or switch to connect to two switches using one logical trunk for redundancy and load sharing

SmartLink

Provides easy-to-configure link redundancy of active and standby links

#### L2 switching

• GARP VLAN registration protocol

Allows automatic learning and dynamic assignment of VLANs

• IEEE 802.1ad Q-in-Q

Increases the scalability of an Ethernet network by providing a hierarchical structure; and connects multiple LANs on a high-speed campus or metro network

• VLAN support and tagging

Supports the IEEE 802.1Q standard and 2,048 VLANs simultaneously

IEEE 802.1v protocol VLANs

Isolate select non-IPv4 protocols automatically into their own VLANs

MAC-based VLAN

Provides granular control and security; and uses the RADIUS to map a MAC address/user to specific VLANs

• Rapid per-VLAN spanning tree (RPVST+)

Allows each VLAN to build a separate spanning tree to improve link bandwidth usage; is compatible with PVST+

• HP switch meshing

Enables dynamic load balancing across multiple active redundant links to increase the aggregate bandwidth availability; and allows concurrent L3 routing

#### L3 services

Loopback interface address

Defines an address in the routing information protocol (RIP) and OSPF, improving the diagnostic capability

Route maps

Provide more control during route redistribution; and allow filtering and altering of route metrics

• User datagram protocol (UDP) helper function

Allows UDP broadcasts to be directed across router interfaces to specific IP unicast or subnet broadcast addresses; and helps prevent server spoofing for UDP services such as DHCP

NEW DHCP server

Centralizes and reduces the cost of IPv4 address management

### L3 routing

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• RIP
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Includes RIPv1 and RIPv2 routing

• Static IP routing

Provides manually configured routing for both IPv4 and IPv6 networks

• OSPF

Provides OSPFv2 for IPv4 routing and OSPFv3 for IPv6 routing

Policy-based routing

Makes routing decisions based on policies set by the network administrator

• IPv4 border gateway routing protocol

Is scalable, robust, and flexible

### Security

Source-port filtering

Allows only specified ports to communicate with each other

• RADIUS/TACACS+

Eases switch management security administration by using a password authentication server

• Secure shell (SSH)

Encrypts all transmitted data for secure remote CLI access over IP networks

Secure Sockets Layer (SSL)

Encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch

Port security

Allows access only to specified MAC addresses, which can be learned or specified by the administrator

MAC address lockout

Helps prevents certain configured MAC addresses from connecting to the network

• Detection of malicious attacks

Monitors 10 types of network traffic; and sends a warning when an anomaly that can be potentially caused by malicious attacks is detected

Secure FTP

Allows secure file transfer to and from the switch; and protects against unwanted file downloads or unauthorized copying of a switch configuration file

- Switch management logon security
- Helps secure switch CLI logon by optionally requiring either RADIUS or TACACS+ authentication
- Secure management access

Delivers secure encryption of all access methods (CLI, GUI, and MIB) through SSHv2, SSL, and/or SNMPv3

ICMP throttling

Defeats ICMP denial-of-service attacks by enabling any switch port to automatically throttle ICMP traffic

• Virus throttling

Detects traffic patterns typical of worm-type viruses; and either throttles or helps entirely prevent the virus from spreading across the routed VLANs or bridged interfaces without requiring external appliances

Identity-driven ACL

Enables implementation of a highly granular and flexible access security policy and VLAN assignment specific to each authenticated network user

• STP bridge protocol data units (BPDUs) port protection

Blocks BPDUs on ports that do not require BPDUs, mitigating forged BPDU attacks

Dynamic IP lockdown

Works with DHCP protection to block traffic from unauthorized hosts, mitigating IP source address spoofing

• DHCP protection

Blocks DHCP packets from unauthorized DHCP servers, mitigating denial-of-service attacks

Dynamic ARP protection

Blocks ARP broadcasts from unauthorized hosts, helping prevent eavesdropping or theft of network data

• STP root guard

Protects the root bridge from malicious attacks or configuration mistakes

• Management interface wizard

Helps secure management interfaces such as SNMP, telnet, SSH, SSL, Web, and USB at the desired level

Security banner

Displays a customized security policy when users log in to the switch

Switch CPU protection

Provides automatic protection against malicious network traffic trying to shut down the switch

• ACLs

Provide filtering based on the IP field, source/destination IP address/subnet and source/destination TCP/UDP port number on a per-VLAN or per-port basis

- Multiple authentication methods
- IEEE 802.1X

Enables authentication of multiple IEEE 802.1X users per port; and helps prevent a user from "piggybacking" on another user's authentication

- Web-based authentication
- Authenticates from the Web browser for clients that do not support the 802.1X supplicant
- MAC-based authentication
  - Provides client authentication with a RADIUS server, based on the client's MAC address
- Concurrent authentication modes

Allows a switch port to accept up to 32 sessions of IEEE 802.1X, Web, and MAC authentications

#### Convergence

• IP multicast snooping (data-driven IGMP)

Helps prevent flooding of IP multicast traffic

LLDP-media endpoint discovery (MED)

Defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones

• PoE allocations

Supports multiple methods—automatic, IEEE 802.3af class, LLDP-MED, or user specified—to allocate PoE power for more efficient energy use

• IP multicast routing

Includes PIM sparse and dense modes to route IP multicast traffic

- Auto VLAN configuration for voice
- RADIUS VLAN

Uses a standard RADIUS attribute and LLDP-MED to automatically configure a VLAN for IP phones

- CDPv2

Uses CDPv2 to configure legacy IP phones

Local MAC authentication

Assigns attributes such as VLAN and QoS, using a locally configured profile that can be a list of MAC prefixes

