# **HP 5820 Switch Series**





## **Key features**

- For enterprise edge, or distribution/data center
- Up to 24 ports of 10GbE per unit/194 per stack
- Flex chassis—modular resiliency
- Cut-through switching for very low latency
- Hot-swappable I/O, power supplies, and fans

## **Product overview**

HP 5820 Switch Series supports advanced features that deliver a unique combination of unmatched 10 Gigabit Ethernet; high-availability architecture; full Layer 2/3 dual-stack IPv4/IPv6; and line-rate, low-latency performance on all ports. Extensible embedded application capabilities enable these switches to integrate services into the network, consolidating devices and appliances to simplify deployment and reduce power consumption as well as rack space.

Extremely versatile, the switches can be used in high-performance, high-density building or department cores as part of a consolidated network; for data center top-of-rack server access; or as high-performance Layer 3, 10GbE aggregation switches in campus and data center networks.

### **Features and benefits**

#### Quality of Service (QoS)

• Powerful QoS feature

Creates traffic classes based on access control lists (ACLs), IEEE 802.1p precedence, IP, and DSCP or Type of Service (ToS) precedence; supports filter, redirect, mirror, or remark; supports congestion actions such as: strict priority (SP) queuing, weighted round robin (WRR), weighted fair queuing (WFQ), weighted random early discard (WRED), weighted deficit round robin (WDRR), and SP+WDRR

Integrated network services

Extends and integrates application capability into the network, with support for open application architecture (OAA) modules ring resiliency protection protocol (RRPP)

• Provides fast recovery for ring

Ethernet-based topology; helps facilitate consistent application performance for applications such as VoIP

#### Management

• Remote configuration and management

Enables configuration and management through a secure Web browser or a CLI located on a remote device

• IEEE 802.1ab LLDP discovery

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

- USB support
- File copy

Allows users to copy switch files to and from a USB flash drive

• DHCP options

Provides server (RFC 2131), client, snooping, and relay options

• SNMPv1, v2c, and v3

Facilitates centralized discovery, monitoring, and secure management of networking devices

sFlow<sup>®</sup>

Provides scalable ASIC-based network monitoring and accounting; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes

• Network Time Protocol (NTP)

Synchronizes timekeeping among distributed time servers and clients; keeps timekeeping consistent among all clock-dependent devices within the network so that the devices can provide diverse applications based on the consistent time

#### Connectivity

High-density port connectivity

194 10GbE ports with a 40 Gbps resilient backplane

Auto-MDIX

Provides automatic adjustments for straight-through or crossover cables on all 10/100 and 10/100/1000 ports

Jumbo frames

On Gigabit Ethernet and 10 Gigabit Ethernet ports, jumbo frames allow high-performance remote backup and disaster-recovery services

- IPv6 native support
- IPv6 host
- Enables switches to be managed and deployed at the IPv6 network's edge
- Dual stack (IPv4/IPv6)
- Transitions from IPv4 to IPv6, supporting 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, preventing traffic flooding

– IPv6 routing

Supports IPv6 static routes and IPv6 versions of RIP, OSPF, IS-IS, and Border Gateway Protocol (BGP) routing protocols

#### Performance

• Hardware-based wire-speed access control lists (ACLs)

Helps provide high levels of security and ease of administration without impacting network performance with a feature-rich TCAM-based ACL implementation

• Unique versatile architecture

Supports the best of both, fixed-port and modular configurations

• Cut-through switching

Delivers wire-speed, line-rate performance on all ports, as well as cut-through switching for low latency

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

Data center-optimized design

HP 5820AF-24XG Switch (JG219A) supports front-to-back and back-to-front airflow for hot or cold aisles, rear rackmounts, and redundant hot-swappable AC or DC power and fans

#### Manageability

Full-featured console

Provides complete control of the switch with a familiar CLI

- Web interface
- Allows configuration of the switch from any Web browser on the network
- RMON and sFlow

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

• Multiple configuration files

Allows multiple configuration files to be stored to a flash image

- Troubleshooting
- Ingress and egress port monitoring enable network problem solving
- Traceroute and ping enable testing of network connectivity
- Virtual cable tests provide visibility to cable problems

#### Layer 2 switching

32K MAC addresses

Provides access to many Layer 2 devices

- 4,094 port-based VLANs
- Provides security between workgroups
- IEEE 802.1ad QinQ and selective QinQ

