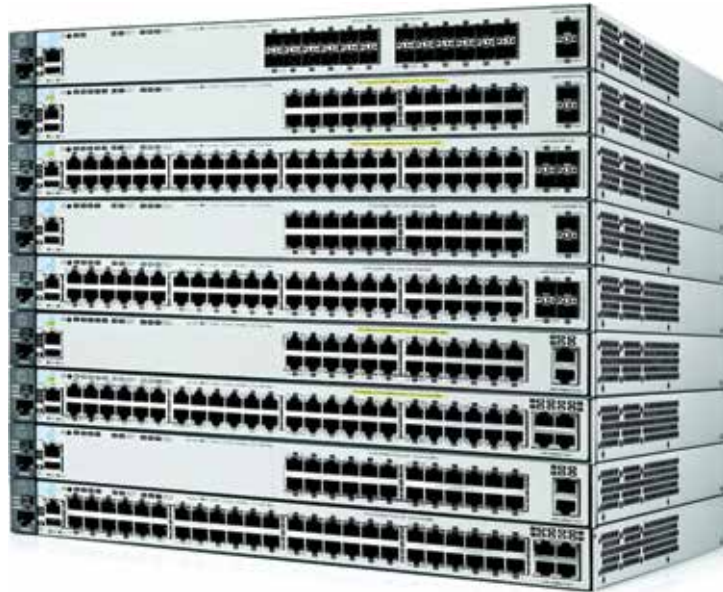




HPE 3800 Switch Series



Product overview

The HPE 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 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

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

- ClearPass Policy Manager
 - Support unified wired and wireless policies using Aruba ClearPass Policy Manager
- HTTP redirect function
 - Supports HPE Intelligent Management Center (IMC) bring your own device (BYOD) solution
- Switch auto-configuration
 - Automatically configures switch for different settings such as VLAN, CoS, PoE max power, and PoE priority when Aruba AP is detected
- User Role
 - A set of switch-based policies in areas such as security, authentication, and QoS. A User Role can be assigned to a group of users or devices, using switch configuration or ClearPass
- Per-port Tunneled Node
 - Provide secured tunnel to transport network traffic on a per-port basis to Aruba Controller. Authentication and network policies will be applied and enforced at the Controller
- **New** Static IP Visibility
 - Allows ClearPass to do accounting for clients with static IP address

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 HPE 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

- Zero-Touch ProVisioning (ZTP)

Simplified installation of the switch infrastructure using Aruba Activate-based or DHCP-based process with AirWave Network 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)

Supports HPE UDLD and DLDP protocols to monitor a cable between two switches and shut down the ports on both ends if the cable is broken

- 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 HPE 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 hpe.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, RIPv6, and OSPFv3 routing protocols
 - 6-in-4 tunneling
 - Supports encapsulation of IPv6 traffic in IPv4 packets
 - Security
 - Provides RA guard, DHCPv6 protection, dynamic IPv6 lockdown, and ND snooping

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

- HPE 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 HPE 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

- GVRP and MVRP

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 4094 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+

- HPE 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
- DHCP server
Centralizes and reduces the cost of IPv4 address management

L3 routing

- RIP
Provides RIPv1, RIPv2, and RIPv6 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

- Private VLAN
Provides network security by restricting peer-to-peer communication to prevent a variety of malicious attacks; typically a switch port can only communicate with other ports in the same community and/or an uplink port, regardless of VLAN ID or destination MAC address
- 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 prevent 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
- 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
 - See hpe.com/networking/warrantysummary for warranty and support information included with your product purchase.
- Software releases
 - To find software for your product, visit hpe.com/networking/support; for details on the software releases available with your product purchase, visit hpe.com/networking/warrantysummary