#### Warranty and support

• Limited Lifetime warranty 2.0

Advance hardware replacement with next-business-day delivery (available in most countries). See hp.com/networking/warrantysummary for duration details

• Electronic and telephone support (for Limited Lifetime Warranty 2.0)

limited 24x7 telephone support is available from HP for the first 3 years; limited electronic and business hours telephone support is available from HP for the entire warranty period; to reach our support centers, refer to <u>hp.com/networking/contact-support</u>; for details on the duration of support provided with your product purchase, refer to <u>hp.com/networking/</u>warrantysummary

Software releases

To find software for your product, visit <u>hp.com/networking/support</u>; for details on the software releases available with your product purchase, visit <u>hp.com/networking/</u>warrantysummary

### HP 3800 Switch Series

### Specifications

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	HP 3800-24G-PoE+-2SFP+	HP 3800-48G-PoE+-4SFP+	HP 3800-24G-2SFP+
	Switch (J9573A)	Switch (J9574A)	Switch (J9575A)
Included accessories	1 HP 3800 Switch Fan Tray (J9582A)	1 HP 3800 Switch Fan Tray (J9582A)	1 HP 3800 Switch Fan Tray (J9582A)
	1 HP X312 1000W 100-240VAC to 54VDC	1 HP X312 1000W 100-240VAC to 54VDC	1 HP X311 400W 100-240VAC to 12VDC
	Power Supply (J9580A)	Power Supply (J9580A)	Power Supply (J9581A)
Ports	24 RJ-45 autosensing 10/100/1000 PoE+	48 RJ-45 autosensing 10/100/1000 PoE+	24 RJ-45 autosensing 10/100/1000 ports
	ports (IEEE 802.3 Type 10BASE-T, IEEE	ports (IEEE 802.3 Type 10BASE-T, IEEE	(IEEE 802.3 Type 10BASE-T, IEEE 802.3u
	802.3u Type 100BASE-TX, IEEE 802.3ab	802.3u Type 100BASE-TX, IEEE 802.3ab Type	Type 100BASE-TX, IEEE 802.3ab Type
	Type 1000BASE-T, IEEE 802.3at PoE+);	1000BASE-T, IEEE 802.3at PoE+);	1000BASE-T); Duplex:
	Duplex: 10BASE-T/100BASE-TX: half or full;	Duplex: 10BASE-T/100BASE-TX: half or full;	10BASE-T/100BASE-TX: half or full;
	1000BASE-T: full only	1000BASE-T: full only	1000BASE-T: full only
	2 fixed 1000/10000 SFP+ ports	4 fixed 1000/10000 SFP+ ports	2 fixed 1000/10000 SFP+ ports
	1 RJ-45 serial console port	1 RJ-45 serial console port	1 RJ-45 serial console port
	1 RJ-45 out-of-band management port	1 RJ-45 out-of-band management port	1 RJ-45 out-of-band management port
	1 stacking module slot	1 stacking module slot	1 stacking module slot
Power supplies	2 power supply slots	2 power supply slots	2 power supply slots
	1 minimum power supply required	1 minimum power supply required	1 minimum power supply required
	includes: 1 x J9580A (HP X312 1000W	includes: 1 x J9580A (HP X312 1000W	includes: 1 x J9581A (HP X311 400W
	100-240VAC to 54VDC Power Supply)	100-240VAC to 54VDC Power Supply)	100-240VAC to 12VDC Power Supply)
Fan tray	Includes: 1 x J9582A	Includes: 1 x J9582A	Includes: 1 x J9582A
	1 fan tray slot	1 fan tray slot	1 fan tray slot
Physical characteristics Weight	17.43(w) x 18.4(d) x 1.7(h) in. (44.27 x 46.74 x 4.32 cm) (1U height) 15.9 lb (7.21 kg) switch chassis with 1 power supply and fan tray installed	17.43(w) x 18.4(d) x 1.7(h) in. (44.27 x 46.74 x 4.32 cm) (1U height) 16.84 lb (7.64 kg) switch chassis with 1 power supply and fan tray installed	17.43(w) x 18.4(d) x 1.7(h) in. (44.27 x 46.74 x 4.32 cm) (1U height) 15.26 lb (6.92 kg) switch chassis with 1 power supply and fan tray installed
Memory and processor Processor	HP ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 18 MB dynamic	HP ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 36 MB dynamic	HP ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 18 MB dynamic
Mounting	Mounts in an EIA-standard 19 in. Telco rack	Mounts in an EIA-standard 19 in. Telco rack	Mounts in an EIA-standard 19 in. Telco rack
	or equipment cabinet (hardware included);	or equipment cabinet (hardware included);	or equipment cabinet (hardware included);
	horizontal surface mounting only	horizontal surface mounting only	horizontal surface mounting only
Performance 1000 Mb Latency 10 Gb/s Latency Throughput Switching capacity Routing table size MAC address table size	<ul> <li>2.8 µs (LIFO 64-byte packets)</li> <li>1.9 µs (LIFO 64-byte packets)</li> <li>up to 65.4 million pps (64-byte packets)</li> <li>88 Gb/s</li> <li>10000 entries (IPv4)</li> <li>65500 entries</li> </ul>	<ul> <li>2.8 µs (LIFO 64-byte packets)</li> <li>1.9 µs (LIFO 64-byte packets)</li> <li>up to 130.9 million pps (64-byte packets)</li> <li>176 Gb/s</li> <li>10000 entries (IPv4)</li> <li>65500 entries</li> </ul>	<ul> <li>2.8 µs (LIFO 64-byte packets)</li> <li>1.9 µs (LIFO 64-byte packets)</li> <li>up to 65.4 million pps (64-byte packets)</li> <li>88 Gb/s</li> <li>10000 entries (IPv4)</li> <li>65500 entries</li> </ul>
<b>Environment</b>	32°F to 131°F (0°C to 55°C); max temperature	32°F to 131°F (0°C to 55°C); max temperature	32°F to 131°F (0°C to 55°C); max temperature
Operating temperature	is 45°C when transceivers are installed	is 45°C when transceivers are installed	is 45°C when transceivers are installed
Operating relative humidity	15% to 95% @ 104°F (40°C), noncondensing	15% to 95% @ 104°F (40°C), noncondensing	15% to 95% @ 104°F (40°C), noncondensing
Nonoperating/Storage temperature Nonoperating/Storage relative humidity	-40°F to 158°F (-40°C to 70°C) 15% to 90% @ 149°F (65°C), noncondensing	-40°F to 158°F (-40°C to 70°C) 15% to 90% @ 149°F (65°C), noncondensing	-40°F to 158°F (-40°C to 70°C) 15% to 90% @ 149°F (65°C), noncondensing
Altitude	up to 10,000 ft. (3 km)	up to 10,000 ft. (3 km)	up to 10,000 ft. (3 km)
Acoustic	Power: 49 dB, Pressure: 33.7 dB	Power: 57 dB, Pressure: 41.2 dB	Power: 36 dB, Pressure: 26.4 dB
Electrical characteristics Frequency Maximum heat dissipation Voltage Current Maximum power rating Idle power PoE power	50/60 Hz 434 BTU/hr (457.87 kJ/hr) 100-120/200-240 VAC 9.4/7.8 A 127 W 70 W 720 W	50/60 Hz 635 BTU/hr (669.93 kJ/hr) 100-120/200-240 VAC 9.4/7.8 A 186 W 97 W 1080 W	50/60 Hz 434 BTU/hr (457.87 kJ/hr) 100-127/200-240 VAC 6/3 A 127 W 66 W