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

Gigabit Ethernet port aggregation

Allows grouping of ports to increase overall data throughput to a remote device

• 10GbE port aggregation

Allows grouping of ports to increase overall data throughput to a remote device

• Spanning Tree/MSTP, RSTP, and STP root guard

Prevents network loops

• sFlow

Allows traffic sampling

• GVRP VLAN Registration Protocol

Allows automatic learning and dynamic assignment of VLANs

#### **Layer 3 services**

• Address resolution protocol (ARP)

Determines the MAC address of another IP host in the same subnet; supports static ARPs; gratuitous ARP allows detection of duplicate IP addresses; proxy ARP allows normal ARP operation between subnets or when subnets are separated by a Layer 2 network

• Dynamic host configuration protocol (DHCP)

Simplifies the management of large IP networks and supports client and server; DHCP Relay enables DHCP operation across subnets

#### Layer 3 routing

Layer 3 IPv4 routing

Provides routing of IPv4 at media speed; supports static routes, RIP and RIPv2, OSPF, IS-IS, and BGP

• Routing Information Protocol (RIP) and RIPng support

Provides complete support of RIP for both IPv4 and IPv6

• OSPF and OSPFv3 support

Provides complete support of OSPF for both IPv4 and IPv6

• IS-IS and IS-ISv6 support

Provides complete support of IS-IS for both IPv4 and IPv6

• Layer 3 IPv6 routing

Provides routing of IPv6 at media speed; supports static routes, RIPng, OSPFv3, IS-ISv6, and BGP4+  $\,$ 

• Bidirectional Forwarding Detection (BFD)

Enables link connectivity monitoring and reduces network convergence time for RIP, OSPF, BGP, IS-IS, VRRP, MPLS, and IRF

• Virtual Router Redundancy Protocol (VRRP) and VRRP Extended

Allows quick failover of router ports

Policy-based routing

Makes routing decisions based on policies set by the network administrator

• IGMPv1, v2, and v3

Allows individual hosts to be registered on a particular VLAN

• PIM-SSM, PIM-DM, and PIM-SM (for IPv4 and IPv6)

Support IP multicast address management and inhibition of DoS attacks

• Equal-Cost Multipath (ECMP)

Enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth

#### Security

Defense in-depth security

Provides integrated and distributed security enforcement that can be managed from a central location, such as the HP Intelligent Management Center (IMC)

• Advanced processor queuing mechanism

Helps prevent denial-of-service (DoS) attacks, while DHCP snooping helps enable that devices can only receive an IP address from a legitimate DHCP server on the network

• RADIUS/HWTACACS

Eases switch management security administration by using a password authentication server

- Secure Shell (SSHv2)
- Encrypts all transmitted data for secure, remote CLI access over IP networks
- IEEE 802.1X-based dynamic delivery of QoS, ACLs, and VLANs

Allows complete control over user network access

• Guest VLAN

Provides a browser-based environment to authenticated clients that is similar to IEEE 802.1X

Port isolation

Secures and adds privacy, and prevents malicious attackers from obtaining user information

Port security

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

• MAC-based authentication

Allows or denies access to the switch based on a client MAC address

• IP source guard

Helps prevent IP spoofing attacks

• HTTPS management

Provides secure Web management

• Unicast Reverse Path Forwarding (URPF)

Limits malicious traffic on a network

- Multi-Customer Edge (MCE)—Multicast Virtual Routing and Forwarding (MVRF) Provides MPLS edge router support
- Public key infrastructure (PKI)

Is used to control access

#### Convergence

Voice VLAN

Automatically assigns VLAN and priority for IP phones, simplifying network configuration and maintenance

• LLDP-MED

Is a standard extension that automatically configures network devices, including LLDP-capable IP phones

• Internet Group Management Protocol (IGMP)

Utilizes Any-Source Multicast (ASM) or Source-Specific Multicast (SSM) to manage IPv4 multicast networks; supports IGMPv1, v2, and v3

Protocol Independent Multicast (PIM)

Defines modes of Internet multicasting to allow one-to-many and many-to-many transmission of information; supports PIM Dense Mode (DM), Sparse Mode (SM), and Source-Specific Mode (SSM)

#### **Monitor and diagnostics**

• Port mirroring

Enables traffic on a port to be simultaneously sent to a network analyzer for monitoring

