HP A5500G SI Switch Series

Data sheet

Product overview

These Gigabit Ethernet switches deliver quad-speed performance 10/100/1000 and 10 Gigabit Ethernet, as well as advanced voice-enhanced features such as Power over Ethernet (PoE), auto-voice VLAN, and quality of service (QoS). As a result, they are ideal for enterprise organizations seeking to build a secure, convergence-enhanced campus network. Robust IPv6 support and 10 Gigabit Ethernet uplinks future-proof an enterprise network against obsolescence. Resilient Ring Protection Protocol (RRPP), Smart Link, and Intelligent Resilient Framework (IRF) deliver 50 ms switchover and carrier-class reliability.

Key features

- Managed Layer 2 and Layer 3 GbE connectivity
- High performance
- Enterprise-class security features
- Application convergence capable
- Easy to use and manage

Features and benefits

Quality of Service (QoS)

- **Broadcast control:** allows limitation of broadcast traffic rate to cut down on unwanted broadcast traffic on the network
- **Advanced classifier-based QoS:** classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a port, VLAN, or whole switch
- **Powerful QoS feature:** supports the following congestion actions: strict priority queuing (SP), weighted round robin queuing, and SP+WRR
- **Traffic policing:** supports Committed Access Rate (CAR) and line rate

Management

- **Friendly port names:** allow assignment of descriptive names to ports
- **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
- **Command authorization:** leverages HWTACACS to link a custom list of CLI commands to an individual network administrator's login; also provides an audit trail
- **Secure Web GUI:** provides a secure, easy-to-use graphical interface for configuring the module via HTTPS
- **Multiple configuration files:** can be stored to the flash image
- **Complete session logging:** provides detailed information for problem identification and resolution
- **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
- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP):** automated device discovery protocol provides easy mapping by network management applications
- **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
- **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 switch port anywhere on the network
- **Device Link Detection Protocol (DLDP):** monitors cable between two switches and shuts down the ports on both ends if the cable is broken, preventing network problems such as loops
- **IPv6 management:** future-proofs networking, as the switch is capable of being managed whether the attached network is running IPv4 or IPv6; supports pingv6, tracertv6, Telnetv6, TFTPv6, DNSv6, syslogv6, FTPv6, SNMPv6, DHCPv6, and RADIUS for IPv6
- **Troubleshooting:** ingress and egress port monitoring enable network problem solving; virtual cable tests provide visibility into cable problems

Connectivity

- **Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100/1000 ports
- **Flow control:** using standard IEEE 802.3x, it provides back pressure to reduce congestion in heavy traffic situations
- **Ethernet OAM:** provides a Layer 2 link performance and fault detection monitoring tool, which reduces failover and network convergence times
- **Jumbo packet support:** supports up to 9216-byte frame size to improve performance of large data transfers
- **Optional 10 Gigabit Ethernet ports:** allow the addition of 10 Gigabit Ethernet connections for uplinks or high-bandwidth server connections; flexibly supports XFP, SFP+, or CX4 local connections
- **IEEE 802.3af Power over Ethernet (PoE) support:** simplifies deployment and dramatically reduces installation costs by helping to eliminate the time and cost involved in supplying local power at each access point location

- **High-bandwidth CX4 local stacking:** when locally stacked using CX4 local stacking, achieves 12 Gbps per connection, allowing for up to 96 Gbps total stacking bandwidth (full duplex) in a resilient stacking configuration

Performance

- **Nonblocking architecture:** up to 176 Gbps nonblocking switching fabric provides wire-speed switching with up to 130 million pps throughput
- **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

- **Separate data and control paths:** keeps control separated from services and keeps service processing isolated; increases security and performance
- **External redundant power supply:** provides high reliability
- **Smart link:** allows 50 ms failover between links
- **Spanning Tree/MSTP and RSTP:** provide redundant links while preventing network loops
- **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 50 ms, reducing the impact on traffic and applications
- **Intelligent Resilient Framework (IRF):** creates virtual resilient switching fabrics, where two or more switches perform as a single Layer 2 switch, 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