	HP 3800-24G-PoE+-2SFP+ Switch (J9573A)	HP 3800-48G-PoE+-4SFP+ Switch (J9574A)	HP 3800-24G-2SFP+ Switch (J9575A)
Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). With a single power supply at 120 V input, a maximum of 572 W of PoE power is available.	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). With a single power supply at 120 V input, a maximum of 514 W of PoE power is available. With a single power supply at 240 V, a maximum of 814 W of PoE power is available.	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	EN 60950/IEC 60950; UL 60950; CAN/CSA 22.2 No. 60950; EN 60825	EN 60950/IEC 60950; UL 60950; CAN/CSA 22.2 No. 60950; EN 60825	EN 60950/IEC 60950; UL 60950; CAN/CSA 22.2 No. 60950; EN 60825
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A
Immunity			
EN EN 55024, CISPR 24		EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m
EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
Surge	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC
Conducted	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V
Power frequency magnetic field	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	IEC 61000-4-8; 1 A/m, 50 or 60 Hz
Voltage dips and interruptions	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods
Harmonics	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2
Flicker	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3
Management	IMC—Intelligent Management Center; command-line interface; Web browser; configuration menu	IMC—Intelligent Management Center; command-line interface; Web browser; configuration menu	IMC—Intelligent Management Center; command-line interface; Web browser; configuration menu
Notes Supported 1G SFP transceivers are revision "B" or later (product number ends with the letter "B" or later, for example, J9142B, J8177C).		Supported 1G SFP transceivers are revision "B" or later (product number ends with the letter "B" or later, for example, J9142B, J8177C).	Supported 1G SFP transceivers are revision "B" or later (product number ends with the letter "B" or later, for example, J9142B, J8177C).
Services Refer to the HP website at hp.com/ networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.		Refer to the HP website at hp.com/ networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	Refer to the HP website at hp.com/ networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

