



HP 5830 Switch Series

Data sheet

Product overview

The HP 5830AF Switch Series is a family of high-density 1 GbE top-of-rack data center and campus switches that are a part of the HP FlexFabric solution module of the HP FlexNetwork architecture. The two models, the 5830AF-48G and 5830AF-96G switches, are ideally suited for deployments at the server access layer in medium-sized and large enterprise data centers and campus networks. The HP 5830AF-48G Switch delivers 48 1-GbE ports and up to four 10-GbE ports in a space-saving 1RU package, while the HP 5830AF-96G Switch provides an industry-leading 96 1-GbE ports and up to 10 10-GbE uplink ports in a 2RU form factor.

Key features

- Stackable, high port density for high scalability
- HP IRF technology for simpler two-tier networks
- Ultradeep (1 Gb and 3 GB) packet buffers
- Full L2/L3 features, IPv4 and IPv6 dual stack
- Lower OpEx and greener data centers



Features and benefits

Quality of Service (QoS)

- **Traffic policing:** supports Committed Access Rate (CAR) and line rate
- **Powerful QoS feature:** creates traffic classes based on access control lists (ACLs), IEEE 802.1p precedence, IP, DSCP, or Type of Service (ToS) precedence; supports filter, redirect, mirror, or remark; supports the following congestion actions: strict priority (SP) queuing, weighted round robin (WRR), weighted fair queuing (WFQ), weighted random early discard (WRED), SP+WRR, and SP+WFQ

Management

- **sFlow (RFC 3176):** provides scalable ASIC-based wire-speed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes
- **Remote configuration and management:** is available through a secure Web browser or a command-line interface (CLI)
- **Manager and operator privilege levels:** enable read-only (operator) and read-write (manager) access on CLI and Web browser management interfaces
- **Management VLAN:** segments traffic to and from management interfaces, including CLI/telnet, a Web browser interface, and SNMP
- **Remote intelligent mirroring:** mirrors ingress/egress ACL-selected traffic from a switch port or VLAN to a local or remote 8200 zl, 6600, 6200 yl, 5400 zl, or 3500 switch port anywhere on the network
- **Multiple configuration files:** can be stored to the flash image
- **Secure Web GUI:** provides a secure, easy-to-use graphical interface for configuring the module via HTTPS
- **SNMPv1, v2c, and v3:** facilitate centralized discovery, monitoring, and secure management of networking devices
- **Remote monitoring (RMON):** uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group

- **Network Time Protocol (NTP):** synchronizes timekeeping among distributed time servers and clients; keeps consistent timekeeping among all clock-dependent devices within the network so that the devices can provide diverse applications based on the consistent time
- **Out-of band-interface:** isolates management traffic from user data plane traffic for complete isolation and total reachability, no matter what happens in the data plane

Connectivity

- **Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100 ports
- **Jumbo Frames:** on Gigabit Ethernet and 10-Gigabit ports, they 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 and IPv6):** transitions from IPv4 to IPv6, supporting connectivity for both protocols
 - **Multicast Listener Discovery (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 and OSPF routing protocols

Performance

- **Extraordinarily high port density:** is a single box-type switch that can provide 96 GbE ports and 10 10-GbE ports simultaneously with full line-rate switching and forwarding
- **Ultradeep packet buffering:** provides up to a 3G packet buffer to eliminate network congestion at the I/O associated with heavy use of server virtualization, as well as bursty multimedia, storage applications, and other critical services.
- **Hardware-based wire-speed access control lists (ACLs):** feature-rich ACL implementation (TCAM based) helps ensure high levels of security and ease of administration without impacting network performance
- **Local Address Resolution Protocol (ARP):** ARP fast reply feature provides an outstanding utilization of air-interface resources by first issuing an ARP request locally before the AP broadcasts over the radio interface