HPE 3800 Switch Series

Specifications



	HPE 3800-24G-PoE+-2SFP+ Switch (J9573A)	HPE 3800-48G-PoE+-4SFP+ Switch (J9574A)	HPE 3800-24G-2SFP+ Switch (J9575A)
Included accessories	1 HPE 3800 Switch Fan Tray (J9582A) 1 HPE X312 1000W 100–240VAC to 54VDC Power Supply (J9580A)	1 HPE 3800 Switch Fan Tray (J9582A) 1 HPE X312 1000W 100–240VAC to 54VDC Power Supply (J9580A)	1 HPE 3800 Switch Fan Tray (J9582A) 1 HPE 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 fixed 1000/10000 SFP+ ports 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 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 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 fixed 1000/10000 SFP+ ports 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 (HPE X312 1000W 100–240VAC to 54VDC Power Supply)	2 power supply slots 1 minimum power supply required includes: 1 x J9580A (HPE X312 1000W 100–240VAC to 54VDC Power Supply)	2 power supply slots 1 minimum power supply required includes: 1 x J9581A (HPE 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) 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
Weight			
Memory and processor			
Processor	HPE ProVision ASIC/ARM® @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 18 MB dynamic	HPE ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 36 MB dynamic	HPE 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	< 2.8 μs (LIFO 64-byte packets)	< 2.8 μs (LIFO 64-byte packets)	< 2.8 μs (LIFO 64-byte packets)
10 Gb/s Latency	< 1.9 μs (LIFO 64-byte packets)	< 1.9 μs (LIFO 64-byte packets)	< 1.9 μs (LIFO 64-byte packets)
Throughput	up to 65.4 million pps (64-byte packets)	up to 130.9 million pps (64-byte packets)	up to 65.4 million pps (64-byte packets)
Switching capacity	88 Gb/s	176 Gb/s	88 Gb/s
Routing table size	10000 entries (IPv4)	10000 entries (IPv4)	10000 entries (IPv4)
MAC address table size	65500 entries	65500 entries	65500 entries
Environment			
Operating temperature	32°F to 131°F (0°C to 55°C); max temperature is 45°C when transceivers are installed	32°F to 131°F (0°C to 55°C); max temperature is 45°C when transceivers are installed	32°F to 131°F (0°C to 55°C); max temperature 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	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	15% to 90% @ 149°F (65°C), noncondensing	15% to 90% @ 149°F (65°C), noncondensing	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	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)
Voltage	100–120/200–240 VAC	100–120/200–240 VAC	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	70 W	97 W	66 W
PoE power	720 W	1080 W	

	HPE 3800-24G-PoE+-2SFP+ Switch (J9573A)	HPE 3800-48G-PoE+-4SFP+ Switch (J9574A)	HPE 3800-24G-2SFP+ Switch (J9575A)
Notes	<p>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.</p> <p>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).</p> <p>With a single power supply at 120 V input, a maximum of 572 W of PoE power is available.</p>	<p>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.</p> <p>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).</p> <p>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.</p>	<p>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.</p>
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; AirWave Network Management	IMC—Intelligent Management Center; command-line interface; web browser; configuration menu; AirWave Network Management	IMC—Intelligent Management Center; command-line interface; web browser; configuration menu; AirWave Network Management
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 HPE website at hpe.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 HPE sales office.	Refer to the HPE website at hpe.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 HPE sales office.	Refer to the HPE website at hpe.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 HPE sales office.

HPE 3800 Switch Series (continued)

Specifications (continued)



	HPE 3800-48G-4SFP+ Switch (J9576A)	HPE 3800-24G-2XG Switch (J9585A)	HPE 3800-48G-4XG Switch (J9586A)
Included accessories	1 HPE 3800 Switch Fan Tray (J9582A) 1 HPE X311 400W 100–240VAC to 12VDC Power Supply (J9581A)	1 HPE 3800 Switch Fan Tray (J9582A) 1 HPE X311 400W 100–240VAC to 12VDC Power Supply (J9581A)	1 HPE 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 (HPE X311 400W 100–240VAC to 12VDC Power Supply)	2 power supply slots 1 minimum power supply required includes: 1 x J9581A (HPE X311 400W 100–240VAC to 12VDC Power Supply)	2 power supply slots 1 minimum power supply required includes: 1 x J9581A (HPE 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
Memory and processor			
Processor	HPE ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 36 MB dynamic	HPE ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 18 MB dynamic	HPE 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	< 2.8 μs (LIFO 64-byte packets)	< 2.8 μs (LIFO 64-byte packets)	< 2.8 μs (LIFO 64-byte packets)
10 Gb/s Latency	< 1.9 μs (LIFO 64-byte packets)	< 1.9 μs (LIFO 64-byte packets)	< 1.9 μs (LIFO 64-byte packets)
Throughput	up to 130.9 million pps (64-byte packets)	up to 65.4 million pps (64-byte packets)	up to 130.9 million pps (64-byte packets)
Switching capacity	176 Gb/s	88 Gb/s	176 Gb/s
Routing table size	10000 entries (IPv4)	10000 entries (IPv4)	10000 entries (IPv4)
MAC address table size	65500 entries	65500 entries	65500 entries
Environment			
Operating temperature	32°F to 131°F (0°C to 55°C); max temperature is 45°C when transceivers are installed	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
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	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	15% to 90% @ 149°F (65°C), noncondensing	15% to 90% @ 149°F (65°C), noncondensing	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: 36 dB, Pressure: 25.4 dB	Power: 39 dB, Pressure: 25.5 dB	Power: 34 dB, Pressure: 24.5 dB