	HP 3800-48G-4SFP+ Switch (J9576A)	HP 3800-24G-2XG Switch (J9585A)	HP 3800-48G-4XG Switch (J9586A)
Included accessories	1 HP 3800 Switch Fan Tray (J9582A) 1 HP X311 400W 100-240VAC to 12VDC Power Supply (J9581A)	1 HP 3800 Switch Fan Tray (J9582A) 1 HP X311 400W 100-240VAC to 12VDC Power Supply (J9581A)	1 HP X311 400W 100-240VAC to 12VDC Power Supply (J9581A)
Ports	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 fixed 1000/10000 SFP+ ports 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 stacking module slot	24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 RJ-45 10GbE ports IEEE 802.3an-2006 Type 10GBASE-T; Duplex: full only 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 stacking module slot	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T; full only 4 RJ-45 10GbE ports IEEE 802.3an-2006 Type 10GBASE-T; Duplex: full only 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 stacking module slot
Power supplies	2 power supply slots 1 minimum power supply required includes: 1 x J9581A (HP X311 400W 100-240VAC to 12VDC Power Supply)	2 power supply slots 1 minimum power supply required includes: 1 x J9581A (HP X311 400W 100-240VAC to 12VDC Power Supply)	2 power supply slots 1 minimum power supply required includes: 1 x J9581A (HP X311 400W 100-240VAC to 12VDC Power Supply)
Fan tray	Includes: 1 x J9582A 1 fan tray slot	Includes: 1 x J9582A 1 fan tray slot	Includes: 1 x J9582A 1 fan tray slot
Physical characteristics	17.43(w) x 18.4(d) x 1.7(h) in. (44.27 x 46.74 x 4.32 cm) (1U height)	17.43(w) x 18.4(d) x 1.7(h) in. (44.27 x 46.74 x 4.32 cm) (1U height)	17.43(w) x 18.4(d) x 1.7(h) in. (44.27 x 46.74 x 4.32 cm) (1U height)
Weight	16.01 lb (7.26 kg) switch chassis with 1 power supply and fan tray installed	15.81 lb (7.17 kg) switch chassis with 1 power supply and fan tray installed	16.36 lb (7.42 kg) switch chassis with 1 power supply and fan tray installed
<b>Memory and processor</b> Processor	HP ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 36 MB dynamic	HP ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 18 MB dynamic	HP ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 36 MB dynamic
Mounting	Mounts in an EIA-standard 19 in. Telco rack or equipment cabinet (hardware included); horizontal surface mounting only	Mounts in an EIA-standard 19 in. Telco rack or equipment cabinet (hardware included); horizontal surface mounting only	Mounts in an EIA-standard 19 in. Telco rack or equipment cabinet (hardware included); horizontal surface mounting only
Performance 1000 Mb Latency 10 Gb/s Latency Throughput Switching capacity Routing table size MAC address table size	< 2.8 µs (LIFO 64-byte packets) < 1.9 µs (LIFO 64-byte packets) up to 130.9 million pps (64-byte packets) 176 Gb/s 10000 entries (IPv4) 65500 entries	< 2.8 µs (LIFO 64-byte packets) < 1.9 µs (LIFO 64-byte packets) up to 65.4 million pps (64-byte packets) 88 Gb/s 10000 entries (IPv4) 65500 entries	< 2.8 µs (LIFO 64-byte packets) < 1.9 µs (LIFO 64-byte packets) up to 130.9 million pps (64-byte packets) 176 Gb/s 10000 entries (IPv4) 65500 entries
Environment Operating temperature Operating relative humidity	32°F to 131°F (0°C to 55°C); max temperature is 45°C when transceivers are installed 15% to 95% @ 104°F (40°C), noncondensing	32°F to 131°F (0°C to 55°C) 15% to 95% @ 104°F (40°C), noncondensing	32°F to 131°F (0°C to 55°C); max temperature is 45°C when SFP+ transceivers are installed 15% to 95% @ 104°F (40°C), noncondensing
Nonoperating/Storage temperature Nonoperating/Storage relative humidity	-40°F to 158°F (-40°C to 70°C) 15% to 90% @ 149°F (65°C), noncondensing	-40°F to 158°F (-40°C to 70°C) 15% to 90% @ 149°F (65°C), noncondensing	-40°F to 158°F (-40°C to 70°C) 15% to 90% @ 149°F (65°C), noncondensing
Altitude Acoustic	up to 10,000 ft. (3 km) Power: 36 dB, Pressure: 25.4 dB	up to 10,000 ft. (3 km) Power: 39 dB, Pressure: 25.5 dB	up to 10,000 ft. (3 km) Power: 34 dB, Pressure: 24.5 dB
Electrical characteristics Frequency Maximum heat dissipation Voltage Current Maximum power rating	50/60 Hz 635 BTU/hr (669.93 kJ/hr) 100-127/200-240 VAC 6/3 A 186 W	50/60 Hz 434 BTU/hr (457.87 kJ/hr) 100-127/200-240 VAC 6/3 A 127 W	50/60 Hz 635 BTU/hr (669.93 kJ/hr) 100-127/200-240 VAC 6/3 A 186 W

	HP 3800-48G-4SFP+ Switch (J9576A)	HP 3800-24G-2XG Switch (J9585A)	HP 3800-48G-4XG Switch (J9586A)
Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded POE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	EN 60950/IEC 60950; UL 60950; CAN/CSA 22.2 No. 60950; EN 60825	EN 60950/IEC 60950; UL 60950; CAN/CSA 22.2 No. 60950; EN 60825	EN 60950/IEC 60950; UL 60950; CAN/CSA 22.2 No. 60950; EN 60825
Emissions	Emissions FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A		FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A
Immunity			
EN	EN 55024, CISPR 24	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m
EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
Surge	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC
Conducted	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V
Power frequency magnetic field Voltage dips and interruptions	IEC 61000-4-8; 1 A/m, 50 or 60 Hz IEC 61000-4-11; >95% reductions, 0.5 period;	IEC 61000-4-8; 1 A/m, 50 or 60 Hz IEC 61000-4-11; >95% reductions, 0.5 period;	IEC 61000-4-8; 1 A/m, 50 or 60 Hz IEC 61000-4-11; >95% reductions, 0.5 period;
	30% reduction, 25 periods	30% reduction, 25 periods	30% reduction, 25 periods
Harmonics	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2
Flicker	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3
Management	IMC—Intelligent Management Center; command-line interface; Web browser; configuration menu	IMC—Intelligent Management Center; command-line interface; Web browser; configuration menu	IMC—Intelligent Management Center; command-line interface; Web browser; configuration menu
Notes	Supported 1G SFP transceivers are revision "B" or later (product number ends with the letter "B" or later, for example, J9142B, J8177C).		
Services	Refer to the HP website at hp.com/networking/ services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	Refer to the HP website at hp.com/networking/ services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	Refer to the HP website at hp.com/networking/ services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