Resiliency and high availability

- **Device Link Detection Protocol (DLDP):** monitors link connectivity and shuts down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks
- **Virtual Router Redundancy Protocol (VRRP):** allows groups of two routers to dynamically back each other up to create highly available routed environments
- **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; switches do not have to be co-located and can be part of a disaster-recovery system; servers or switches can be attached using standard LACP for automatic load balancing and high availability; simplifies network operation by eliminating the complexity of Spanning Tree Protocol, Equal-Cost Multipath (ECMP), or VRRP
- **Rapid Ring Protection Protocol (RRPP):** connects multiple switches in a high-performance ring using standard Ethernet technology; traffic can be rerouted around the ring in less than 200 ms, reducing the impact on traffic and applications
- **Smart link:** allows 200 ms failover between links
- **Data center optimized design:** supports front-to-back/back-to-front airflow for hot/cold aisles, rear rack mounts, and redundant hot-swappable AC or DC power and fans

Manageability

- **Troubleshooting:** ingress and egress port monitoring enable network problem solving

Layer 2 switching

- **Spanning Tree/MSTP and RSTP:** prevent network loops
- **GARP VLAN Registration Protocol:** allows automatic learning and dynamic assignment of VLANs
- **Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) protocol snooping:** effectively control and manage the flooding of multicast packets in a Layer 2 network
- **32K MAC addresses:** provide access to many Layer 2 devices
- **IEEE 802.1ad QinQ and Selective QinQ:** increase the scalability of an Ethernet network by providing a hierarchical structure; connect multiple LANs on a high-speed campus or metro network

- **10 GbE port aggregation:** allows grouping of ports to increase overall data throughput to a remote device
- **Port isolation:** increases security by isolating ports within a VLAN while still allowing them to communicate with other VLANs
- **Per-VLAN Spanning Tree Plus (PVST+):** allows each virtual LAN (VLAN) to build a separate spanning tree to improve link bandwidth usage in network environments where multiple VLANs exist

Layer 3 services

- **Loopback interface address:** defines an address in Routing Information Protocol (RIP) and OSPF that can always be reachable, improving diagnostic capability
- **User Datagram Protocol (UDP) helper function:** allows UDP broadcasts to be directed across router interfaces to specific IP unicast or subnet broadcast addresses and prevents server spoofing for UDP services such as DHCP
- **Route maps:** provide more control during route redistribution; allow filtering and altering of route metrics
- **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

- **IPv6 tunneling:** is an important element for the transition from IPv4 to IPv6; allows IPv6 packets to traverse IPv4-only networks by encapsulating the IPv6 packet into a standard IPv4 packet; supports manually configured, 6to4, and Intra-Site Automatic Tunnel Addressing Protocol (ISATAP) tunnels
- **Bidirectional Forwarding Detection (BFD):** enables link connectivity monitoring and reduces network convergence time for RIP, OSPF, BGP, IS-IS, VRRP, and IRF
- **Policy-based routing:** makes routing decisions based on policies set by the network administrator
- **IGMPv1, v2, and v3:** allow 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
- **Layer 3 IPv4 routing:** provides routing of IPv4 at media speed; supports static routes, RIP and RIPv2, OSPF, IS-IS, and BGP

- **Equal-Cost Multipath (ECMP):** enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth
- **Layer 3 IPv6 routing:** provides routing of IPv6 at media speed; supports static routes, RIPng, OSPFv3, IS-ISv6, and MP-BGP
- **Endpoint Admission Defense (EAD):** provides security policies to users accessing a network
- **RADIUS/HWTACACS:** eases switch management security administration by using a password authentication server