Layer 2 switching

- **16K MAC address table:** provides access to many Layer 2 devices
- **VLAN support and tagging:** support IEEE 802.1Q, with 4094 simultaneous VLAN IDs
- **GARP VLAN Registration Protocol (GVRP):** allows automatic learning and dynamic assignment of VLANs
- **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
- **IGMP and MLD snooping:** effectively control and manage the flooding of multicast packets in a Layer 2 network

Layer 3 services

- **Address Resolution Protocol (ARP):** determines the MAC address of another IP host in the same subnet
- **Dynamic Host Configuration Protocol (DHCP):** simplifies the management of large IP networks; supports client; DHCP Relay enables DHCP operation across subnets
- **Loopback interface address:** defines an address in RIP 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

Layer 3 routing

- **IPv4 routing protocols:** support static routes and RIP
- **IPv6 routing protocols:** provide routing of IPv6 at wire speed; support static routes and RIPng

Security

- **Access control lists (ACLs):** provide IP Layer 2 to Layer 4 traffic filtering; support global ACL, VLAN ACL, port ACL, and IPv6 ACL
- **IEEE 802.1X:** industry-standard method of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server
- **MAC-based authentication:** authenticates the client with the RADIUS server based on the client's MAC address

- **Identity-driven security and access control:**
  - **Per-user ACLs:** permit or deny user access to specific network resources based on user identity 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 identities
- **Secure management access:** securely encrypts all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3
- **Secure File Transfer Protocol (FTP):** allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of switch configuration file
- **Guest VLAN:** similar to IEEE 802.1X, it provides a browser-based environment to authenticated clients
- **Endpoint Admission Defense (EAD):** provides security policies to users accessing a network
- **Port security:** allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **Port isolation:** secures and adds privacy, and prevents malicious attackers from obtaining user information
- **STP BPDU port protection:** blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- **STP Root Guard:** protects root bridge from malicious attack or configuration mistakes
- **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
- **IP source guard:** helps prevent IP spoofing attacks
- **RADIUS/HWTACACS:** eases switch management security administration by using a password authentication server

Convergence

- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP):** is an automated device discovery protocol for easy mapping by network management applications
- **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
- **IEEE 802.3af Power over Ethernet:** provides up to 15.4 W per port to PoE-powered devices such as IP phones, wireless access points, and video cameras
- **PoE allocations:** support multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user specified) to allocate PoE power for more efficient energy savings
- **Voice VLAN:** automatically assigns VLAN and priority for IP phones, simplifying network configuration and maintenance
- **IP multicast snooping (data-driven IGMP):** automatically prevents flooding of IP multicast 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

Device support

- **Cisco prestandard PoE support:** detects and provides power to Cisco's prestandard PoE devices such as wireless LAN access points and IP phones

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
- **Green initiative support:** provides support for RoHS and WEEE regulations

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

*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 zl Module, HP Threat Management Services zl Module, HP PCM+ Agent with AllianceONE Services zl Module, and HP E-MSM765 zl Mobility Controller. For details, refer to the HP Software License, Warranty, and Support booklet at www.hp.com/networking/warranty.

- **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 A5500G SI Switch Series

Specifications

HP A5500-24G SI Switch (JD369A)

HP A5500-48G SI Switch (JD370A)