	HP 3800-24G-PoE+-2XG Switch (J9587A)	HP 3800-48G-PoE+-4XG Switch (J9588A)	HP 3800-24SFP-2SFP+ Switch (J9584A)
Included accessories	1 HP 3800 Switch Fan Tray (J9582A) 1 HP X312 1000W 100-240VAC to 54VDC Power Supply (J9580A)	1 HP 3800 Switch Fan Tray (J9582A) 1 HP X312 1000W 100-240VAC to 54VDC Power Supply (J9580A)	1 HP 3800 Switch Fan Tray (J9582A) 1 HP X311 400W 100-240VAC to 12VDC Power Supply (J9581A) `
Ports	24 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 RJ-45 10GbE ports IEEE 802.3an-2006 Type 10GBASE-T; Duplex: full only	48 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 RJ-45 10GbE ports IEEE 802.3an-2006 Type 10GBASE-T; Duplex: full only	24 SFP 100/1000 Mbps ports (IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 100BASE-TX: half or full; 1000BASE-T: full only 2 fixed 1000/10000 SFP+ ports
	1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 stacking module slot	1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 stacking module slot	1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 stacking module slot
Power supplies	2 power supply slots 1 minimum power supply required includes: 1 x J9580A (HP X312 1000W 100-240VAC to 54VDC Power Supply)	2 power supply slots 1 minimum power supply required includes: 1 x J9580A (HP X312 1000W 100-240VAC to 54VDC Power Supply)	2 power supply slots 1 minimum power supply required includes: 1 x J9581A (HP X311 400W 100-240VAC to 12VDC Power Supply)
Fan tray	Includes: 1 x J9582A 1 fan tray slot	Includes: 1 × J9582A 1 fan tray slot	Includes: 1 x J9582A 1 fan tray slot
Physical characteristics Weight	17.43(w) x 18.4(d) x 1.7(h) in. (44.27 x 46.74 x 4.32 cm) (1U height) 16.45 lb (7.46 kg) switch chassis with 1 power supply and fan tray installed	17.43(w) x 18.4(d) x 1.7(h) in. (44.27 x 46.74 x 4.32 cm) (1U height) 17.24 lb (7.82 kg) switch chassis with 1 power supply and fan tray installed	17.43(w) x 18.4(d) x 1.7(h) in. (44.27 x 46.74 x 4.32 cm) (1U height) 16.01 lb (7.26 kg) switch chassis with 1 power supply and fan tray installed
Memory and processor Processor	HP ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 18 MB dynamic	HP ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 36 MB dynamic	HP ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 18 MB dynamic
Mounting	Mounts in an EIA-standard 19 in. Telco rack or equipment cabinet (hardware included); horizontal surface mounting only	Mounts in an EIA-standard 19 in. Telco rack or equipment cabinet (hardware included); horizontal surface mounting only	Mounts in an EIA-standard 19 in. Telco rack or equipment cabinet (hardware included); horizontal surface mounting only
Performance 1000 Mb Latency 10 Gb/s Latency Throughput Switching capacity Routing table size MAC address table size	< 2.8 µs (LIFO 64-byte packets) < 1.9 µs (LIFO 64-byte packets) µp to 65.4 million pps (64-byte packets) 88 Gb/s 10000 entries (IPv4) 65500 entries	< 2.8 µs (LIFO 64-byte packets) < 1.9 µs (LIFO 64-byte packets) up to 130.9 million pps (64-byte packets) 176 Gb/s 10000 entries (IPv4) 65500 entries	< 2.8 µs (LIFO 64-byte packets) < 1.9 µs (LIFO 64-byte packets) up to 65.4 million pps (64-byte packets) 88 Gb/s 10000 entries (IPv4) 65500 entries
Environment			
Operating temperature	32°F to 131°F (0°C to 55°C)	32°F to 131°F (0°C to 55°C); max temperature is 45°C when SFP+ transceivers are installed	32°F to 113°F (0°C to 45°C)
Operating relative humidity Nonoperating/Storage temperature Nonoperating/Storage relative humidity	15% to 95% @ 104°F (40°C), noncondensing -40°F to 158°F (-40°C to 70°C) 15% to 90% @ 149°F (65°C), noncondensing	15% to 95% @ 104°F (40°C), noncondensing -40°F to 158°F (-40°C to 70°C) 15% to 90% @ 149°F (65°C), noncondensing	15% to 95% @ 104°F (40°C), noncondensing -40°F to 158°F (-40°C to 70°C) 15% to 90% @ 149°F (65°C), noncondensing
Altitude Acoustic	up to 10,000 ft. (3 km) Power: 48 dB, Pressure: 32.6 dB	up to 10,000 ft. (3 km) Power: 57 dB, Pressure: 41.5 dB	up to 10,000 ft. (3 km) Power: 36 dB, Pressure: 25 dB

	HP 3800-24G-PoE+-2XG Switch (J9587A)	HP 3800-48G-PoE+-4XG Switch (J9588A)	HP 3800-24SFP-2SFP+ Switch (J9584A)
Electrical characteristics			
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Maximum heat dissipation	434 BTU/hr (457.87 kJ/hr)	635 BTU/hr (669.93 kJ/hr)	434 BTU/hr (457.87 kJ/hr)
	100-120/200-240 VAC	100-120/200-240 VAC	
Voltage			100-127/200-240 VAC
Current	9.4/7.8 A	9.4/7.8 A	6/3 A
Maximum power rating	127 W	186 W	127 W
Idle power	71 W	100 W	55 W
PoEpower	720 W	1080 W	
Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). With a single power supply at 120 V input, a maximum of 572 W of PoE power is available.	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). With a single power supply at 120 V input, a maximum of 514 W of PoE power is available.	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	EN 60950/IEC 60950; UL 60950; CAN/CSA 22.2 No. 60950; EN 60825	EN 60950/IEC 60950; UL 60950; CAN/CSA 22.2 No. 60950; EN 60825	EN 60950/IEC 60950; UL 60950; CAN/CSA 22.2 No. 60950; EN 60825
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A
Immunity			
EN	EN 55024, CISPR 24	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m
EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV
	(signal line)	(signal line)	(signal line)
Surge	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC
Conducted	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V
Power frequency magnetic field	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	IEC 61000-4-8; 1 A/m, 50 or 60 Hz
Voltage dips and interruptions	IEC 61000-4-11; >95% reductions, 0.5 period;	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reductions, 0.5 period 30% reduction, 25 periods
Uperpapies	30% reduction, 25 periods		
Harmonics Flicker	EN 61000-3-2, IEC 61000-3-2 EN 61000-3-3, IEC 61000-3-3	EN 61000-3-2, IEC 61000-3-2 EN 61000-3-3, IEC 61000-3-3	EN 61000-3-2, IEC 61000-3-2 EN 61000-3-3, IEC 61000-3-3
Management	IMC—Intelligent Management Center;	IMC—Intelligent Management Center;	IMC—Intelligent Management Center;
management	command-line interface; Web browser; configuration menu	command-line interface; Web browser; configuration menu	command-line interface; Web browser; configuration menu
Notes			Supported 1G SFP transceivers are revision "B" or later (product number ends with the letter "B" or later, for example, J9142B, J8177C).
Services	Refer to the HP website at hp.com/ networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	Refer to the HP website at hp.com/ networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	Refer to the HP website at hp.com/ networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