Security

- **Access control lists (ACLs):** provide IP Layer 3 filtering based on source/destination IP address/subnet and source/destination TCP/UDP port number
- **Secure Shell:** encrypts all transmitted data for secure remote CLI access over IP networks
- **Port security:** allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **Secure FTP:** allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **Secure management access:** securely encrypts all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3
- **Identity-driven security and access control:**
 - **Per-user ACLs:** permits or denies user access to specific network resources based on user identity, location, and time of day, allowing multiple types of users on the same network to access specific network services without risk to network security or unauthorized access to sensitive data
 - **Automatic VLAN assignment:** automatically assigns users to the appropriate VLAN based on their identity and location, and the time of day
- **STP BPDU port protection:** blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- **DHCP protection:** blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- **Dynamic ARP protection:** blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- **STP Root Guard:** protects the root bridge from malicious attacks or configuration mistakes
- **Guest VLAN:** similar to IEEE 802.1X, it provides a browser-based environment to authenticated clients
- **MAC-based authentication:** allows or denies access to the switch based on client MAC address
- **IP Source Guard:** helps prevent IP spoofing attacks
- **IP multicast snooping (data-driven IGMP):** automatically prevents flooding of IP multicast traffic
- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP):** is an automated device discovery protocol that provides easy mapping of network management applications
- **Internet Group Management Protocol (IGMP):** is used by IP hosts to establish and maintain multicast groups; supports v1, v2, and v3; utilizes Any-Source Multicast (ASM) or Source-Specific Multicast (SSM) to manage IPv4 multicast networks
- **Protocol Independent Multicast (PIM):** is used for IPv4 and IPv6 multicast applications; supports PIM Dense Mode (PIM-DM), Sparse Mode (PIM-SM), and Source-Specific Mode (PIM-SSM)
- **Multicast Source Discovery Protocol (MSDP):** is used for inter-domain multicast applications, allowing multiple PIM-SM domains to interoperate
- **Multicast Border Gateway Protocol (MBGP):** allows multicast traffic to be forwarded across BGP networks and kept separate from unicast traffic
- **Multicast VLAN:** allows multiple VLANs to receive the same IPv4 or IPv6 multicast traffic, reducing network bandwidth demand by eliminating multiple streams to each VLAN
- **LLDP-MED:** is a standard extension that automatically configures network devices, including LLDP-capable IP phones
- **LLDP-CDP compatibility:** receives and recognizes CDP packets from Cisco's IP phones for seamless interoperation

Convergence

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Monitor and diagnostics

- **Port mirroring:** enables traffic on a port to be simultaneously sent to a network analyzer for monitoring
- **OAM (802.3ah):** detects data link layer problems that occurred in the "last mile"; monitors the status of the link between the two devices

- **CFD (802.1ag):** connectivity fault detection (CFD) provides a Layer 2 link OAM (operations, administration, and maintenance) mechanism used for link connectivity detection and fault locating

Additional information

- **Green initiative support:** provides support for RoHS and WEEE regulations
- **Green IT and power:** use the latest advances in silicon development, shut off unused ports, and use variable-speed fans to improve energy efficiency

Warranty and support

- **1-year warranty:** with advance replacement and next-business-day delivery (available in most countries)
- **Electronic and telephone support:** limited electronic and telephone support is available from HP; refer to www.hp.com/networking/warranty for details on the support provided and the period during which support is available
- **Software releases:** refer to www.hp.com/networking/warranty for details on the software releases provided and the period during which software releases are available for your product(s)

HP 5830 Switch Series

Specifications



HP 5830AF-48G Switch with 1 Interface Slot (JC691A)



HP 5830AF-96G Switch (JC694A)