	HPE 3800-48G-4SFP+ Switch (J9576A)	HPE 3800-24G-2XG Switch (J9585A)	HPE 3800-48G-4XG Switch (J9586A)
Electrical characteristics			
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Maximum heat dissipation	635 BTU/hr (669.93 kJ/hr)	434 BTU/hr (457.87 kJ/hr)	635 BTU/hr (669.93 kJ/hr)
Voltage	100–127/200–240 VAC	100–127/200–240 VAC	100–127/200–240 VAC
Current	6/3 A	6/3 A	6/3 A
Maximum power rating	186 W	127 W	186 W
Idle power	70 W	70 W	74 W
PoE power			
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			
	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; AirWave Network Management	IMC—Intelligent Management Center; command-line interface; web browser; configuration menu; AirWave Network Management	IMC—Intelligent Management Center; command-line interface; web browser; configuration menu; AirWave Network Management
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 HPE website at hpe.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 HPE sales office.	Refer to the HPE website at hpe.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 HPE sales office.	Refer to the HPE website at hpe.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 HPE sales office.

HPE 3800 Switch Series (continued)

Specifications (continued)



	HPE 3800-24G-PoE+-2XG Switch (J9587A)	HPE 3800-48G-PoE+-4XG Switch (J9588A)	HPE 3800-24SFP-2SFP+ Switch (J9584A)	
Included accessories	1 HPE 3800 Switch Fan Tray (J9582A) 1 HPE X312 1000W 100–240VAC to 54VDC Power Supply (J9580A)	1 HPE 3800 Switch Fan Tray (J9582A) 1 HPE X312 1000W 100–240VAC to 54VDC Power Supply (J9580A)	1 HPE 3800 Switch Fan Tray (J9582A) 1 HPE 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 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 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 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 stacking module slot	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	
Power supplies	2 power supply slots 1 minimum power supply required includes: 1 x J9580A (HPE X312 1000W 100–240VAC to 54VDC Power Supply)	2 power supply slots 1 minimum power supply required includes: 1 x J9580A (HPE X312 1000W 100–240VAC to 54VDC Power Supply)	2 power supply slots 1 minimum power supply required includes: 1 x J9581A (HPE 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	16.45 lb (7.46 kg) switch chassis with 1 power supply and fan tray installed	17.24 lb (7.82 kg) switch chassis with 1 power supply and fan tray installed	16.01 lb (7.26 kg) switch chassis with 1 power supply and fan tray installed	
Memory and processor	Processor HPE ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 18 MB dynamic	Processor HPE ProVision ASIC/ARM @ 350 MHz; Freescale P2020 @ 1200 MHz, 4 GB flash, 2 GB SDRAM; packet buffer size: 36 MB dynamic	Processor HPE 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) 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	< 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 Operating relative humidity Nonoperating/Storage temperature Nonoperating/Storage relative humidity Altitude Acoustic	32°F to 131°F (0°C to 55°C) 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 up to 10,000 ft. (3 km) Power: 48 dB, Pressure: 32.6 dB	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 -40°F to 158°F (-40°C to 70°C) 15% to 90% @ 149°F (65°C), noncondensing up to 10,000 ft. (3 km) Power: 57 dB, Pressure: 41.5 dB	32°F to 113°F (0°C to 45°C) 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 up to 10,000 ft. (3 km) Power: 36 dB, Pressure: 25 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 71 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 100 W 1080 W	50/60 Hz 434 BTU/hr (457.87 kJ/hr) 100–127/200–240 VAC 6/3 A 127 W 55 W

