HP A3100 SI Switch Series

Data sheet

Product overview

The HP A3100 SI Switch Series is a low-cost Fast Ethernet switch line that enables organizations to do more with less. Stackable and affordable, this series comprises intelligent, network-manageable Layer 2 Fast Ethernet switches that offer high performance, high port density, and easy installation. They provide 10/100 Mbps downlinks and Gigabit Ethernet uplinks, and offer link aggregation that expands bandwidth and enhances connection reliability. In enterprise networks, they can serve as access devices for 100 Mbps-to-desktop applications. In metropolitan area networks (MANs) or industry networks, they can connect end users or aggregate low-end switches through 100 Mbps electrical interfaces in the downlink direction, converging at an IP switching center or a large capacity Layer 3 switch in the uplink direction via a GbE interface or link aggregation.

Key features

• Suitable for enterprise networks, MANs
• 8, 16, 24 x 10/100 downlink ports
• Gigabit uplinks
• Link aggregation
• Small size with noise-free design

Features and benefits

Quality of Service (QoS)

- **Powerful QoS feature:** supports the following congestion actions: weighted round robin queuing and HQ+WRR

- **Broadcast control:** allows limitation of broadcast traffic rate to cut down on unwanted broadcast traffic on the network

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 RADIUS 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

- **Management VLAN:** segments traffic to and from management interfaces, including CLI/telnet, a Web browser interface, and SNMP

- **Troubleshooting:** ingress and egress port monitoring enable network problem solving; virtual cable tests provide visibility into cable problems

- **Stacking capability:** single IP address management for a stack of up to 16 switches

Connectivity

- **Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100 and 10/100/1000 ports

- **Flow control:** using standard IEEE 802.3x, it provides back pressure to reduce congestion in heavy traffic situations

- **Gigabit uplinks:** dual-personality ports for either 10/100/1000 or mini-GBIC SFP connectivity for increased connectivity flexibility

Performance

- **Gigabit Ethernet interface:** provides a connection to the network that eliminates the network as a bottleneck

Resiliency and high availability

- **Separate data and control paths:** increases security and performance

- **Spanning Tree/MSTP, RSTP:** provides redundant links while preventing network loops

- **Port trunking:** provides higher switch-to-switch throughput and link-level redundancy, with support for standards-based link aggregation (IEEE 802.3ad)

Layer 2 switching

- **8K MAC addresses:** provide 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

- **Gigabit Ethernet port aggregation:** allows grouping of ports to increase overall data throughput to a remote device

- **IEEE 802.1ad QinQ:** increases the scalability of an Ethernet network by providing a hierarchical structure; connects multiple LANs on a high-speed campus or metro network

Security

- **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:** client is authenticated with the RADIUS server based on the client's MAC address

- **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

- **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

- **RADIUS/HWTACACS:** eases switch management security administration by using a password authentication server

- **HTTPS management:** provides secure Web management

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

- **IP multicast snooping (data-driven IGMP):** automatically prevents flooding of IP multicast traffic

- **Multicast VLAN:** allows multiple VLANs to receive the same multicast traffic, reducing network bandwidth demand by eliminating multiple streams to each VLAN

Flexibility

- **Designed with no fan:** enables quiet operation for deployment in open spaces

Additional information

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

- **Green IT and power:** uses the latest advances in silicon development and shuts off unused ports 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)