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 2 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP 2 fixed 1000/10000 SFP+ ports 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 extended module slot	96 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 10 fixed 1000/10000 SFP+ ports 1 RJ-45 serial console port 1 RJ-45 out-of-band management port
Power supplies	2 power supply slots 1 minimum power supply required (ordered separately)	2 power supply slots 1 minimum power supply required (ordered separately)
Fan tray	1 fan tray slot Base product does not include fan tray	1 fan tray slot Base product does not include fan tray
Physical characteristics		
Dimensions	18.11(d) x 17.32(w) x 1.72(h) in. (46 x 44 x 4.36 cm) (1U height)	25.98(d) x 17.32(w) x 3.39(h) in. (66 x 44 x 8.6 cm)
Weight	14.53 lb. (6.59 kg)	31.75 lb. (14.4 kg)
Memory and processor	64 MB flash, 1 GB SDRAM; packet buffer size: 1 GB	64 MB flash, 1 GB SDRAM; packet buffer size: 3 GB
Performance		
Throughput	119 million pps (64-byte packets)	291.6 million pps (64-byte packets)
Switching capacity	160 Gbps	392 Gbps
Routing table size	12000 entries	12000 entries
MAC address table size	32000 entries	32000 entries
Environment		
Operating temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Operating relative humidity	5% to 95%	5% to 95%
Acoustic	Low-speed fan: 58 dB, High-speed fan: 65 dB	Low-speed fan: 58 dB, High-speed fan: 65 dB
Electrical characteristics		
Maximum heat dissipation	440 BTU/hr (464.2 kJ/hr)	1209 BTU/hr (1275.49 kJ/hr)
Voltage	100-240 VAC	100-240 VAC
DC voltage	-40 to -60 VDC	-40 to -60 VDC
Frequency	50/60 Hz	50/60 Hz
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
Emissions	VCCI Class A; EN 55022 Class A; ICES-003 Class A; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EMC Directive 2004/108/EC; EN 55024:1998+ A1:2001 + A2:2003; FCC (CFR 47, Part 15) Subpart B Class A	VCCI Class A; EN 55022 Class A; ICES-003 Class A; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EMC Directive 2004/108/EC; EN 55024:1998+ A1:2001 + A2:2003; FCC (CFR 47, Part 15) Subpart B Class A
Immunity		
Generic	ETSI EN 300 386 V1.3.3	ETSI EN 300 386 V1.3.3
EN	EN 55024:1998+ A1:2001 + A2:2003	EN 55024:1998+ A1:2001 + A2:2003
ESD	EN 61000-4-2; IEC 61000-4-2	EN 61000-4-2; IEC 61000-4-2
Radiated	EN 61000-4-3; IEC 61000-4-3	EN 61000-4-3; IEC 61000-4-3
EFT/Burst	EN 61000-4-4; IEC 61000-4-4	EN 61000-4-4; IEC 61000-4-4
Surge	EN 61000-4-5; IEC 61000-4-5	EN 61000-4-5; IEC 61000-4-5
Conducted	EN 61000-4-6; IEC 61000-4-6	EN 61000-4-6; IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8; IEC 61000-4-8	IEC 61000-4-8; IEC 61000-4-8
Voltage dips and interruptions	EN 61000-4-11; IEC 61000-4-11	EN 61000-4-11; IEC 61000-4-11
Harmonics	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
Management	IMC - Intelligent Management Center; command-line interface; Web browser; out-of-band management; SNMP Manager; Telnet; RMON1; FTP; IEEE 802.3 Ethernet MIB	IMC - Intelligent Management Center; command-line interface; Web browser; out-of-band management; SNMP Manager; Telnet; RMON1; FTP; IEEE 802.3 Ethernet MIB

HP 5830 Switch Series

Specifications (continued)

	HP 5830AF-48G Switch with 1 Interface Slot (JC691A)	HP 5830AF-96G Switch (JC694A)
Notes	<p>Additional specifications</p> <ul style="list-style-type: none">• Static MAC table: 5120• Max VLAN interface: 1,000• Multicast L2 entries for IPv4: 2,000• Multicast L2 entries for IPv6: 1,000• Multicast L3 entries for IPv4: 2,000• Multicast L3 entries for IPv6: 1,000• VLAN table: 4,000• QoS forward queue number: 8• Static ARP number: 1,000• Dynamic ARP number: 8,000• MAX number in one link group: 8• Link group number: 128• ACL number: 4,000 (ingress); 512 (egress)	<p>Additional specifications</p> <ul style="list-style-type: none">• Static MAC table: 5120• Max VLAN interface: 1,000• Multicast L2 entries for IPv4: 2,000• Multicast L2 entries for IPv6: 1,000• Multicast L3 entries for IPv4: 2,000• Multicast L3 entries for IPv6: 1,000• VLAN table: 4,000• QoS forward queue number: 8• Static ARP number: 1,000• Dynamic ARP number: 8,000• MAX number in one link group: 8• Link group number: 128• ACL number (GbE ports): 8,000 (ingress); 1,000 (egress)• ACL number(10 GbE ports): 2,000 (ingress); 512 (egress)
Services	<p>Refer to the HP website at www.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.</p>	<p>Refer to the HP website at www.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.</p>

Specifications (continued)

HP 5830AF-48G Switch with 1 Interface Slot (JC691A)

HP 5830AF-96G Switch (JC694A)