• OAM (IEEE 802.3ah)

Operations, administration and maintenance (OAM) management capability detects data link layer problems that occur in the "last mile"; monitors the status of the link between the two devices

• CFD (IEEE 802.1ag)

Connectivity fault detection (CFD) provides a Layer 2 link OAM mechanism used for link connectivity detection and fault locating

#### **Additional information**

• HP Intelligent Resilient Framework (IRF)

- Creates virtual resilient switching fabrics, where two or more switches perform as a single Layer 2 switch and Layer 3 router
- Does not require switches to be co-located and allows them to be part of a disaster-recovery system
- Allows servers or switches to be attached using standard LACP for automatic load balancing and high availability
- Simplifies network operation by helping eliminate the complexity of Spanning Tree Protocol, ECMP, or VRRP
- OAA modules

Supports wireless network management and high-performance security applications; leverages network infrastructure investment

Green IT and power

Improves energy efficiency through the use of the latest advances in silicon development; shuts off unused ports and utilizes variable-speed fans, reducing energy costs

• High scalability with IRF

HP Intelligent Resilient Framework (IRF) technology simplifies the architecture of server access networks; up to nine HP 5820/5820AF stackable switches can be combined to deliver unmatched scalability of virtualized access layer switches and flatter, two-tier HP FlexFabric networks using IRF, which reduces cost and complexity

#### Warranty and support

• 1-year warranty

Advance hardware replacement with 10-calendar day delivery (available in most countries)

• Electronic and telephone support

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/</u>networking/warrantysummary

Software releases

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

## HP 5820 Switch Series

#### Specifications

	HP 5820-14XG-SFP+ Switch with 2 Interface Slots & 1 OAA Slot (JC106B)	HP 5820-24XG-SFP+ Switch (JC102B)	HP 5820AF-24XG Switch (JG219B)
I/O ports and slots	14 SFP+ 10GbE ports; Duplex: full only 2 extended module slots 1 open module slot 4 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T) Supports a maximum of 14 SFP+ ports plus 8 8/4/2 Gbps Fibre Channel SFP+ ports, with optional module	24 SFP+ 10GbE ports; Duplex: full only 4 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T) Supports a maximum of 24 SFP+ ports plus 4 autosensing 10/100/1000 ports	24 fixed 1000/10000 SFP+ ports 2 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
Additional ports and slots	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 USB 2.0
Power supplies	2 power supply slots 1 minimum power supply required (ordered separately)	2 power supply slots 1 minimum power supply required (ordered separately)	2 power supply slots 1 minimum power supply required (ordered separately)
Fan tray	Includes: 1 x JC096A 1 fan tray slot Base product includes fan tray.	Includes: 1 x JC098A 1 fan tray slot Base product includes fan tray.	2 fan tray slots The customer must order fan trays, as fan trays are not included with the switch. This system requires two same-direction airflow fan trays to function properly. The system should not be operated with only one fan tray for more than 24 hours. The system should not be operated without a fan tray more than two minutes. The system should not be operated outside of the temperature range of 32°F (0°C) to 113°F (45°C). Failure to comply with these operating requirements may void the product warranty.
Physical characteristics Dimensions Weight	17.32(w) x 18.39(d) x 3.39(h) in. (43.99 x 46.7 x 8.61 cm) (2U height) 33.29 lb (15.1 kg)	17.32(w) x 16.81(d) x 1.73(h) in. (44.0 x 42.7 x 4.4 cm) (1U height) 18.74 lb (8.5 kg)	25.98(w) x 17.32(d) x 1.72(h) in. (65.99 x 43.99 x 4.37 cm) (1U height) 22.05 lb (10 kg) shipping weight