### **Specifications (continued)**

	HP 3800-24G-PoE+-2XG Switch (J9587A)	HP 3800-48G-PoE+-4XG Switch (J9588A)	HP 3800-245FP-25FP+ Switch (J9584A)
Standards and	BGP	RFC 3973 PIM Dense Mode	Network management
Protocols	RFC 1997 BGP Communities Attribute		IEEE 802.1AB Link Layer Discovery Protocol (LLDI
applies to all products	RFC 2918 Route Refresh Capability	IPv6	RFC 2819 Four groups of RMON: 1 (statistics),
n series)	RFC 4456 BGP Route Reflection: An Alternative	RFC 1981 IPv6 Path MTU Discovery	2 (history), 3 (alarm) and 9 (events)
II Selles)	to Full	RFC 2375 IPv6 Multicast Address Assignments	RFC 3176 sFlow
		5	
	RFC 4271 A Border Gateway Protocol 4 (BGP-4)	RFC 2460 IPv6 Specification	RFC 5424 Syslog Protocol
	Mesh Internal BGP (IBGP)	RFC 2464 Transmission of IPv6 over Ethernet	ANSI/TIA-1057 LLDP Media Endpoint Discovery
	RFC 4724 Graceful Restart Mechanism for BGP	Networks	(LLDP-MED)
		RFC 2710 Multicast Listener Discovery (MLD) for IPv6	SNMPv1/v2c/v3
	Denial of service protection	RFC 2925 Definitions of Managed Objects for Remote	XRMON
	CPU DoS Protection	Ping, Traceroute, and Lookup Operations (Ping only)	
		RFC 3019 MLDv1 MIB	OSPF
	Device management	RFC 3315 DHCPv6 (client only)	RFC 2328 OSPFv2
	RFC 1591 DNS (client)	RFC 3484 Default Address Selection for IPv6	RFC 3101 OSPF NSSA
	HTML and telnet management	RFC 3587 IPv6 Global Unicast Address Format	RFC 3623 Graceful OSPF Restart (Unplanned
		RFC 3596 DNS Extension for IPv6	Outages only)
	General protocols	RFC 3810 MLDv2 (host joins only)	RFC 5340 OSPFv3 for IPv6
	IEEE 802.1ad Q-in-Q	RFC 4022 MIB for TCP	
	IEEE 802.1AX-2008 Link Aggregation	RFC 4087 IP Tunnel MIB	QoS/CoS
	IEEE 802.1D MAC Bridges	RFC 4113 MIB for UDP	RFC 2474 DiffServ Precedence, including
	IEEE 802.1p Priority	RFC 4213 Basic Transition Mechanisms for IPv6	8 queues/port
	IEEE 802.10 VLANs	Hosts and Routers	RFC 2597 DiffServ Assured Forwarding (AF)
	IEEE 802.1s Multiple Spanning Trees	RFC 4251 SSHv6 Architecture	
	IEEE 802.1v VLAN classification by Protocol and Port	RFC 4252 SSHv6 Authentication	Security
	IEEE 802.1w Rapid Reconfiguration of Spanning Tree	RFC 4253 SSHv6 Transport Layer	IEEE 802.1X Port Based Network Access Control
	IEEE 802.3ad Link Aggregation Control Protocol (LACP)	RFC 4253 SSHV6 Connection	RFC 1492 TACACS+
	IEEE 802.3af Power over Ethernet	RFC 4291 IP Version 6 Addressing Architecture	RFC 2865 RADIUS (client only)
	IEEE 802.3x Flow Control	RFC 4293 MIB for IP	RFC 2866 RADIUS Accounting
	RFC 768 UDP	RFC 4294 IPv6 Node Requirements	RFC 3579 RADIUS Support For Extensible
	RFC 783 TFTP Protocol (revision 2)	RFC 4419 Key Exchange for SSH	Authentication
	RFC 792 ICMP	RFC 4443 ICMPv6	Protocol (EAP)
	RFC 793 TCP	RFC 4541 IGMP & MLD Snooping Switch	Secure Sockets Layer (SSL)
	RFC 826 ARP	RFC 4861 IPv6 Neighbor Discovery	SSHv2 Secure Shell
	RFC 854 TELNET	RFC 4862 IPv6 Stateless Address Auto-configuration	
	RFC 868 Time Protocol	RFC 5095 Deprecation of Type 0 Routing	
	RFC 951 BOOTP	Headers in IPv6	
	RFC 1058 RIPv1	RFC 5340 OSPFv3 for IPv6	
	RFC 1350 TFTP Protocol (revision 2)	RFC 5453 Reserved IPv6 Interface Identifiers	
	RFC 1519 CIDR	RFC 5519 Multicast Group Membership Discovery	
	RFC 1542 BOOTP Extensions	MIB (MLDv2 only)	
	RFC 1918 Address Allocation for Private Internet		
	RFC 2030 Simple Network Time Protocol (SNTP) v4	MIBs	
	RFC 2131 DHCP	IEEE 802.1ap (MSTP and STP MIBs only)	
	RFC 2453 RIPv2	IEEE 802.1Q Bridge MIB	
	RFC 2548 (MS-RAS-Vendor only)	RFC 1213 MIB II	
	RFC 3046 DHCP Relay Agent Information Option	RFC 1493 Bridge MIB	
	RFC 3576 Ext to RADIUS (CoA only)	RFC 1155 Structure & ID of Mgmt Info for TCP/IP	
	RFC 3768 VRRP	Internets	
	RFC 4675 RADIUS VLAN & Priority	RFC 1724 RIPv2 MIB	
	RFC 5798 VRRP (exclude Accept Mode and	RFC 1850 OSPFv2 MIB	
	sub-sec timer)	RFC 2021 RMONv2 MIB	
	כנט-ככנ נווופו)	RFC 2021 RMONV2 MIB RFC 2096 IP Forwarding Table MIB	
	ID multicast		
	IP multicast	RFC 2578 Structure of Management Information	
	RFC 3376 IGMPv3 (host joins only)	Version 2 (SMIv2)	

