HP 5120 SI Switch Series

Data sheet

Product overview

The HP 5120 SI Switch Series comprises intelligent, fully managed Gigabit Ethernet switches that provide high performance, high port density, and simplified installation to improve the value of your network infrastructure investment. The 5120 SI series is enhanced for the access layer in enterprise networks that require Gigabit Ethernet to the desktop or at the distribution layer in metropolitan area networks (MANs). Wire-speed forwarding delivers more effective throughput and the bandwidth necessary for mission-critical data and high-speed communications. As part of their comprehensive security control, 5120 SI switches employ 802.1X authentication to identify users who attempt to access the network. These switches are highly reliable, providing redundancy while eliminating loops in the network. They also offer a range of management protocols to simplify network administration.

Key features

- Full wire-speed, multi-layer switching
- High reliability with redundancy
- Comprehensive security control policies
- Diversified Quality of Service (QoS) policies
- Excellent manageability

Features and benefits

Quality of Service (QoS)

- **Broadcast control:** allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic
- **Powerful QoS feature:** supports the following congestion actions: strict priority (SP) queuing, SDWRR, and SP+SDWRR
- **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 per-port basis

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
- **Dual flash images:** provide independent primary and secondary operating system files for backup while upgrading
- **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
- **Device Link Detection Protocol (DLDP):** monitors a cable between two switches and shuts down the ports on both ends if the cable is broken, this prevents network problems such as loops

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
- **Jumbo packet support:** supports up to 10k byte frame size to improve performance of large data transfers
- **High-density port connectivity:** provides up to 48 fixed 10/100/1000BASE-T ports in an entry-level static Layer 3 switch
- **Ethernet OAM:** provides a Layer 2 link performance and fault detection monitoring tool, which reduces failover and network convergence times
- **Power over Ethernet Plus (PoE+) support:** provides 30 W power for connected devices, 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
- **IPv6:**
  - **IPv6 Host:** enables switches to be managed and deployed at the IPv6 network's edge
  - **Dual stack (IPv4 and IPv6 using BIS):** allows IPv4 hosts to communicate with IPv6 hosts
  - **IPv6 ACL:** for filtering IPv6 network traffic

Performance

- **Nonblocking architecture:** up to 104 Gbps nonblocking switching fabric provides wire-speed switching with up to 77.4 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:** increases security and performance
- **Spanning Tree/MSTP, RSTP:** provides redundant links while preventing network loops
- **IEEE 802.3ad Link Aggregation Control Protocol (LACP):** supports up to 26 trunks, each with 8 links per trunk; supports static or dynamic groups
- **Smart link:** allows 50 ms failover between links
- **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

Layer 2 switching

- **8K MAC address table:** provides access to many Layer 2 devices
- **VLAN support and tagging:** support IEEE 802.1Q with 4,094 simultaneous VLAN IDs
- **IP multicast snooping:** automatically prevents flooding of IP multicast traffic
- **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

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
- **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 Routing Information Protocol (RIP) and OSPF that can always be reachable, improving diagnostic capability

Layer 3 routing

- **Static IP routing:** provides manually configured routing for both IPv4 and IPv6 networks

Security

- **Access control lists (ACLs):** provides IP Layer 2 to Layer 4 traffic filtering; supports global ACL, VLAN ACL, port ACL, and IPv6 ACL
- **Identity-driven security and access control:**
  - **Per-user ACLs:** permits or denies 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 FTP:** allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **Guest VLAN:** similar to IEEE 802.1X, it provides a browser-based environment to authenticated clients
- **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 the root bridge from malicious attacks 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
- **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

- **Port security:** allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **MAC-based authentication:** allows or denies access to the switch based on a client MAC address

Convergence

- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP):** is an automated device discovery protocol that provides easy mapping of 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
- **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:** reduces network bandwidth demand by eliminating multiple streams to each VLAN