	HP A5500-24G SI Switch (JD369A)	HP A5500-48G SI Switch (JD370A)
Ports	24 auto-sensing 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 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP 2 port expansion module slots 1 RJ-45 serial console port Supports a maximum of 24 auto-sensing 10/100/1000 ports	48 RJ-45 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Media Type: Auto-MDIX; Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only 4 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP 2 port expansion module slots 1 RJ-45 serial console port Supports a maximum of 48 auto-sensing 10/100/1000 ports
Physical characteristics		
Dimensions	11.81(d) x 17.32(w) x 1.72(h) in. (30 x 44 x 4.36 cm) (1U height)	11.81(d) x 17.32(w) x 1.72(h) in. (30 x 44 x 4.36 cm) (1U height)
Weight	9.92 lb. (4.5 kg)	11.02 lb. (5 kg)
Memory and processor		
	128 MB SDRAM, 16 MB flash; packet buffer size: 2 MB	128 MB SDRAM, 16 MB flash; packet buffer size: 4 MB
Mounting	Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included)	Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included)
Performance		
1000 Mb Latency	< 3.2 µs	< 3.2 µs
10 Gbps Latency	< 2.6 µs	< 2.6 µs
Throughput	95.2 million pps	130.9 million pps
Routing/Switching capacity	128 Gbps	176 Gbps
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	10% to 90%, non-condensing	10% to 90%, non-condensing
Non-operating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Non-operating/Storage relative humidity	5% to 95%, non-condensing	5% to 95%, non-condensing
Electrical characteristics		
Maximum heat dissipation	273 BTU/hr (288.02 kJ/hr)	410 BTU/hr (432.55 kJ/hr)
Voltage	100-240 VAC	100-240 VAC
Maximum power rating	80 W	120 W
Frequency	50 / 60 Hz	50 / 60 Hz
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.
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; EN 60950-1/A11; FDA 21 CFR Subchapter J; 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; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; 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	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; 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
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager

Specifications (continued)

	HP A5500-24G SI Switch (JD369A)	HP A5500-48G SI Switch (JD370A)
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UV870E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV873E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UV876E) 3-year, 24x7 SW phone support, software updates (UV879E) Installation with minimum configuration, system-based pricing (UW451E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV871E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV874E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV877E) 4-year, 24x7 SW phone support, software updates (UV880E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV872E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV875E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV878E) 5-year, 24x7 SW phone support, software updates (UV881E) 3 Yr 6 hr Call-to-Repair Onsite (UW966E) 4 Yr 6 hr Call-to-Repair Onsite (UW967E) 5 Yr 6 hr Call-to-Repair Onsite (UW968E) 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.	3-year, 4-hour onsite, 13x5 coverage for hardware (UV870E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV873E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UV876E) 3-year, 24x7 SW phone support, software updates (UV879E) Installation with minimum configuration, system-based pricing (UW451E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV871E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV874E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV877E) 4-year, 24x7 SW phone support, software updates (UV880E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV872E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV875E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV878E) 5-year, 24x7 SW phone support, software updates (UV881E) 3 Yr 6 hr Call-to-Repair Onsite (UW966E) 4 Yr 6 hr Call-to-Repair Onsite (UW967E) 5 Yr 6 hr Call-to-Repair Onsite (UW968E) 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.

Specifications (continued)

Standards and protocols
(applies to all products in series)

HP A5500-24G SI Switch (JD369A)

Device management
RFC 1157 SNMPv1/v2c
RFC 1305 NTPv3
RFC 1901 (Community based SNMPv2)
RFC 2452 MIB for TCP6
RFC 2454 MIB for UDP6
RFC 2573 (SNMPv3 Applications)
RFC 2576 (Coexistence between SNMP V1, V2, V3)
RFC 2819 RMON
RFC 3410 (Management Framework)
RFC 3416 (SNMP Protocol Operations v2)
RFC 3417 (SNMP Transport Mappings)
HTML and telnet management
Multiple Configuration Files
SNMP v3 and RMON RFC support
SSHv1/SSHv2 Secure Shell

