



HP A5810-48G Switch

Data sheet

Product overview

The HP A5810-48G Switch delivers unparalleled QoS across 48 10/100/1000Base-T Ethernet ports, two multiplex Gigabit Ethernet (GbE) combination SFP ports, and two 10-GbE SFP+ ports for the most demanding enterprise network environments.

Key features

- High performance for core and distribution
- Powerful IPv4/IPv6 ACL/QoS/VoQ
- Powerful buffer capability—24M buffering
- Redundant, hot-swappable power supplies



Features and benefits

Management

- **Remote configuration and management:** is available through a secure Web browser or a command-line interface (CLI)
- **IEEE 802.1ab LLDP discovery:** advertises and receives management information from adjacent devices on a network
- **USB support:**
 - **File copy:** allows users to copy switch files to and from a USB flash drive
- **DHCP options:** client allows automatic setting of IP address
- **SNMPv1, v2c, and v3:** facilitate centralized discovery, monitoring, and secure management of networking devices
- **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

Connectivity

- **Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100 and 10/100/1000 ports
- **Jumbo frames:** on Gigabit and 10-Gigabit ports, allow high-performance remote backup and disaster-recovery services

Performance

- **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

Resiliency and high availability

- **Virtual Router Redundancy Protocol (VRRP):** allows groups of two routers to dynamically back each other up to create highly available routed environments
- **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

- **Link Aggregation Control Protocol (LACP):** LACP allows to bundle several physical ports together to form a single logical channel.

Manageability

- **RMON (remote monitoring):** provides advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- **Web interface:** allows configuration of the switch from any Web browser on the network
- **Multiple configuration files:** allow multiple configuration files to be stored to flash image
- **Troubleshooting:** ingress and egress port monitoring enable network problem solving

Layer 2 switching

- **16K MAC address table:** provides access to many Layer 2 devices
- **4094 port-based VLANs:** provide security between workgroups
- **Gigabit Ethernet port aggregation:** allows grouping of ports to increase overall data throughput to a remote device
- **10 GbE port aggregation:** allows grouping of ports to increase overall data throughput to a remote device
- **Spanning Tree/MSTP, RSTP, and STP Root Guard:** prevent network loops

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

Layer 3 routing

- **Layer 3 IP routing:**
 - **Static IP routing:** provides basic routing (supporting up to 1K static routes); allows manual configuration of routing

Security

- **Advanced processor queuing mechanism:** helps prevent denial-of-service (DoS) attacks, while DHCP snooping helps ensure that devices can only receive an IP address from a legitimate DHCP server on the network
- **IP source guard:** helps prevent IP spoofing attacks
- **HTTPS management:** provides secure Web management

- **RADIUS/HWTACACS:** eases switch management security administration by using a password authentication server
- **Secure Shell (SSHv2):** encrypts all transmitted data for secure, remote command-line interface (CLI) access over IP networks

Convergence

- **LLDP-MED:** is a standard extension that automatically configures network devices, including LLDP-capable IP phones

Monitor and diagnostics

- **Port mirroring:** enables traffic on a port to be simultaneously sent to a network analyzer for monitoring
- **Remote Span (Rspan):** RSPAN extends SPAN by enabling remote monitoring of multiple switches across your network.

Additional information

- **Green IT and power:** use the latest advances in silicon development, shut off unused ports, and use variable-speed fans to improve power efficiency

Warranty and support

- **Lifetime warranty:** for as long as you own the product 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)

*Hardware warranty replacement for as long as you own the product, with next business day advance replacement (available in most countries) with a five-year hardware warranty replacement for the disk drive included with HP AllianceONE Services z1 Module, HP Threat Management Services z1 Module, HP PCM+ Agent with AllianceONE Services z1 Module, and HP E-MSM765 z1 Mobility Controller. For details, refer to the HP Software License, Warranty, and Support booklet at www.hp.com/networking/warranty.

HP A5810-48G Switch

Specifications



HP A5810-48G Switch (JF242A)