Additional information

- **Green IT and power:** use the latest advances in silicon development, shut off unused ports, and use variable-speed fans to improve energy 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; to reach our support centers, refer to www.hp.com/networking/contact-support; for details on the duration of support provided with your product purchase, refer to www.hp.com/networking/warrantysummary
- **Software releases:** to find software for your product, refer to www.hp.com/networking/support; for details on the software releases available with your product purchase, refer to www.hp.com/networking/warrantysummary

†HP warranty includes repair or replacement of hardware for as long as you own the product, with next business day advance replacement (available in most countries). The disk drive included with HP AllianceOne Advanced Services and Services zl Modules, HP Threat Management Services zl Module, HP AllianceOne Extended zl Module with Riverbed Steelhead, HP MSM765zl Mobility Controller and HP Survivable Branch Communication zl Module powered by Microsoft Lync has a five-year hardware warranty. For details, refer to the Software license and hardware warranty statements at www.hp.com/networking/warranty.

Specifications

	 **HP 5120-48G SI Switch (JE072A)**	 **HP 5120-24G SI Switch (JE074A)**	 **HP 5120-16G SI Switch (JE073A)**
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	24 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	16 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
	4 fixed Gigabit Ethernet SFP ports	4 fixed Gigabit Ethernet SFP ports	4 fixed Gigabit Ethernet SFP ports
	1 RJ-45 serial console port	1 RJ-45 serial console port	1 RJ-45 serial console port
Physical characteristics			
Dimensions	10.24(d) x 17.3(w) x 1.72(h) in. (26.01 x 43.94 x 4.37 cm) (1U height)	6.3(d) x 17.3(w) x 1.72(h) in. (16 x 43.94 x 4.37 cm) (1U height)	6.3(d) x 17.3(w) x 1.72(h) in. (16 x 43.94 x 4.37 cm) (1U height)
Weight	11.02 lb. (5 kg)	6.61 lb. (3 kg)	6.61 lb. (3 kg)
Memory and processor	128 MB flash, 128 MB SDRAM; packet buffer size: 1 MB	128 MB flash, 128 MB SDRAM; packet buffer size: 0.5 MB	128 MB flash, 128 MB SDRAM; packet buffer size: 0.5 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)	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
Performance			
1000 Mb Latency	< 3 µs	< 3 µs	< 3 µs
Throughput	77.4 million pps	41.7 million pps	29.8 million pps
Routing/Switching capacity	104 Gbps	56 Gbps	40 Gbps
Routing table size	32 entries	32 entries	32 entries
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	189 BTU/hr (199.4 kJ/hr)	108 BTU/hr (113.94 kJ/hr)	76 BTU/hr (80.18 kJ/hr)
Voltage	100-240 VAC	100-240 VAC	100-240 VAC
Maximum power rating	55.4 W	31.5 W	22.4 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; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; 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
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UV858E)	3-year, 4-hour onsite, 13x5 coverage for hardware (UV858E)	3-year, 4-hour onsite, 13x5 coverage for hardware (UV858E)
	3-year, 4-hour onsite, 24x7 coverage for hardware (UV861E)	3-year, 4-hour onsite, 24x7 coverage for hardware (UV861E)	3-year, 4-hour onsite, 24x7 coverage for hardware (UV861E)
	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV864E)	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV864E)	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV864E)
	3-year, 24x7 SW phone support, software updates (UV867E)	3-year, 24x7 SW phone support, software updates (UV867E)	3-year, 24x7 SW phone support, software updates (UV867E)

Specifications (continued)