	HPE 3800-24G-PoE+-2XG Switch (J9587A)	HPE 3800-48G-PoE+-4XG Switch (J9588A)	HPE 3800-24SFP-2SFP+ Switch (J9584A)
Notes	<p>Idle power is the actual power consumption of the device with no ports connected.</p> <p>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.</p> <p>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).</p> <p>With a single power supply at 120 V input, a maximum of 572 W of PoE power is available.</p>	<p>Idle power is the actual power consumption of the device with no ports connected.</p> <p>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.</p> <p>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).</p> <p>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 input, a maximum of 814 W of PoE power is available.</p>	<p>Idle power is the actual power consumption of the device with no ports connected.</p> <p>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.</p>
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	<p>EN 55024, CISPR 24</p> <p>ESD IEC 61000-4-2</p> <p>Radiated IEC 61000-4-3; 3 V/m</p> <p>EFT/Burst IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)</p> <p>Surge IEC 61000-4-5; 1 kV/2 kV AC</p> <p>Conducted IEC 61000-4-6; 3 V</p> <p>Power frequency magnetic field IEC 61000-4-8; 1 A/m, 50 or 60 Hz</p> <p>Voltage dips and interruptions IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods</p> <p>Harmonics EN 61000-3-2, IEC 61000-3-2</p> <p>Flicker EN 61000-3-3, IEC 61000-3-3</p>	<p>EN 55024, CISPR 24</p> <p>ESD IEC 61000-4-2</p> <p>Radiated IEC 61000-4-3; 3 V/m</p> <p>EFT/Burst IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)</p> <p>Surge IEC 61000-4-5; 1 kV/2 kV AC</p> <p>Conducted IEC 61000-4-6; 3 V</p> <p>Power frequency magnetic field IEC 61000-4-8; 1 A/m, 50 or 60 Hz</p> <p>Voltage dips and interruptions IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods</p> <p>Harmonics EN 61000-3-2, IEC 61000-3-2</p> <p>Flicker EN 61000-3-3, IEC 61000-3-3</p>	<p>EN 55024, CISPR 24</p> <p>ESD IEC 61000-4-2</p> <p>Radiated IEC 61000-4-3; 3 V/m</p> <p>EFT/Burst IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)</p> <p>Surge IEC 61000-4-5; 1 kV/2 kV AC</p> <p>Conducted IEC 61000-4-6; 3 V</p> <p>Power frequency magnetic field IEC 61000-4-8; 1 A/m, 50 or 60 Hz</p> <p>Voltage dips and interruptions IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods</p> <p>Harmonics EN 61000-3-2, IEC 61000-3-2</p> <p>Flicker EN 61000-3-3, IEC 61000-3-3</p>
Management	IMC—Intelligent Management Center; command-line interface; web browser; configuration menu; AirWave Network Management	IMC—Intelligent Management Center; command-line interface; web browser; configuration menu; AirWave Network Management	IMC—Intelligent Management Center; command-line interface; web browser; configuration menu; AirWave Network Management
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 HPE website at hpe.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 HPE sales office.	Refer to the HPE website at hpe.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 HPE sales office.	Refer to the HPE website at hpe.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 HPE sales office.

HPE 3800 Switch Series (continued)

Specifications (continued)