	HP 5820-14XG-SFP+ Switch with 2 Interface Slots & 1 OAA Slot (JC106B)	HP 5820-24XG-SFP+ Switch (JC102B)	HP 5820AF-24XG Switch (JG219B)
Memory and processor	2048 MB SDRAM, 512 MB flash; packet buffer size: 2 MB	2048 MB SDRAM, 512 MB flash; packet buffer size: 2 MB	2048 MB flash, 512 MB SDRAM; packet buffer size: 2 MB
Performance Latency Throughput Routing/Switching capacity Routing table size MAC address table size	2.02 μs (Cut Through), 2.02 μs (Store and Forward) (64-byte packets) up to 363 million pps (64-byte packets) 488 Gbps 12000 entries (IPv4) 32000 entries	2.02 µs (Cut Through), 2.02 µs (Store and Forward) (64-byte packets) up to 363 million pps (64-byte packets) 488 Gbps 12000 entries (IPv4) 32000 entries	3 μs (64-byte packets) 360 million pps 484 Gbps 12000 entries (IPv4) 32000 entries
<b>Environment</b> Operating temperature Operating relative humidity Acoustic	32°F to 113°F (0°C to 45°C) 10% to 90%, noncondensing Low-speed fan: 44.3 dB, High-speed fan: 54.1 dB	32°F to 113°F (0°C to 45°C) 10% to 90%, noncondensing Low-speed fan: 48.4 dB, High-speed fan: 59.7 dB	32°F to 113°F (0°C to 45°C) 10% to 90%, noncondensing Low-speed fan: 60.1 dB, High-speed fan: 69.9 dB
Electrical characteristics Frequency Maximum heat dissipation AC voltage DC voltage Maximum power rating	50/60 Hz 836 BTU/hr (881.98 kJ/hr) 100–120 / 200–240 VAC -48 to -60 VDC 300 W	50/60 Hz 631 BTU/hr (665.71 kJ/hr) 100–120 / 200–240 VAC -48 to -60 VDC 300 W	50/60 Hz 607 BTU/hr (640.39 kJ/hr) 100–120 / 200–240 VAC -48 to -60 VDC 650 W
	Notes 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.	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.	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	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/ CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; G05T; EN 60950-1/A11; FDA 21 CF Subchapter J; NOM; ROHS Compliance

	HP 5820-14XG-SFP+ Switch with 2 Interface Slots & 1 OAA Slot (JC106B)	HP 5820-24XG-SFP+ Switch (JC102B)	HP 5820AF-24XG Switch (JG219B)
Emissions	VCCI Class A; EN 55022 Class A; ICES-003	VCCI Class A; EN 55022 Class A; ICES-003	VCCI Class A; EN 55022 Class A; ICES-003
	Class A; ANSI C63.4 2003; AS/NZS CISPR	Class A; ANSI C63.4 2003; AS/NZS CISPR	Class A; ANSI C63.4 2003; AS/NZS CISPR
	22 Class A; EN 61000-3-2:2006; EN	22 Class A; EN 61000-3-2:2006; EN	22 Class A; EN 61000-3-2:2006; EN
	61000-3-3:1995 +A1:2001+A2:2005;	61000-3-3:1995 +A1:2001+A2:2005;	61000-3-3:1995 +A1:2001+A2:2005;
	EMC Directive 2004/108/EC; FCC (CFR 47,	EMC Directive 2004/108/EC; FCC (CFR 47,	EMC Directive 2004/108/EC; FCC (CFR 47,
	Part 15) Class A	Part 15) Class A	Part 15) Class A
Immunity Generic EN ESD Radiated EFT/Burst Surge Conducted Power frequency magnetic field Voltage dips and interruptions Harmonics Flicker	ETSI EN 300 386 V1.3.3 EN 55024:1998+ A1:2001 + A2:2003 EN 61000-4-2; IEC 61000-4-2 EN 61000-4-3; IEC 61000-4-3 EN 61000-4-4; IEC 61000-4-4 EN 61000-4-5; IEC 61000-4-5 EN 61000-4-6; IEC 61000-4-6 IEC 61000-4-8; EN 61000-4-8 EN 61000-4-11; IEC 61000-4-11 EN 61000-3-2, IEC 61000-3-2 EN 61000-3-3, IEC 61000-3-3	ETSI EN 300 386 V1.3.3 EN 55024:1998+ A1:2001 + A2:2003 EN 61000-4-2; IEC 61000-4-2 EN 61000-4-3; IEC 61000-4-3 EN 61000-4-4; IEC 61000-4-4 EN 61000-4-5; IEC 61000-4-5 EN 61000-4-6; IEC 61000-4-6 IEC 61000-4-8; EN 61000-4-8 EN 61000-4-11; IEC 61000-4-11 EN 61000-3-2, IEC 61000-3-2 EN 61000-3-3, IEC 61000-3-3	ETSI EN 300 386 V1.3.3 EN 55024:1998+ A1:2001 + A2:2003 EN 61000-4-2; IEC 61000-4-2 EN 61000-4-3; IEC 61000-4-3 EN 61000-4-4; IEC 61000-4-4 EN 61000-4-5; IEC 61000-4-5 IEC 61000-4-6; IEC 61000-4-6 IEC 61000-4-8; EN 61000-4-11 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;
	command-line interface; Web browser;	command-line interface; Web browser;	command-line interface; Web browser;
	SNMP Manager; Telnet; HTTPS; RMON1;	SNMP Manager; Telnet; HTTPS; RMON1;	SNMP Manager; Telnet; HTTPS; RMON1;
	FTP	FTP	FTP
Notes	The customer must order a power supply,	The customer must order a power supply,	The customer must order power supply,
	as the device does not come with a PSU.	as the device does not come with a PSU.	as the device does not come with a PSU.
	At least one JC087A or JC090A is required.	At least one JC087A or JC090A is required.	At least one JC680A or JC681A is required.
Services	Refer to the HP website at <u>hp.com/</u>	Refer to the HP website at hp.com/	Refer to the HP website at <u>hp.com/</u>
	<u>networking/services</u> for details on the	networking/services for details on the	networking/services for details on the
	service-level descriptions and product	service-level descriptions and product	service-level descriptions and product
	numbers. For details about services	numbers. For details about services	numbers. For details about services
	and response times in your area, please	and response times in your area, please	and response times in your area, please
	contact your local HP sales office.	contact your local HP sales office.	contact your local HP sales office.