Standards and protocols (applies to all products in series)

BGP

RFC 1771 BGPv4
 RFC 1772 Application of the BGP
 RFC 1965 BGP4 confederations
 RFC 1997 BGP Communities Attribute
 RFC 1998 PPP Gandalf FZA Compression Protocol
 RFC 2385 BGP Session Protection via TCP MD5
 RFC 2439 BGP Route Flap Damping
 RFC 2796 BGP Route Reflection
 RFC 2858 BGP-4 Multi-Protocol Extensions
 RFC 2918 Route Refresh Capability
 RFC 3065 Autonomous System Confederations for BGP
 RFC 3392 Capabilities Advertisement with BGP-4
 RFC 4271 A Border Gateway Protocol 4 (BGP-4)
 RFC 4272 BGP Security Vulnerabilities Analysis
 RFC 4273 Definitions of Managed Objects for BGP-4
 RFC 4274 BGP-4 Protocol Analysis
 RFC 4275 BGP-4 MIB Implementation Survey
 RFC 4276 BGP-4 Implementation Report
 RFC 4277 Experience with the BGP-4 Protocol
 RFC 4360 BGP Extended Communities Attribute
 RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP)
 RFC 5291 Outbound Route Filtering Capability for BGP-4
 RFC 5292 Address-Prefix-Based Outbound Route Filter for BGP-4

Denial of service protection

RFC 2267 Network Ingress Filtering
 Automatic filtering of well-known denial-of-service packets
 CPU DoS Protection
 Rate limiting by ACLs

Device management

RFC 1157 SNMPv1/v2c
 RFC 1305 NTPv3
 RFC 1902 (SNMPv2)
 RFC 2271 FrameWork
 RFC 2579 (SMIv2 Text Conventions)
 RFC 2580 (SMIv2 Conformance)
 RFC 2819 (RMON groups Alarm, Event, History and Statistics only)
 HTTP, SSHv1, and Telnet
 Multiple Configuration Files
 Multiple Software Images
 SSHv1/SSHv2 Secure Shell
 TACACS/TACACS+
 Web UI

General protocols

IEEE 802.1ad Qin-Q
 IEEE 802.1ag Service Layer OAM
 IEEE 802.1p Priority
 IEEE 802.1Q VLANs
 IEEE 802.1s Multiple Spanning Trees
 IEEE 802.1w Rapid Reconfiguration of Spanning Tree
 IEEE 802.1X PAE
 IEEE 802.3ab 1000BASE-T
 IEEE 802.3ac (VLAN Tagging Extension)
 IEEE 802.3ad Link Aggregation Control Protocol (LACP)
 IEEE 802.3ae 10-Gigabit Ethernet
 IEEE 802.3at
 IEEE 802.3u 100BASE-X
 IEEE 802.3x Flow Control
 IEEE 802.3z 1000BASE-X
 RFC 768 UDP
 RFC 783 TFTP Protocol (revision 2)
 RFC 791 IP
 RFC 792 ICMP
 RFC 793 TCP
 RFC 826 ARP