Specifications

	HP A3100-8 SI Switch (JD304A)	HP A3100-16 SI Switch (JD305A)	HP A3100-24 SI Switch (JD306A)
Ports	1 autosensing 10/100/1000 port (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	1 autosensing 10/100/1000 port (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 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
	8 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full	16 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full	24 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full
	1 RJ-45 serial console port	1 RJ-45 serial console port	1 RJ-45 serial console port
Physical characteristics			
Dimensions	7.9(d) x 12.8(w) x 1.7(h) in. (20.07 x 32.51 x 4.32 cm) (1U height)	7.9(d) x 17.2(w) x 1.7(h) in. (20.07 x 43.69 x 4.32 cm) (1U height)	9.5(d) x 17.2(w) x 1.7(h) in. (24.13 x 43.69 x 4.32 cm) (1U height)
Weight	6.61 lb. (3.0 kg)	6.61 lb. (3.0 kg)	6.61 lb. (3.0 kg)
Memory and processor			
	64 MB SDRAM, 8 MB flash; packet buffer size: 256 KB	64 MB SDRAM, 8 MB flash; packet buffer size: 256 KB	64 MB SDRAM, 8 MB flash; packet buffer size: 256 KB
Mounting	Requires angle mounting set if rack mounted (not included)	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			
Latency	< 10 µs	< 10 µs	< 10 µs
Throughput	up to 2.6 million pps	3.8 million pps	6.5 million pps
Routing/Switching capacity	3.6 Gbps	5.2 Gbps	8.8 Gbps
Environment			
Operating temperature	32°F to 113°F (0°C to 45°C)	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%, noncondensing	10% to 90%, noncondensing	10% to 90%, noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing	5% to 95%, noncondensing
Electrical characteristics			
Maximum heat dissipation	34 BTU/hr (35.87 kJ/hr)	41 BTU/hr (43.26 kJ/hr)	68 BTU/hr (71.74 kJ/hr)
Voltage	100-240 VAC	100-240 VAC	100-240 VAC
Maximum power rating	10 W	12 W	20 W
Frequency	50 / 60 Hz	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.	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	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	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	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager

Specifications (continued)

	HP A3100-8 SI Switch (JD304A)	HP A3100-16 SI Switch (JD305A)	HP A3100-24 SI Switch (JD306A)
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UV810E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV813E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UV816E) 3-year, 24x7 SW phone support, software updates (UV819E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV811E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV814E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV817E) 4-year, 24x7 SW phone support, software updates (UV820E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV812E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV815E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV818E) 5-year, 24x7 SW phone support, software updates (UV821E) 3 Yr 6 hr Call-to-Repair Onsite (UW428E) 4 Yr 6 hr Call-to-Repair Onsite (UW429E) 5 Yr 6 hr Call-to-Repair Onsite (UW430E) 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 (UV810E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV813E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UV816E) 3-year, 24x7 SW phone support, software updates (UV819E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV811E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV814E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV817E) 4-year, 24x7 SW phone support, software updates (UV820E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV812E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV815E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV818E) 5-year, 24x7 SW phone support, software updates (UV821E) 3 Yr 6 hr Call-to-Repair Onsite (UW428E) 4 Yr 6 hr Call-to-Repair Onsite (UW429E) 5 Yr 6 hr Call-to-Repair Onsite (UW430E) 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 (UV810E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV813E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UV816E) 3-year, 24x7 SW phone support, software updates (UV819E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV811E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV814E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV817E) 4-year, 24x7 SW phone support, software updates (UV820E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV812E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV815E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV818E) 5-year, 24x7 SW phone support, software updates (UV821E) 3 Yr 6 hr Call-to-Repair Onsite (UW428E) 4 Yr 6 hr Call-to-Repair Onsite (UW429E) 5 Yr 6 hr Call-to-Repair Onsite (UW430E) 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 (applies to all products in series)	**General protocols** IEEE 802.1D MAC Bridges IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1s Multiple Spanning Trees IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.3ab 1000BASE-T IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3i 10BASE-T IEEE 802.3u 100BASE-X IEEE 802.3x Flow Control IEEE 802.3z 1000BASE-X RFC 768 UDP RFC 791 IP RFC 792 ICMP RFC 793 TCP RFC 826 ARP RFC 854 TELNET RFC 951 BOOTP	**MIBs** IEEE 8021-PAE-MIB IEEE 8023-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 2571 SNMP Framework MIB RFC 2572 SNMP-MPD MIB RFC 2573 SNMP-Notification MIB RFC 2573 SNMP-Target MIB RFC 2618 RADIUS Authentication Client MIB RFC 2620 RADIUS Accounting Client MIB RFC 2665 Ethernet-Like-MIB RFC 2674 802.1p and IEEE 802.1Q Bridge 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 4113 UDP MIB	LLDP-EXT-DOT1-MIB LLDP-EXT-DOT3-MIB LLDP-MIB **Network management** IEEE 802.1AB Link Layer Discovery Protocol (LLDP) RFC 1157 SNMPv1 RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events) ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED) SNMPv1/v2c/v3