	HPE 3800-24G-PoE+-2XG Switch (J9587A)	HPE 3800-48G-PoE+-4XG Switch (J9588A)	HPE 3800-24SFP-2SFP+ Switch (J9584A)
Standards and Protocols (applies to all products in series)	<p>BGP</p> <p>RFC 1997 BGP Communities Attribute</p> <p>RFC 2918 Route Refresh Capability</p> <p>RFC 4456 BGP Route Reflection: An Alternative to Full</p> <p>RFC 4271 A Border Gateway Protocol 4 (BGP-4) Mesh Internal BGP (IBGP)</p> <p>RFC 4724 Graceful Restart Mechanism for BGP</p> <p>Denial of service protection</p> <p>CPU DoS Protection</p> <p>Device management</p> <p>RFC 1591 DNS (client)</p> <p>RFC 2576 (Coexistence between SNMP V1, V2, V3)</p> <p>RFC 2579 (SMIPv2 Text Conventions)</p> <p>RFC 2580 (SMIPv2 Conformance)</p> <p>RFC 3416 (SNMP Protocol Operations v2)</p> <p>RFC 3417 (SNMP Transport Mappings)</p> <p>HTML and telnet management</p> <p>General protocols</p> <p>IEEE 802.1ad Q-in-Q</p> <p>IEEE 802.1AX-2008 Link Aggregation</p> <p>IEEE 802.1D MAC Bridges</p> <p>IEEE 802.1p Priority</p> <p>IEEE 802.1Q VLANs</p> <p>IEEE 802.1s Multiple Spanning Trees</p> <p>IEEE 802.1v VLAN classification by Protocol and Port</p> <p>IEEE 802.1w Rapid Reconfiguration of Spanning Tree</p> <p>IEEE 802.3ad Link Aggregation Control Protocol (LACP)</p> <p>IEEE 802.3af Power over Ethernet</p> <p>IEEE 802.3x Flow Control</p> <p>RFC 768 UDP</p> <p>RFC 783 TFTP Protocol (revision 2)</p> <p>RFC 792 ICMP</p> <p>RFC 793 TCP</p> <p>RFC 826 ARP</p> <p>RFC 854 TELNET</p> <p>RFC 868 Time Protocol</p> <p>RFC 951 BOOTP</p> <p>RFC 1058 RIPv1</p> <p>RFC 1350 TFTP Protocol (revision 2)</p> <p>RFC 1519 CIDR</p> <p>RFC 1542 BOOTP Extensions</p> <p>RFC 1918 Address Allocation for Private Internet</p> <p>RFC 2030 Simple Network Time Protocol (SNTP) v4</p> <p>RFC 2131 DHCP</p> <p>RFC 2453 RIPv2</p> <p>RFC 2548 (MS-RAS-Vendor only)</p> <p>RFC 3046 DHCP Relay Agent Information Option</p> <p>RFC 3575 IANA Considerations for RADIUS</p> <p>RFC 3576 Ext to RADIUS (CoA only)</p> <p>RFC 3768 VRRP</p> <p>RFC 4675 RADIUS VLAN & Priority</p> <p>RFC 5798 VRRP (exclude Accept Mode and sub-sec timer)</p> <p>RFC 5905 NTP Client</p> <p>IP multicast</p> <p>RFC 3376 IGMIPv3</p> <p>RFC 3973 PIM Dense Mode</p>	<p>IPv6</p> <p>RFC 1981 IPv6 Path MTU Discovery</p> <p>RFC 2080 RIPng</p> <p>RFC 2081 RIPng Protocol Applicability</p> <p>RFC 2082 RIP-2 MD5</p> <p>RFC 2375 IPv6 Multicast Address Assignments RFC 2460 IPv6 Specification</p> <p>RFC 2464 Transmission of IPv6 over Ethernet Networks</p> <p>RFC 2710 Multicast Listener Discovery (MLD) for IPv6</p> <p>RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)</p> <p>RFC 3019 MLDv1 MIB</p> <p>RFC 3315 DHCPv6 (client only)</p> <p>RFC 3484 Default Address Selection for IPv6</p> <p>RFC 3587 IPv6 Global Unicast Address Format</p> <p>RFC 3596 DNS Extension for IPv6</p> <p>RFC 3810 MLDv2 (host joins only)</p> <p>RFC 4022 MIB for TCP</p> <p>RFC 4087 IP Tunnel MIB</p> <p>RFC 4113 MIB for UDP</p> <p>RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers</p> <p>RFC 4251 