General protocols
IEEE 802.1ad Q-in-Q
IEEE 802.1D MAC Bridges
IEEE 802.1p Priority
IEEE 802.1Q (GVRP)
IEEE 802.1s (MSTP)
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.3ab 1000BASE-T
IEEE 802.3ad Link Aggregation (LAG)
IEEE 802.3ae 10-Gigabit Ethernet
IEEE 802.3af Power over Ethernet
IEEE 802.3i 10Base-T
IEEE 802.3u 100BASE-X
IEEE 802.3x Flow Control
IEEE 802.3z 1000BASE-X
RFC 791 IP
RFC 792 ICMP
RFC 793 TCP
RFC 854 TELNET
RFC 925 Multi-LAN Address Resolution
RFC 950 Internet Standard Subnetting Procedure
RFC 951 BOOTP
RFC 1058 RIPv1
RFC 1122 Host Requirements
RFC 1141 Incremental updating of the Internet checksum
RFC 1213 Management Information Base for Network Management of TCP/IP-based internets
RFC 1305 NTPv3
RFC 1350 TFTP Protocol (revision 2)
RFC 1519 CIDR
RFC 1542 BOOTP Extensions
RFC 1723 RIP v2
RFC 1812 IPv4 Routing
RFC 1887 An Architecture for IPv6 Unicast Address Allocation
RFC 2131 DHCP
RFC 2236 IGMP Snooping
RFC 2375 IPv6 Multicast Address Assignments
RFC 2581 TCP Congestion Control
RFC 2616 HTTP Compatibility v1.1
RFC 2644 Directed Broadcast Control
RFC 2865 Remote Authentication Dial In User Service (RADIUS)
RFC 2866 RADIUS Accounting
RFC 3246 Expedited Forwarding PHB
RFC 3410 Applicability Statements for SNMP
RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)

HP A5500-48G SI Switch (JD370A)

RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)
RFC 3484 Default Address Selection for Internet Protocol version 6 (IPv6)
RFC 3493 Basic Socket Interface Extensions for IPv6
RFC 3542 Advanced Sockets Application Program Interface (API) for IPv6
RFC 3587 IPv6 Global Unicast Address Format
RFC 3596 DNS Extensions to Support IP Version 6
RFC 4113 Management Information Base for the User Datagram Protocol (UDP)
RFC 4213 Basic IPv6 Transition Mechanisms
RFC 4443 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
802.1r - GARP Proprietary Attribute Registration Protocol (GPRP)

IPv6
RFC 1887 IPv6 Unicast Address Allocation Architecture
RFC 1981 IPv6 Path MTU Discovery
RFC 2080 RIPng 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 2475 IPv6 DiffServ Architecture
RFC 2710 Multicast Listener Discovery (MLD) for IPv6
RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)
RFC 3056 Connection of IPv6 Domains via IPv4 Clouds
RFC 3162 RADIUS and IPv6
RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses
RFC 3315 DHCPv6 (client and relay)
RFC 3484 Default Address Selection for IPv6
RFC 3493 Basic Socket Interface Extensions for IPv6
RFC 3513 IPv6 Addressing Architecture
RFC 3542 Advanced Sockets API for IPv6
RFC 3587 IPv6 Global Unicast Address Format
RFC 3596 DNS Extension for IPv6
RFC 3810 MLDv2 for IPv6
RFC 4113 MIB for UDP
RFC 4443 ICMPv6

MIBs
RFC 1212 Concise MIB Definitions
RFC 1213 MIB II
RFC 1724 RIPv2 MIB
RFC 1757 Remote Network Monitoring MIB
RFC 2012 SNMPv2 MIB for TCP
RFC 2013 SNMPv2 MIB for UDP
RFC 2233 Interface 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 2573 SNMP-Target MIB
RFC 2574 SNMP USM MIB
RFC 2618 RADIUS Authentication Client MIB
RFC 2620 RADIUS Accounting Client MIB
RFC 2819 RMON MIB
RFC 2925 Ping MIB
RFC 3414 SNMP-User based-SM MIB
RFC 3415 SNMP-View based-ACM MIB
RFC 4113 UDP MIB