RFC 854 TELNET
 RFC 894 IP over Ethernet
 RFC 903 RARP
 RFC 906 TFTP Bootstrap
 RFC 925 Multi-LAN Address Resolution
 RFC 950 Internet Standard Subnetting Procedure
 RFC 951 BOOTP
 RFC 959 File Transfer Protocol (FTP)
 RFC 1027 Proxy ARP
 RFC 1035 Domain Implementation and Specification
 RFC 1042 IP Datagrams
 RFC 1058 RIPv1
 RFC 1142 OSI ISIS Intra-domain Routing Protocol
 RFC 1213 Management Information Base for Network Management of TCP/IP-based internets
 RFC 1256 ICMP Router Discovery Protocol (IRDP)
 RFC 1293 Inverse Address Resolution Protocol
 RFC 1305 NTPv3
 RFC 1350 TFTP Protocol (revision 2)
 RFC 1393 Traceroute Using an IP Option
 RFC 1519 CIDR
 RFC 1531 Dynamic Host Configuration Protocol
 RFC 1533 DHCP Options and BOOTP Vendor Extensions
 RFC 1591 DNS (client only)
 RFC 1624 Incremental Internet Checksum
 RFC 1701 Generic Routing Encapsulation
 RFC 1721 RIP-2 Analysis
 RFC 1723 RIP v2
 RFC 1812 IPv4 Routing
 RFC 2091 Trigger RIP
 RFC 2131 DHCP
 RFC 2138 Remote Authentication Dial In User Service (RADIUS)
 RFC 2453 RIPv2
 RFC 2644 Directed Broadcast Control
 RFC 2763 Dynamic Name-to-System ID mapping
 RFC 2784 Generic Routing Encapsulation (GRE)
 RFC 2865 Remote Authentication Dial In User Service (RADIUS)
 RFC 2966 Domain-wide Prefix Distribution with Two-Level ISIS
 RFC 2973 ISIS Mesh Groups
 RFC 3277 ISIS Transient Blackhole Avoidance
 RFC 3567 Intermediate System to Intermediate System (IS-IS) Cryptographic Authentication
 RFC 3719 Recommendations for Interoperable Networks using Intermediate System to Intermediate System (IS-IS)
 RFC 3784 ISIS TE support
 RFC 3786 Extending the Number of IS-IS LSP Fragments Beyond the 256 Limit
 RFC 3787 Recommendations for Interoperable IP Networks using Intermediate System to Intermediate System (IS-IS)
 RFC 3847 Restart signaling for IS-IS
 RFC 4251 The Secure Shell (SSH) Protocol Architecture
 RFC 5130 A Policy Control Mechanism in IS-IS Using Administrative Tags

IP multicast

RFC 2236 IGMPv2
 RFC 2283 Multiprotocol Extensions for BGP-4
 RFC 2362 PIM Sparse Mode (Premium Edge License)
 RFC 3376 IGMPv3
 RFC 3446 Anycast Rendezvous Point (RP) mechanism using Protocol Independent Multicast (PIM) and Multicast Source Discovery Protocol (MSDP)
 RFC 3618 Multicast Source Discovery Protocol (MSDP)
 RFC 3973 PIM Dense Mode
 RFC 4541 Considerations for Internet Group

Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches
 RFC 4601 Draft 10 PIM Sparse Mode
 RFC 4604 Using Internet Group Management Protocol Version 3 (IGMPv3) and Multicast Listener Discovery Protocol Version 2 (MLDv2) for Source-Specific Multicast
 RFC 4605 IGMP/MLD Proxying
 RFC 4607 Source-Specific Multicast for IP
 RFC 4610 Anycast-RP Using Protocol Independent Multicast (PIM)
 RFC 5059 Bootstrap Router (BSR) Mechanism for Protocol Independent Multicast (PIM)

IPv6

RFC 1886 DNS Extension for IPv6
 RFC 1887 IPv6 Unicast Address Allocation Architecture
 RFC 1981 IPv6 Path MTU Discovery
 RFC 2080 RIPng for IPv6
 RFC 2081 RIPng Protocol Applicability Statement
 RFC 2292 Advanced Sockets API for IPv6
 RFC 2373 IPv6 Addressing Architecture
 RFC 2375 IPv6 Multicast Address Assignments
 RFC 2460 IPv6 Specification
 RFC 2461 IPv6 Neighbor Discovery
 RFC 2462 IPv6 Stateless Address Auto-configuration
 RFC 2463 ICMPv6
 RFC 2464 Transmission of IPv6 over Ethernet Networks
 RFC 2473 Generic Packet Tunneling in IPv6
 RFC 2526 Reserved IPv6 Subnet Anycast Addresses
 RFC 2529 Transmission of IPv6 Packets over IPv4
 RFC 2545 Use of MP-BGP-4 for IPv6
 RFC 2553 Basic Socket Interface Extensions for IPv6
 RFC 2710 Multicast Listener Discovery (MLD) for IPv6
 RFC 2740 OSPFv3 for IPv6
 RFC 2767 Dual stacks IPv4& IPv6
 RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers
 RFC 3056 Connection of IPv6 Domains via IPv4 Clouds
 RFC 3307 IPv6 Multicast Address Allocation
 RFC 3315 DHCPv6 (client and relay)
 RFC 3484 Default Address Selection for IPv6
 RFC 3513 IPv6 Addressing Architecture
 RFC 3736 Stateless Dynamic Host Configuration Protocol (DHCP) Service for IPv6
 RFC 3810 MLDv2 for IPv6
 RFC 4214 Intra-Site Automatic Tunnel Addressing Protocol (ISATAP)