#### **Standards and Protocols**

(applies to all products in series)

General protocols	IEEE 802.1ag Service Layer OAM IEEE 802.1D MAC Bridges IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1s (MSTP) IEEE 802.1v VLAN classification by Protocol and Port IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3ae 10 Gigabit Ethernet	IEEE 802.3x Flow Control RFC 768 UDP RFC 792 ICMP RFC 793 TCP RFC 826 ARP RFC 854 TELNET RFC 925 Multi-LAN Address Resolution RFC 951 BOOTP RFC 1058 RIPv1 RFC 1350 TFTP Protocol (revision 2) RFC 1519 CIDR	RFC 1542 BOOTP Extensions RFC 2131 DHCP RFC 2453 RIPv2 RFC 3046 DHCP Relay Agent Information Option RFC 3576 Ext to RADIUS (CoA only) RFC 3768 VRRP RFC 4675 RADIUS VLAN & Priority RFC 3323—A Privacy Mechanism for th Session Initiation Protocol (SIP) 802.1r—GARP Proprietary Attribute Registration Protocol (GPRP)
IP multicast	RFC 2934 Protocol Independent Multicast MIB for IPv4 RFC 3376 IGMPv3 (host joins only)	RFC 3618 Multicast Source Discovery Protocol (MSDP) RFC 3973 Draft 2 PIM Dense Mode	RFC 4601 Draft 10 PIM Sparse Mode
IPv6	RFC 2080 RIPng for IPv6 RFC 2460 IPv6 Specification RFC 2710 Multicast Listener Discovery (MLD) for IPv6 RFC 2740 OSPFv3 for IPv6 RFC 2925 Remote Operations MIB (ping only) RFC 3019 MLDv1 MIB	RFC 3162 RADIUS and IPv6 RFC 3315 DHCPv6 (client and relay) RFC 3315 DHCPv6 (client only) RFC 3810 MLDv2 (host joins only) RFC 4022 MIB for TCP RFC 4251 SSHv6 Architecture RFC 4252 SSHv6 Authentication RFC 4253 SSHv6 Transport Layer	RFC 4254 SSHv6 Connection RFC 4293 MIB for IP RFC 4419 Key Exchange for SSH RFC 4443 ICMPv6 RFC 4541 IGMP & MLD Snooping Switch RFC 4861 IPv6 Neighbor Discovery RFC 4862 IPv6 Stateless Address Auto-configuration
MIBs	IEEE8021-PAE-MIB IEEE8023-LAG-MIB RFC 1213 MIB II RFC 1493 Bridge MIB RFC 1657 BGP-4 MIB RFC 1724 RIPv2 MIB RFC 1850 OSPFv2 MIB RFC 2011 SNMPv2 MIB for IP RFC 2013 SNMPv2 MIB for UDP RFC 2233 Interface MIB RFC 2273 SNMP-Notification-MIB RFC 2452 IPv6-TCP-MIB	RFC 2454 IPv6-UDP-MIB RFC 2465 IPv6 MIB RFC 2466 ICMPv6 MIB RFC 2571 SNMP Framework MIB RFC 2572 SNMP-MPD MIB RFC 2573 SNMP-Notification MIB RFC 2618 RADIUS Client MIB RFC 2620 RADIUS Accounting MIB RFC 2665 Ethernet-Like-MIB RFC 2665 Ethernet-Like-MIB RFC 2674 802.1p and IEEE 802.1Q Bridge MIB RFC 2688 MAU-MIB	RFC 2787 VRRP MIB RFC 2819 RMON MIB RFC 2925 Ping MIB RFC 3414 SNMP-User based-SM MIB RFC 3415 SNMP-View based-ACM MIB RFC 3418 MIB for SNMPv3 RFC 3621 Power Ethernet MIB RFC 3621 Power Ethernet MIB RFC 3826 AES for SNMP's USM MIB RFC 4133 Entity MIB (version 3) LLDP-EXT-DOT1-MIB LLDP-EXT-DOT3-MIB LLDP-MIB
Network management	IEEE 802.1ab Link Layer Discovery Protocol (LLDP) RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm), and 9 (events)	RFC 3176 sFlow ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)	SNMPv1/v2c/v3
OSPF	RFC 2328 OSPFv2	RFC 3101 OSPF NSSA	
Security	IEEE 802.1X Port-based Network Access Control RFC 1492 TACACS+	RFC 2865 RADIUS (client only) RFC 2866 RADIUS Accounting	Secure Sockets Layer (SSL) SSHv2 Secure Shell