RFC 2613 SMON MIB RFC 2618 RADIUS Client MIB RFC 2620 RADIUS Accounting MIB RFC 2665 Ethernet-Like-MIB RFC 2668 802.3 MAU MIB RFC 2674 802.1p and RFC 2737 Entity MIB (Version 2) RFC 2787 VRRP MIB

RFC 2925 Ping MIB

Attachment Units (MAU)

RFC 2863 The Interfaces Group MIB

RFC 2932 IP (Multicast Routing MIB) RFC 4836 Managed Objects for 802.3 Medium

15

### HP 3800 Switch Series accessories

Modules	HP 3800 4-port Stacking Module (J9577A)
Cables	HP 3800 0.5m Stacking Cable (J9578A)
	HP 3800 1m Stacking Cable (J9665A)
	HP 3800 3m Stacking Cable (J9579A)
an Tray	HP 3800 Switch Fan Tray (J9582A)
Aounting Kit	HP X410 1U Universal 4-post Rack Mounting Kit (J9583A)
IP 3800-24G-PoE+-2SFP+ Switch (J9573A)	HP X121 1G SFP LC SX Transceiver (J4858C)
	HP X121 1G SFP LC LX Transceiver (J4859C)
	HP X121 1G SFP LC LH Transceiver (J4860C)
	HP X121 1G SFP RJ-45 T Transceiver (J8177C)
	HP X122 1G SFP LC BX-D Transceiver (J9142B)
	HP X122 1G SFP LC BX-U Transceiver (J9143B)
	HP X132 10G SFP+ LC SR Transceiver (J9150A)
	HP X132 10G SFP+ LC LR Transceiver (J9151A)
	HP X132 10G SFP+ LC LRM Transceiver (J9152A)
	HP X132 10G SFP+ LC ER Transceiver (J9153A)
	HP X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281B)
	HP X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283B)
	HP X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable (J9285B)
	HP X242 10G SFP+ to SFP+ 10m Direct Attach Copper Cable (J9286B)
	HP X242 10G SFP+ to SFP+ 15m Direct Attach Copper Cable (J9287B)
	HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable (J9300A)
	HP X244 10G XFP to SFP+ 3m Direct Attach Copper Cable (J9301A)
	HP X244 10G XFP to SFP+ 5m Direct Attach Copper Cable (J9302A)
	HP 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)
	HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)
	HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)
	HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)
	HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)
	HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)
	HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 1m Cable (QK732A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 2m Cable (QK733A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 5m Cable (QK734A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 15m Cable (QK735A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 30m Cable (QK736A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 50m Cable (QK737A)
	HP X312 1000W 100-240VAC to 54VDC Power Supply (J9580A)

HP 3800-48G-PoE+-4SFP+ Switch (J9574A)	HP X121 1G SFP LC SX Transceiver (J4858C)
	HP X121 1G SFP LC LX Transceiver (J4859C)
	HP X121 1G SFP LC LH Transceiver (J4860C)
	HP X121 1G SFP RJ-45 T Transceiver (J8177C)
	HP X122 1G SFP LC BX-D Transceiver (J9142B)
	HP X122 1G SFP LC BX-U Transceiver (J9143B)
	HP X132 10G SFP+ LC SR Transceiver (J9150A)
	HP X132 10G SFP+ LC LR Transceiver (J9151A)
	HP X132 10G SFP+ LC LRM Transceiver (J9152A)
	HP X132 10G SFP+ LC ER Transceiver (J9153A)
	HP X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281B)
	HP X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283B)
	HP X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable (J9285B)
	HP X242 10G SFP+ to SFP+ 10m Direct Attach Copper Cable (J9286B)
	HP X242 10G SFP+ to SFP+ 15m Direct Attach Copper Cable (J9287B)
	HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable (J9300A)
	HP X244 10G XFP to SFP+ 3m Direct Attach Copper Cable (J9301A)
	HP X244 10G XFP to SFP+ 5m Direct Attach Copper Cable (J9302A)
	HP 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)
	HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)
	HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)
	HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)
	HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)
	HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)
	HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 1m Cable (QK732A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 2m Cable (QK733A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 5m Cable (QK734A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 15m Cable (QK735A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 30m Cable (QK736A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 50m Cable (QK737A)
	HP X312 1000W 100-240VAC to 54VDC Power Supply (J9580A)