Ports	48 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) 2 SFP 100/1000 Mbps ports 2 SFP+ 10-GbE ports; Duplex: full only 1 RJ-45 serial console port 1 RJ-45 out-of-band management port
Power supplies	2 power-supply slots 1 minimum power-supplies required includes: 1 x JC087AHP A5820/A5800 300W AC Power Supply
Physical characteristics	
Dimensions	16.54(d) x 17.32(w) x 1.72(h) in. (42 x 44 x 4.36 cm) (1U height)
Weight	17.64 lb. (8 kg)
Memory and processor	512 MB SDRAM, 512 MB flash; packet buffer size: 24 MB
Mounting	Mounts in EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
Performance	
Throughput	up to 101 million pps
Routing/Switching capacity	136 Gbps
MAC address table size	16000 entries
Environment	
Operating temperature	32°F to 113°F (0°C to 45°C)
Operating relative humidity	10% to 90%, noncondensing
Electrical characteristics	
Maximum heat dissipation	614 BTU/hr (647.77 kJ/hr)
Voltage	100-120 / 200-240 VAC
Frequency	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
Emissions	VCCI Class A; EN 55022 Class A; ICES-003 Class A; ANSI C63.4 2003; AS/NZS CISPR22 Class A; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A
Immunity	
Generic	ETSI EN 300 386 V1.3.3
EN	EN 55024:1998+ A1:2001 + A2:2003
ESD	EN 61000-4-2; IEC 61000-4-2
Radiated	EN 61000-4-3; IEC 61000-4-3
EFT/Burst	EN 61000-4-4; IEC 61000-4-4
Surge	EN 61000-4-5; IEC 61000-4-5
Conducted	EN 61000-4-6; IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8; EN 61000-4-8
Voltage dips and interruptions	EN 61000-4-11; IEC 61000-4-11
Harmonics	EN 61000-3-2, IEC 61000-3-2
Flicker	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; HTTPS; RMON1; FTP
Notes	A5810 switch provides a power module when shipped. Customer can select two power modules to implement 1+1 power supply redundancy.
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UV882E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV885E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UV888E) 3-year, 24x7 SW phone support, software updates (UV891E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV883E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV886E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV889E) 4-year, 24x7 SW phone support, software updates (UV892E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV884E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV887E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV890E) 5-year, 24x7 SW phone support, software updates (UV893E) 3 Yr 6 hr Call-to-Repair Onsite (UW969E) 4 Yr 6 hr Call-to-Repair Onsite (UW970E)

Specifications (continued)

HP A5810-48G Switch (JF242A)

5 Yr 6 hr Call-to-Repair Onsite (UW971E)

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.

Standards and protocols

General protocols

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 1519 CIDR
RFC 1542 BOOTP Extensions
RFC 2131 DHCP
RFC 3576 Ext to RADIUS (CoA only)
RFC 4675 RADIUS VLAN & Priority

MIBs

IEEE8021-PAE-MIB
IEEE8023-LAG-MIB
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 2011 SNMPv2 MIB for IP
RFC 2013 SNMPv2 MIB for UDP
RFC 2233 Interface MIB
RFC 2273 SNMP-NOTIFICATION-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 2674 802.1p and IEEE 802.1Q Bridge MIB
RFC 2688 MAU-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 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

Security

RFC 1492 TACACS+
RFC 2865 RADIUS (client only)
RFC 2866 RADIUS Accounting
Secure Sockets Layer (SSL)
SSHv2 Secure Shell

HP A5810-48G Switch accessories

Transceivers

HP X124 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 X110 100M SFP LC LH40 Transceiver (JD090A)
HP X110 100M SFP LC LH80 Transceiver (JD091A)
HP X130 SFP+ LC SR Transceiver (JD092B)
HP X130 SFP+ LC LRM Transceiver (JD093B)
HP X130 SFP+ LC LR Transceiver (JD094B)
HP X110 100M SFP LC FX Transceiver (JD102B)
HP X120 1G SFP LC SX Transceiver (JD118B)
HP X120 1G SFP LC LX Transceiver (JD119B)
HP X110 100M SFP LC LX Transceiver (JD120B)
HP X240 SFP+ SFP+ 0.65 m Direct Attach Cable (JD095B)
HP X240 SFP+ SFP+ 1.2 m Direct Attach Cable (JD096B)
HP X240 SFP+ SFP+ 3 m Direct Attach Cable (JD097B)

Cables

NEW HP 1 m PremierFlex OM3+ LC/LC Optical Cable (BK838A)

NEW HP 2 m PremierFlex OM3+ LC/LC Optical Cable (BK839A)

NEW HP 5 m PremierFlex OM3+ LC/LC Optical Cable (BK840A)

NEW HP 15 m PremierFlex OM3+ LC/LC Optical Cable (BK841A)

NEW HP 30 m PremierFlex OM3+ LC/LC Optical Cable (BK842A)

NEW HP 50 m PremierFlex OM3+ LC/LC Optical Cable (BK843A)

Power Supply

HP A5820/A5800 300W AC Power Supply (JC087A)

Fan Tray

HP A5800 1RU Spare Fan Assembly for A5800-24G-SFP Switch with 1 Interface Slot (JC098A)

To learn more, visit www.hp.com/networking

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