SSHv6 Architecture</p> <p>RFC 4252 SSHv6 Authentication</p> <p>RFC 4253 SSHv6 Transport Layer</p> <p>RFC 4254 SSHv6 Connection</p> <p>RFC 4291 IP Version 6 Addressing Architecture</p> <p>RFC 4293 MIB for IP</p> <p>RFC 4294 IPv6 Node Requirements</p> <p>RFC 4419 Key Exchange for SSH</p> <p>RFC 4443 ICMPv6</p> <p>RFC 4541 IGMP & MLD Snooping Switch</p> <p>RFC 4861 IPv6 Neighbor Discovery</p> <p>RFC 4862 IPv6 Stateless Address Auto-configuration</p> <p>RFC 5095 Deprecation of Type 0 Routing Headers in IPv6</p> <p>RFC 5340 OSPFv3 for IPv6</p> <p>RFC 5453 Reserved IPv6 Interface Identifiers</p> <p>RFC 5519 Multicast Group Membership Discovery MIB (MLDv2 only)</p> <p>RFC 6620 FCFS SAVI draft-ietf-savi-mix</p> <p>MIBs</p> <p>IEEE 8021-Bridge-MIB (2008)</p> <p>IEEE 8021-Q-Bridge-MIB (2008)</p> <p>IEEE 802.1ap (MSTP and STP MIBs only)</p> <p>IEEE 802.1Q Bridge MIB</p> <p>RFC 1213 MIB II</p> <p>RFC 1493 Bridge MIB</p> <p>RFC 1155 Structure & ID of Mgmt Info for TCP/IP Internets</p> <p>RFC 1724 RIPv2 MIB</p> <p>RFC 1850 OSPFv2 MIB</p> <p>RFC 2021 RMONv2 MIB</p> <p>RFC 2096 IP Forwarding Table MIB</p> <p>RFC 2578 Structure of Management Information Version 2 (SMIPv2)</p> <p>RFC 2613 SMON MIB</p> <p>RFC 2618 RADIUS Client MIB</p>	<p>RFC 2620 RADIUS Accounting MIB</p> <p>RFC 2665 Ethernet-Like-MIB</p> <p>RFC 2668 802.3 MAU MIB</p> <p>RFC 2674 802.1p and</p> <p>RFC 2737 Entity MIB (Version 2)</p> <p>RFC 2787 VRRP MIB</p> <p>RFC 2863 The Interfaces Group MIB</p> <p>RFC 2925 Ping MIB</p> <p>RFC 2932 IP (Multicast Routing MIB)</p> <p>RFC 4836 Managed Objects for 802.3 Medium Attachment Units (MAU)</p> <p>Network management</p> <p>IEEE 802.1AB Link Layer Discovery Protocol (LLDP)</p> <p>RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)</p> <p>RFC 3176 sFlow</p> <p>RFC 3411 SNMP Management Frameworks</p> <p>RFC 3412 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)</p> <p>RFC 3413 Simple Network Management Protocol (SNMP) Applications</p> <p>RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)</p> <p>RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)</p> <p>RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)</p> <p>RFC 5424 Syslog Protocol</p> <p>ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)</p> <p>SNMPv1/v2c/v3</p> <p>XRMON</p> <p>OSPF</p> <p>RFC 2328 OSPFv2</p> <p>RFC 3101 OSPF NSSA</p> <p>RFC 3623 Graceful OSPF Restart (Unplanned Outages only)</p> <p>RFC 5340 OSPFv3 for IPv6</p> <p>QoS/CoS</p> <p>RFC 2474 DiffServ Precedence, including 8 queues/port</p> <p>RFC 2475 DiffServ Architecture</p> <p>RFC 2597 DiffServ Assured Forwarding (AF)</p> <p>Security</p> <p>IEEE 802.1X Port Based Network Access Control</p> <p>RFC 1321 The MD5 Message-Digest Algorithm</p> <p>RFC 1492 TACACS+</p> <p>RFC 2818 HTTP Over TLS</p> <p>RFC 2865 RADIUS (client only)</p> <p>RFC 2866 RADIUS Accounting</p> <p>RFC 3579 RADIUS Support For Extensible Authentication Protocol (EAP)</p> <p>Secure Sockets Layer (SSL)</p> <p>SSHv2 Secure Shell</p>