MIBs

RFC 1156 (TCP/IP MIB)
 RFC 1157 A Simple Network Management Protocol (SNMP)
 RFC 1213 MIB II
 RFC 1215 A Convention for Defining Traps for use with the SNMP
 RFC 1229 Interface MIB Extensions
 RFC 1493 Bridge MIB
 RFC 1573 SNMP MIB II
 RFC 1643 Ethernet MIB
 RFC 1657 BGP-4 MIB
 RFC 1724 RIPv2 MIB
 RFC 1757 Remote Network Monitoring MIB
 RFC 1850 OSPFv2 MIB
 RFC 1907 SNMPv2 MIB
 RFC 2011 SNMPv2 MIB for IP
 RFC 2012 SNMPv2 MIB for TCP
 RFC 2013 SNMPv2 MIB for UDP
 RFC 2096 IP Forwarding Table MIB
 RFC 2233 Interface MIB
 RFC 2452 IPV6-TCP-MIB
 RFC 2454 IPV6-UDP-MIB

Specifications (continued)

HP 5830AF-48G Switch with 1 Interface Slot (JC691A)

Standards and protocols (applies to all products in series)

RFC 2571 SNMP Framework MIB
 RFC 2572 SNMP-MPD MIB
 RFC 2573 SNMP-Target MIB
 RFC 2578 Structure of Management Information Version 2 (SMIv2)
 RFC 2580 Conformance Statements for SMIv2
 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 IEEE 802.1Q Bridge MIB
 RFC 2787 VRRP MIB
 RFC 2819 RMON MIB
 RFC 2925 Ping MIB
 RFC 2932IP (Multicast Routing MIB)
 RFC 2933 IGMP MIB
 RFC 2934 Protocol Independent Multicast MIB for IPv4
 RFC 3414 SNMP-User based-SM MIB
 RFC 3415 SNMP-View based-ACM MIB
 RFC 3417 Simple Network Management Protocol (SNMP) over IEEE 802 Networks
 RFC 3418 MIB for SNMPv3
 RFC 3595 Textual Conventions for IPv6 Flow Label
 RFC 3826 AES for SNMP's USM MIB
 RFC 4133 Entity MIB (Version 3)
 RFC 4444 Management Information Base for Intermediate System to Intermediate System (IS-IS)

Network management

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
 RFC 1155 Structure of Management Information
 RFC 1157 SNMPv1
 RFC 1448 Protocol Operations for version 2 of the Simple Network Management Protocol (SNMPv2)
 RFC 2211 Controlled-Load Network
 RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
 RFC 3176 sFlow
 RFC 3411 SNMP Management Frameworks

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RFC 3412 SNMPv3 Message Processing
 RFC 3414 SNMPv3 User-based Security Model (USM)
 RFC 3415 SNMPv3 View-based Access Control Model VACM)
 ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)

OSPF

RFC 1245 OSPF protocol analysis
 RFC 1246 Experience with OSPF
 RFC 1765 OSPF Database Overflow
 RFC 1850 OSPFv2 Management Information Base (MIB), traps
 RFC 2154 OSPF w/ Digital Signatures (Password, MD-5)
 RFC 2328 OSPFv2
 RFC 2370 OSPF Opaque LSA Option
 RFC 3101 OSPF NSSA
 RFC 3137 OSPF Stub Router Advertisement
 RFC 3630 Traffic Engineering Extensions to OSPF Version 2
 RFC 4061 Benchmarking Basic OSPF Single Router Control Plane Convergence
 RFC 4062 OSPF Benchmarking Terminology and Concepts
 RFC 4063 Considerations When Using Basic OSPF Convergence Benchmarks
 RFC 4222 Prioritized Treatment of Specific OSPF Version 2 Packets and Congestion Avoidance
 RFC 4811 OSPF Out-of-Band LSDB Resynchronization
 RFC 4812 OSPF Restart Signaling
 RFC 4813 OSPF Link-Local Signaling
 RFC 4940 IANA Considerations for OSPF