HP 3800-24G-2SFP+ Switch (J9575A)	HP X121 1G SFP LC SX Transceiver (J4858C)
	HP X121 1G SFP LC LX Transceiver (J4859C)
	HP X121 1G SFP LC LH Transceiver (J4860C)
	HP X121 1G SFP RJ-45 T Transceiver (J8177C)
	HP X122 1G SFP LC BX-D Transceiver (J9142B)
	HP X122 1G SFP LC BX-U Transceiver (J9143B)
	HP X132 10G SFP+ LC SR Transceiver (J9150A)
	HP X132 10G SFP+ LC LR Transceiver (J9151A)
	HP X132 10G SFP+ LC LRM Transceiver (J9152A)
	HP X132 10G SFP+ LC ER Transceiver (J9153A)
	HP X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281B)
	HP X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283B)
	HP X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable (J9285B)
	HP X242 10G SFP+ to SFP+ 10m Direct Attach Copper Cable (J9286B)
	HP X242 10G SFP+ to SFP+ 15m Direct Attach Copper Cable (J9287B)
	HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable (J9300A)
	HP X244 10G XFP to SFP+ 3m Direct Attach Copper Cable (J9301A)
	HP X244 10G XFP to SFP+ 5m Direct Attach Copper Cable (J9302A)
	HP 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)
	HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)
	HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)
	HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)
	HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)
	HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)
	HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 1m Cable (QK732A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 2m Cable (QK733A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 5m Cable (QK734A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 15m Cable (QK735A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 30m Cable (QK736A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 50m Cable (QK737A)
	HP X311 400W 100-240VAC to 12VDC Power Supply (J9581A)

HP 3800-48G-4SFP+ Switch (J9576A)	HP X121 1G SFP LC SX Transceiver (J4858C)
	HP X121 1G SFP LC LX Transceiver (J4859C)
	HP X121 1G SFP LC LH Transceiver (J4860C)
	HP X121 1G SFP RJ-45 T Transceiver (J8177C)
	HP X122 1G SFP LC BX-D Transceiver (J9142B)
	HP X122 1G SFP LC BX-U Transceiver (J9143B)
	HP X132 10G SFP+ LC SR Transceiver (J9150A)
	HP X132 10G SFP+ LC LR Transceiver (J9151A)
	HP X132 10G SFP+ LC LRM Transceiver (J9152A)
	HP X132 10G SFP+ LC ER Transceiver (J9153A)
	HP X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281B)
	HP X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283B)
	HP X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable (J9285B)
	HP X242 10G SFP+ to SFP+ 10m Direct Attach Copper Cable (J9286B)
	HP X242 10G SFP+ to SFP+ 15m Direct Attach Copper Cable (J9287B)
	HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable (J9300A)
	HP X244 10G XFP to SFP+ 3m Direct Attach Copper Cable (J9301A)
	HP X244 10G XFP to SFP+ 5m Direct Attach Copper Cable (J9302A)
	HP 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)
	HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)
	HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)
	HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)
	HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)
	HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)
	HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 1m Cable (QK732A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 2m Cable (QK733A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 5m Cable (QK734A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 15m Cable (QK735A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 30m Cable (QK736A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 50m Cable (QK737A)
	HP X311 400W 100-240VAC to 12VDC Power Supply (J9581A)
HP 3800-24G-2XG Switch (J9585A)	HP X311 400W 100-240VAC to 12VDC Power Supply (J9581A)
HP 3800-48G-4XG Switch (J9586A)	HP X311 400W 100-240VAC to 12VDC Power Supply (J9581A)
HP 3800-24G-PoE+-2XG Switch (J9587A)	HP X312 1000W 100-240VAC to 54VDC Power Supply (J9580A)
HP 3800-48G-PoE+-4XG Switch (J9588A)	HP X312 1000W 100-240VAC to 54VDC Power Supply (J9580A)

IP 3800-24SFP-2SFP+ Switch (J9584A)	HP X121 1G SFP LC SX Transceiver (J4858C)
	HP X121 1G SFP LC LX Transceiver (J4859C)
	HP X121 1G SFP LC LH Transceiver (J4860C)
	HP X121 1G SFP RJ-45 T Transceiver (J8177C)
	HP X122 1G SFP LC BX-D Transceiver (J9142B)
	HP X122 1G SFP LC BX-U Transceiver (J9143B)
	HP X132 10G SFP+ LC SR Transceiver (J9150A)
	HP X132 10G SFP+ LC LR Transceiver (J9151A)
	HP X132 10G SFP+ LC LRM Transceiver (J9152A)
	HP X132 10G SFP+ LC ER Transceiver (J9153A)
	HP X111 100M SFP LC FX Transceiver (J9054C)
	HP X112 100M SFP LC BX-D Transceiver (J9099B)
	HP X112 100M SFP LC BX-U Transceiver (J9100B)
	HP X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281B)
	HP X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283B)
	HP X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable (J9285B)
	HP X242 10G SFP+ to SFP+ 10m Direct Attach Copper Cable (J9286B)
	HP X242 10G SFP+ to SFP+ 15m Direct Attach Copper Cable (J9287B)
	HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable (J9300A)
	HP X244 10G XFP to SFP+ 3m Direct Attach Copper Cable (J9301A)
	HP X244 10G XFP to SFP+ 5m Direct Attach Copper Cable (J9302A)
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	HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)
	HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)
	HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)
	HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)
	HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 1m Cable (0K732A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 2m Cable (QK733A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 5m Cable (QK734A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 15m Cable (QK735A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 30m Cable (QK736A)
	HP Premier Flex LC/LC Multimode OM4 2 fiber 50m Cable (0K737A)

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