Network management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
IEEE 802.1D (STP)
RFC 1157 SNMPv1
RFC 1212 Concise MIB definitions
RFC 1215 SNMP Generic traps
RFC 1757 RMON 4 groups: Stats, History, Alarms and Events
RFC 1901 SNMPv2 Introduction
RFC 1918 Private Internet Address Allocation
RFC 2373 Remote Network Monitoring Management Information Base for High Capacity Networks
RFC 2571 An Architecture for Describing SNMP Management Frameworks
RFC 2572 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)
RFC 2573 SNMP Applications
RFC 2573 SNMPv3 Applications
RFC 2574 SNMPv3 User-based Security Model (USM)
RFC 2575 SNMPv3 View-based Access Control Model (VACM)
RFC 2576 Coexistence between SNMP versions
RFC 2578 SMIv2
RFC 2581 TCP6
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations
RFC 3176 sFlow
RFC 3410 Introduction to Version 3 of the Internet-standard Network Management Framework
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)
SNMPv1/v2c/v3

QoS/CoS
IEEE 802.1P (CoS)
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 1492 TACACS+
RFC 1918 Address Allocation for Private Internets
RFC 2865 RADIUS Authentication
RFC 2866 RADIUS Accounting
Access Control Lists (ACLs)
MAC Authentication
Port Security
SSHv2 Secure Shell

Specifications (continued)

	 HP A5500-24G-PoE SI Switch (JD371A)	 HP A5500-48G-PoE SI Switch (JD372A)
Ports	24 RJ-45 auto-sensing 10/100/1000 PoE ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T, IEEE 802.3af PoE); Media Type: Auto-MDIX; Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only 4 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP 2 port expansion module slots 1 RJ-45 serial console port Supports a maximum of 24 auto-sensing 10/100/1000 ports	48 RJ-45 auto-sensing 10/100/1000 PoE ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T, IEEE 802.3af PoE); Media Type: Auto-MDIX; Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only 4 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP 2 port expansion module slots 1 RJ-45 serial console port Supports a maximum of 48 auto-sensing 10/100/1000 ports
Physical characteristics		
Dimensions	16.54(d) x 17.32(w) x 1.72(h) in. (42 x 44 x 4.36 cm) (1U height)	16.54(d) x 17.32(w) x 1.72(h) in. (42 x 44 x 4.36 cm) (1U height)
Weight	13.2 lb. (6 kg)	16.53 lb. (7.5 kg)
Memory and processor		
	128 MB SDRAM, 16 MB flash; packet buffer size: 2 MB	128 MB SDRAM, 16 MB flash; packet buffer size: 4 MB
Mounting	Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included)	Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included)
Performance		
1000 Mb Latency	< 3.2 µs	< 3.2 µs
10 Gbps Latency	< 2.6 µs	< 2.6 µs
Throughput	up to 95.2 million pps	up to 130.9 million pps
Routing/Switching capacity	128 Gbps	176 Gbps
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	10% to 90%, non-condensing	10% to 90%, non-condensing
Non-operating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Non-operating/Storage relative humidity	5% to 95%, non-condensing	5% to 95%, non-condensing
Electrical characteristics		
Maximum heat dissipation	1553 BTU/hr (1638.42 kJ/hr)	2969 BTU/hr (3132.29 kJ/hr)
Voltage	100-240 VAC	100-240 VAC
DC Voltage	-52 to -55 VDC	-52 to -55 VDC
Maximum power rating	455 W	870 W
PoE power	370 W	740 W
Frequency	50 / 60 Hz	50 / 60 Hz
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. 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).	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). With AC input: the maximum power consumption is 500 W; PoE power is 370 W.
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; EN 60950-1/A11; FDA 21 CFR Subchapter J; 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; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; 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	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; 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
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager

Specifications (continued)

	HP A5500-24G-PoE SI Switch (JD371A)	HP A5500-48G-PoE SI Switch (JD372A)
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UV870E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV873E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UV876E) 3-year, 24x7 SW phone support, software updates (UV879E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV871E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV874E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV877E) 4-year, 24x7 SW phone support, software updates (UV880E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV872E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV875E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV878E) 5-year, 24x7 SW phone support, software updates (UV881E) 3 Yr 6 hr Call-to-Repair Onsite (UW966E) 4 Yr 6 hr Call-to-Repair Onsite (UW967E) 5 Yr 6 hr Call-to-Repair Onsite (UW968E) 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.	3-year, 4-hour onsite, 13x5 coverage for hardware (UV870E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV873E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UV876E) 3-year, 24x7 SW phone support, software updates (UV879E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV871E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV874E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV877E) 4-year, 24x7 SW phone support, software updates (UV880E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV872E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV875E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV878E) 5-year, 24x7 SW phone support, software updates (UV881E) 3 Yr 6 hr Call-to-Repair Onsite (UW966E) 4 Yr 6 hr Call-to-Repair Onsite (UW967E) 5 Yr 6 hr Call-to-Repair Onsite (UW968E) 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.