QoS/CoS

IEEE 802.1P (CoS)

RFC 1349 Type of Service in the Internet Protocol Suite
 RFC 2211 Specification of the Controlled-Load Network Element Service
 RFC 2212 Guaranteed Quality of Service
 RFC 2474 DSCP DiffServ
 RFC 2475 DiffServ Architecture
 RFC 2597 DiffServ Assured Forwarding (AF)
 RFC 2598 DiffServ Expedited Forwarding (EF)

Security

IEEE 802.1X Port Based Network Access Control
 RFC 1321 The MD5 Message-Digest Algorithm
 RFC 1334 PPP Authentication Protocols (PAP)
 RFC 1492 An Access Control Protocol, Sometimes Called TACACS
 RFC 1994 PPP Challenge Handshake Authentication Protocol (CHAP)
 RFC 2082 RIP-2 MD5 Authentication
 RFC 2104 Keyed-Hashing for Message Authentication
 RFC 2408 Internet Security Association and Key Management Protocol (ISAKMP)
 RFC 2409 The Internet Key Exchange (IKE)
 RFC 2716 PPP EAP TLS Authentication Protocol
 RFC 2865 RADIUS Authentication
 RFC 2866 RADIUS Accounting
 RFC 2867 RADIUS Accounting Modifications for Tunnel Protocol Support
 RFC 2868 RADIUS Attributes for Tunnel Protocol Support
 RFC 2869 RADIUS Extensions
 Access Control Lists (ACLs)
 Guest VLAN for 802.1x
 MAC Authentication
 Port Security
 SSHv1/SSHv2 Secure Shell

HP 5830 Switch Series accessories

Transceivers

HP X110 100M SFP LC LH40 Transceiver (JD090A)
HP X110 100M SFP LC LH80 Transceiver (JD091A)
HP X110 100M SFP LC FX Transceiver (JD102B)
HP X110 100M SFP LC LX Transceiver (JD120B)
HP X125 1G SFP LC LH40 1310nm Transceiver (JD061A)
HP X120 1G SFP LC LH40 1550nm Transceiver (JD062A)
HP X125 1G SFP LC LH70 Transceiver (JD063B)
HP X120 1G SFP LC SX Transceiver (JD118B)
HP X120 1G SFP LC LX Transceiver (JD119B)
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HP X170 1G SFP LC LH70 1590 Transceiver (JD111A)
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HP X170 1G SFP LC LH70 1470 Transceiver (JD113A)
HP X170 1G SFP LC LH70 1490 Transceiver (JD114A)
HP X170 1G SFP LC LH70 1510 Transceiver (JD115A)
HP X170 1G SFP LC LH70 1530 Transceiver (JD116A)
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HP X130 10G SFP+ LC LRM Transceiver (JD093B)
HP X130 10G SFP+ LC LR Transceiver (JD094B)
HP X130 10G SFP+ LC ER 40km Transceiver (JG234A)
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable (JD095B)
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable (JD096B)

HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (JD097B)

HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable (JG081B)

Power Supply

HP 58x0AF 650W AC Power Supply (JC680A)

HP 58x0AF 650W DC Power Supply (JC681A)

HP 5830AF-48G Switch with 1 Interface Slot (JC691A)

HP 5500/5120 2-port 10GbE SFP+ Module (JD368B)

HP 5830AF-48G Back (power side) to Front (port side) Airflow Fan Tray (JC692A)

HP 5830AF-48G Front (port side) to Back (power side) Airflow Fan Tray (JC693A)

HP 5830AF-96G Switch (JC694A)

HP 5830AF-96G back (power side) to front (port side) airflow Fan Tray (JC695A)

HP 5830AF-96G front (port side) to back (power side) airflow Fan Tray (JC696A)

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4AA3-6200ENW, Created August 2011; Updated November 2011, Rev. 2