Specifications (continued)

	HP A3100-16 SI Switch with 2 Slots (JD308A)	HP A3100-24 SI Switch with 2 slots (JD309A)
Ports	2 port expansion module slots	2 port expansion module slots
	16 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full	24 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full
	1 RJ-45 serial console port	1 RJ-45 serial console port
Physical characteristics		
Dimensions	7.9(d) x 17.2(w) x 1.7(h) in. (20.07 x 43.69 x 4.32 cm) (1U height)	9.5(d) x 17.2(w) x 1.7(h) in. (24.13 x 43.69 x 4.32 cm) (1U height)
Weight	6.61 lb. (3.0 kg)	6.61 lb. (3.0 kg)
Memory and processor		
	64 MB SDRAM, 8 MB flash; packet buffer size: 256 KB	64 MB SDRAM, 8 MB flash; packet buffer size: 256 KB
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		
Latency	< 10 μs	< 10 μs
Throughput	5.3 million pps	6.5 million pps
Routing/Switching capacity	7.2 Gbps	8.8 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%, noncondensing	10% to 90%, noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
Electrical characteristics		
Maximum heat dissipation	41 BTU/hr (43.26 kJ/hr)	68 BTU/hr (71.74 kJ/hr)
Voltage	100-240 VAC	100-240 VAC
Maximum power rating	12 W	20 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
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UV810E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV813E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UV816E) 3-year, 24x7 SW phone support, software updates (UV819E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV811E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV814E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV817E) 4-year, 24x7 SW phone support, software updates (UV820E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV812E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV815E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV818E) 5-year, 24x7 SW phone support, software updates (UV821E) 3 Yr 6 hr Call-to-Repair Onsite (UW428E) 4 Yr 6 hr Call-to-Repair Onsite (UW429E) 5 Yr 6 hr Call-to-Repair Onsite (UW430E) 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 (UV810E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV813E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UV816E) 3-year, 24x7 SW phone support, software updates (UV819E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV811E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV814E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV817E) 4-year, 24x7 SW phone support, software updates (UV820E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV812E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV815E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV818E) 5-year, 24x7 SW phone support, software updates (UV821E) 3 Yr 6 hr Call-to-Repair Onsite (UW428E) 4 Yr 6 hr Call-to-Repair Onsite (UW429E) 5 Yr 6 hr Call-to-Repair Onsite (UW430E) 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)

| HP A3100-16 SI Switch with 2 Slots (JD308A) | | HP A3100-24 SI Switch with 2 slots (JD309A) | |

Standards and protocols
(applies to all products in series)

General protocols
IEEE 802.1D MAC Bridges
IEEE 802.1p Priority
IEEE 802.1Q VLANs
IEEE 802.1s Multiple Spanning Trees
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.3ab 1000BASE-T
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3i 10BASE-T
IEEE 802.3u 100BASE-X
IEEE 802.3x Flow Control
IEEE 802.3z 1000BASE-X
RFC 768 UDP
RFC 791 IP
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 854 TELNET
RFC 951 BOOTP

MIBs
IEEE 8021-PAE-MIB
IEEE 8023-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 2571 SNMP Framework MIB
RFC 2572 SNMP-MPD MIB
RFC 2573 SNMP-Notification MIB
RFC 2573 SNMP-Target MIB
RFC 2618 RADIUS Authentication Client MIB
RFC 2620 RADIUS Accounting Client MIB
RFC 2665 Ethernet-Like-MIB
RFC 2674 802.1p and IEEE 802.1Q Bridge 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 4113 UDP MIB

LLDP-EXT-DOT1-MIB
LLDP-EXT-DOT3-MIB
LLDP-MIB

Network management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 1157 SNMPv1
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3

Modules

HP 1-port Gig-T 3100 SI Module (JD298A)

HP 1-port Gig-LX SC 3100 SI Module (JD299A)

HP 1-port Gig-SX SC 3100 SI Module (JD300A)

HP 1-port 10/100Base-T PoE 3100 SI Module (JD301A)

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