## HP 5820 Switch Series accessories

(applies to all products in series)

Transceivers	HP X125 1G SFP LC LH40 1310nm Transceiver (JD061A) HP X120 1G SFP LC LH40 1550nm Transceiver (JD062A) HP X120 1G SFP LC LH70 Transceiver (JD083B) HP X120 1G SFP LC SX Transceiver (JD089B) HP X120 1G SFP LC SX Transceiver (JD118B) HP X120 1G SFP LC SX Transceiver (JD192B) HP X130 10G SFP+ LC SR Transceiver (JD092B) HP X130 10G SFP+ LC LR Transceiver (JD093B) HP X130 10G SFP+ LC LR Transceiver (JD094B) HP X130 10G SFP+ LC LR Transceiver (JG234A) HP X130 10G SFP+ LC LR Moken Transceiver (JG234A) HP X130 10G SFP+ LC LH 80km Transceiver (JG915A) HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable (JD095C) HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (JD095C) HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (JD097C) HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (JD097C) HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable (JD097C) HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable (JD097C) HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable (JD097C) HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable (JD097C) HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable (JD097C) HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Splitter Cable (JG329A) HP X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable (JG330A) HP X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable (JG331A)
Cables	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable (QK732A) HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable (QK733A) HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable (QK734A) HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable (QK735A) HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable (QK736A) HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable (QK737A)
Power supply	HP RPS1600 Redundant Power System (JG136A) HP RPS1600 1600W AC Power Supply (JG137A)

## HP 5820 Switch model-specific accessories

HP 5820-14XG-SFP+ Switch with 2 Interface Slots & 1 OAA Slot (JC106B)	HP 5800 4-port 10GbE SFP+ Module (JC091A) HP 5800 2-port 10GbE SFP+ Module (JC092B) HP 5800 300W AC Power Supply (JC087A) HP 5800 300W DC Power Supply (JC090A) HP 5800 2RU Spare Fan Assembly (JC096A) HP 5820 VPN Firewall Module (JD255A)
HP 5820-24XG-SFP+ Switch (JC102B)	HP 5800 300W AC Power Supply (JC087A) HP 5800 300W DC Power Supply (JC090A) HP 5800 1RU Spare Fan Assembly (JC098A)
HP 5820AF-24XG Switch (JG219B)	HP 58x0AF 650W AC Power Supply (JC680A) HP 58x0AF 650W DC Power Supply (JC681A) HP 58x0AF Back (power side) to Front (port side) Airflow Fan Tray (JC682A) HP 58x0AF Front (port side) to Back (power side) Airflow Fan Tray (JC683A)

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