HPE 3800 Switch Series accessories

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

HPE 3800 Switch Series accessories (continued)

HPE 3800-48G-PoE+-4SFP+ Switch (J9574A)

HPE X121 1G SFP LC SX Transceiver (J4858C)
HPE X121 1G SFP LC LX Transceiver (J4859C)
HPE X121 1G SFP LC LH Transceiver (J4860C)
HPE X121 1G SFP RJ-45 T Transceiver (J8177C)
HPE X122 1G SFP LC BX-D Transceiver (J9142B)
HPE X122 1G SFP LC BX-U Transceiver (J9143B)

HPE X132 10G SFP+ LC SR Transceiver (J9150A)
HPE X132 10G SFP+ LC LR Transceiver (J9151A)
HPE X132 10G SFP+ LC LRM Transceiver (J9152A)
HPE X132 10G SFP+ LC ER Transceiver (J9153A)

HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281B)
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283B)
HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable (J9285B)
HPE X244 10G XFP to SFP+ 1m Direct Attach Copper Cable (J9300A)
HPE X244 10G XFP to SFP+ 3m Direct Attach Copper Cable (J9301A)
HPE X244 10G XFP to SFP+ 5m Direct Attach Copper Cable (J9302A)

HPE 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)
HPE 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)
HPE 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)
HPE 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)
HPE 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)
HPE 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)
HPE 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)

HPE Premier Flex LC/LC Multimode OM4 2 fiber 1m Cable (QK732A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 2m Cable (QK733A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 5m Cable (QK734A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 15m Cable (QK735A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 30m Cable (QK736A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 50m Cable (QK737A)
HPE X312 1000W 100-240VAC to 54VDC Power Supply (J9580A)

HPE 3800 Switch Series accessories (continued)

HPE 3800-24G-2SFP+ Switch (J9575A)

HPE X121 1G SFP LC SX Transceiver (J4858C)
HPE X121 1G SFP LC LX Transceiver (J4859C)
HPE X121 1G SFP LC LH Transceiver (J4860C)
HPE X121 1G SFP RJ-45 T Transceiver (J8177C)
HPE X122 1G SFP LC BX-D Transceiver (J9142B)
HPE X122 1G SFP LC BX-U Transceiver (J9143B)

HPE X132 10G SFP+ LC SR Transceiver (J9150A)
HPE X132 10G SFP+ LC LR Transceiver (J9151A)
HPE X132 10G SFP+ LC LRM Transceiver (J9152A)
HPE X132 10G SFP+ LC ER Transceiver (J9153A)

HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281B)
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283B)
HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable (J9285B)
HPE X244 10G XFP to SFP+ 1m Direct Attach Copper Cable (J9300A)
HPE X244 10G XFP to SFP+ 3m Direct Attach Copper Cable (J9301A)
HPE X244 10G XFP to SFP+ 5m Direct Attach Copper Cable (J9302A)

HPE 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)
HPE 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)
HPE 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)
HPE 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)
HPE 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)
HPE 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)
HPE 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)

HPE Premier Flex LC/LC Multimode OM4 2 fiber 1m Cable (QK732A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 2m Cable (QK733A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 5m Cable (QK734A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 15m Cable (QK735A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 30m Cable (QK736A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 50m Cable (QK737A)
HPE X311 400W 100–240VAC to 12VDC Power Supply (J9581A)

HPE 3800 Switch Series accessories (continued)

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

HPE 3800 Switch Series accessories (continued)

HPE 3800-24SFP-2SFP+ Switch (J9584A)

HPE X121 1G SFP LC SX Transceiver (J4858C)
HPE X121 1G SFP LC LX Transceiver (J4859C)
HPE X121 1G SFP LC LH Transceiver (J4860C)
HPE X121 1G SFP RJ-45 T Transceiver (J8177C)
HPE X122 1G SFP LC BX-D Transceiver (J9142B)
HPE X122 1G SFP LC BX-U Transceiver (J9143B)

HPE X132 10G SFP+ LC SR Transceiver (J9150A)
HPE X132 10G SFP+ LC LR Transceiver (J9151A)
HPE X132 10G SFP+ LC LRM Transceiver (J9152A)
HPE X132 10G SFP+ LC ER Transceiver (J9153A)
HPE X111 100M SFP LC FX Transceiver (J9054C)

HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281B)
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283B)
HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable (J9285B)
HPE X244 10G XFP to SFP+ 1m Direct Attach Copper Cable (J9300A)
HPE X244 10G XFP to SFP+ 3m Direct Attach Copper Cable (J9301A)
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HPE 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)

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HPE Premier Flex LC/LC Multimode OM4 2 fiber 2m Cable (QK733A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 5m Cable (QK734A)

HPE Premier Flex LC/LC Multimode OM4 2 fiber 15m Cable (QK735A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 30m Cable (QK736A)
HPE Premier Flex LC/LC Multimode OM4 2 fiber 50m Cable (QK737A)
HPE X311 400W 100–240VAC to 12VDC Power Supply (J9581A)

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4AA3-7115ENW, November 2016, Rev. 10