Specifications (continued)

Standards and protocols
(applies to all products in series)

HP A5500-24G-PoE SI Switch (JD371A)

Device management
RFC 1157 SNMPv1/v2c
RFC 1305 NTPv3
RFC 1901 (Community based SNMPv2)
RFC 2452 MIB for TCP6
RFC 2454 MIB for UDP6
RFC 2573 (SNMPv3 Applications)
RFC 2576 (Coexistence between SNMP V1, V2, V3)
RFC 2819 RMON
RFC 3410 (Management Framework)
RFC 3416 (SNMP Protocol Operations v2)
RFC 3417 (SNMP Transport Mappings)
HTML and telnet management
Multiple Configuration Files
SNMP v3 and RMON RFC support
SSHv1/SSHv2 Secure Shell

General protocols
IEEE 802.1ad Q-in-Q
IEEE 802.1D MAC Bridges
IEEE 802.1p Priority
IEEE 802.1Q (GVRP)
IEEE 802.1s (MSTP)
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.3ab 1000BASE-T
IEEE 802.3ad Link Aggregation (LAG)
IEEE 802.3ae 10-Gigabit Ethernet
IEEE 802.3af Power over Ethernet
IEEE 802.3i 10Base-T
IEEE 802.3u 100BASE-X
IEEE 802.3x Flow Control
IEEE 802.3z 1000BASE-X
RFC 791 IP
RFC 792 ICMP
RFC 793 TCP
RFC 854 TELNET
RFC 925 Multi-LAN Address Resolution
RFC 950 Internet Standard Subnetting Procedure
RFC 951 BOOTP
RFC 1058 RIPv1
RFC 1122 Host Requirements
RFC 1141 Incremental updating of the Internet checksum
RFC 1213 Management Information Base for Network Management of TCP/IP-based internets
RFC 1305 NTPv3
RFC 1350 TFTP Protocol (revision 2)
RFC 1519 CIDR
RFC 1542 BOOTP Extensions
RFC 1723 RIP v2
RFC 1812 IPv4 Routing
RFC 1887 An Architecture for IPv6 Unicast Address Allocation
RFC 2131 DHCP
RFC 2236 IGMP Snooping
RFC 2375 IPv6 Multicast Address Assignments
RFC 2581 TCP Congestion Control
RFC 2616 HTTP Compatibility v1.1
RFC 2644 Directed Broadcast Control
RFC 2865 Remote Authentication Dial In User Service (RADIUS)
RFC 2866 RADIUS Accounting
RFC 3246 Expedited Forwarding PHB
RFC 3410 Applicability Statements for SNMP
RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)

HP A5500-48G-PoE SI Switch (JD372A)

RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)
RFC 3484 Default Address Selection for Internet Protocol version 6 (IPv6)
RFC 3493 Basic Socket Interface Extensions for IPv6
RFC 3542 Advanced Sockets Application Program Interface (API) for IPv6
RFC 3587 IPv6 Global Unicast Address Format
RFC 3596 DNS Extensions to Support IP Version 6
RFC 4113 Management Information Base for the User Datagram Protocol (UDP)
RFC 4213 Basic IPv6 Transition Mechanisms
RFC 4443 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
802.1r - GARP Proprietary Attribute Registration Protocol (GPRP)

IPv6
RFC 1887 IPv6 Unicast Address Allocation Architecture
RFC 1981 IPv6 Path MTU Discovery
RFC 2080 RIPng 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 2475 IPv6 DiffServ Architecture
RFC 2710 Multicast Listener Discovery (MLD) for IPv6
RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)
RFC 3056 Connection of IPv6 Domains via IPv4 Clouds
RFC 3162 RADIUS and IPv6
RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses
RFC 3315 DHCPv6 (client and relay)
RFC 3484 Default Address Selection for IPv6
RFC 3493 Basic Socket Interface Extensions for IPv6
RFC 3513 IPv6 Addressing Architecture
RFC 3542 Advanced Sockets API for IPv6
RFC 3587 IPv6 Global Unicast Address Format
RFC 3596 DNS Extension for IPv6
RFC 3810 MLDv2 for IPv6
RFC 4113 MIB for UDP
RFC 4443 ICMPv6

MIBs
RFC 1212 Concise MIB Definitions
RFC 1213 MIB II
RFC 1724 RIPv2 MIB
RFC 1757 Remote Network Monitoring MIB
RFC 2012 SNMPv2 MIB for TCP
RFC 2013 SNMPv2 MIB for UDP
RFC 2233 Interface 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 2573 SNMP-Target MIB
RFC 2574 SNMP USM MIB
RFC 2618 RADIUS Authentication Client MIB
RFC 2620 RADIUS Accounting Client MIB
RFC 2819 RMON MIB
RFC 2925 Ping MIB
RFC 3414 SNMP-User based-SM MIB
RFC 3415 SNMP-View based-ACM MIB
RFC 4113 UDP MIB

Network management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
IEEE 802.1D (STP)
RFC 1157 SNMPv1
RFC 1212 Concise MIB definitions
RFC 1215 SNMP Generic traps
RFC 1757 RMON 4 groups: Stats, History, Alarms and Events
RFC 1901 SNMPv2 Introduction
RFC 1918 Private Internet Address Allocation
RFC 2373 Remote Network Monitoring Management Information Base for High Capacity Networks
RFC 2571 An Architecture for Describing SNMP Management Frameworks
RFC 2572 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)
RFC 2573 SNMP Applications
RFC 2573 SNMPv3 Applications
RFC 2574 SNMPv3 User-based Security Model (USM)
RFC 2575 SNMPv3 View-based Access Control Model (VACM)
RFC 2576 Coexistence between SNMP versions
RFC 2578 SMIv2
RFC 2581 TCP6
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations
RFC 3176 sFlow
RFC 3410 Introduction to Version 3 of the Internet-standard Network Management Framework
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)
SNMPv1/v2c/v3

QoS/CoS
IEEE 802.1P (CoS)
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 1492 TACACS+
RFC 1918 Address Allocation for Private Internets
RFC 2865 RADIUS Authentication
RFC 2866 RADIUS Accounting
Access Control Lists (ACLs)
MAC Authentication
Port Security
SSHv2 Secure Shell

HP A5500G SI Switch Series accessories

Modules

HP 2-port XFP A5500 Module (JD359B)
HP 2-port 10-GbE A5500 Local Connection Module (JD360B)
HP 1-port XFP A5500 Module (JD361B)
HP 2-Port 10-GbE SFP+ A5500/E4800/E4500 Module (JD368B)

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 X130 SFP+ LC SR Transceiver (JD092B)
HP X130 SFP+ LC LRM Transceiver (JD093B)
HP X130 SFP+ LC LR Transceiver (JD094B)
HP X130 SC LR XFP Transceiver (JD108B)
HP X130 LC SR XFP Transceiver (JD117B)
HP X125 1G SFP LC SX Transceiver (JD118B)
HP X120 1G SFP LC LX Transceiver (JD119B)
HP X135 LC ER XFP Transceiver (JD121A)
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

HP X230 Local Connect 100 cm CX4 Cable (JD364B)
HP X230 Local Connect CX4 300 cm Cable (JD365A)
NEW HP 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)
NEW HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)
NEW HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)
NEW HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)
NEW HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)
NEW HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)
NEW HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)
NEW HP 0.5 m PremierFlex OM3+ LC/LC Optical Cable (BK837A)

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