	HP 5120-48G SI Switch (JE072A)	HP 5120-24G SI Switch (JE074A)	HP 5120-16G SI Switch (JE073A)
	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR584E)	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR584E)	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR584E)
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR585E)	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR585E)	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR585E)
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR586E)	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR586E)	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR586E)
	Installation with minimum configuration, system-based pricing (UX116E)	Installation with minimum configuration, system-based pricing (UX116E)	Installation with minimum configuration, system-based pricing (UX116E)
	Installation with HP-provided configuration, system-based pricing (UX117E)	Installation with HP-provided configuration, system-based pricing (UX117E)	Installation with HP-provided configuration, system-based pricing (UX117E)
	4-year, 4-hour onsite, 13x5 coverage for hardware (UV859E)	4-year, 4-hour onsite, 13x5 coverage for hardware (UV859E)	4-year, 4-hour onsite, 13x5 coverage for hardware (UV859E)
	4-year, 4-hour onsite, 24x7 coverage for hardware (UV862E)	4-year, 4-hour onsite, 24x7 coverage for hardware (UV862E)	4-year, 4-hour onsite, 24x7 coverage for hardware (UV862E)
	4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV865E)	4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV865E)	4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV865E)
	4-year, 24x7 SW phone support, software updates (UV868E)	4-year, 24x7 SW phone support, software updates (UV868E)	4-year, 24x7 SW phone support, software updates (UV868E)
	5-year, 4-hour onsite, 13x5 coverage for hardware (UV860E)	5-year, 4-hour onsite, 13x5 coverage for hardware (UV860E)	5-year, 4-hour onsite, 13x5 coverage for hardware (UV860E)
	5-year, 4-hour onsite, 24x7 coverage for hardware (UV863E)	5-year, 4-hour onsite, 24x7 coverage for hardware (UV863E)	5-year, 4-hour onsite, 24x7 coverage for hardware (UV863E)
	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV866E)	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV866E)	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV866E)
	5-year, 24x7 SW phone support, software updates (UV869E)	5-year, 24x7 SW phone support, software updates (UV869E)	5-year, 24x7 SW phone support, software updates (UV869E)
	3 Yr 6 hr Call-to-Repair Onsite (UW963E)	3 Yr 6 hr Call-to-Repair Onsite (UW963E)	3 Yr 6 hr Call-to-Repair Onsite (UW963E)
	4 Yr 6 hr Call-to-Repair Onsite (UW964E)	4 Yr 6 hr Call-to-Repair Onsite (UW964E)	4 Yr 6 hr Call-to-Repair Onsite (UW964E)
	5 Yr 6 hr Call-to-Repair Onsite (UW965E)	5 Yr 6 hr Call-to-Repair Onsite (UW965E)	5 Yr 6 hr Call-to-Repair Onsite (UW965E)
	1-year, 6 hour Call-To-Repair Onsite for hardware (HR588E)	1-year, 6 hour Call-To-Repair Onsite for hardware (HR588E)	1-year, 6 hour Call-To-Repair Onsite for hardware (HR588E)
	1-year, 24x7 software phone support, software updates (HR587E)	1-year, 24x7 software phone support, software updates (HR587E)	1-year, 24x7 software phone support, software updates (HR587E)
	1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS682E)	1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS682E)	1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS682E)
	1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS683E)	1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS683E)	1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS683E)
	4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS686E)	4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS686E)	4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS686E)
	4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS687E)	4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS687E)	4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS687E)
	5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS688E)	5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS688E)	5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS688E)
	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.	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.	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 5120-48G SI Switch (JE072A)	HP 5120-24G SI Switch (JE074A)	HP 5120-16G SI Switch (JE073A)
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 802.1X PAE IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3x Flow Control RFC 768 UDP RFC 792 ICMP RFC 793 TCP RFC 826 ARP RFC 854 TELNET RFC 951 BOOTP RFC 1350 TFTP Protocol (revision 2) RFC 2131 DHCP RFC 2865 Remote Authentication Dial In User Service (RADIUS) RFC 2866 RADIUS Accounting **IPv6** RFC 1350 TFTP RFC 1886 DNS Extension for IPv6 RFC 1887 IPv6 Unicast Address Allocation Architecture RFC 1981 IPv6 Path MTU Discovery RFC 2292 Advanced Sockets API for IPv6 RFC 2373 IPv6 Addressing Architecture 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 2465 Management Information Base for IP Version 6: Textual Conventions and General Group(partially support, only "IPv6 Interface Statistics table") RFC 2475 IPv6 DiffServ Architecture	RFC 2553 Basic Socket Interface Extensions for IPv6 RFC 2711 IPv6 Router Alert Option 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 2925 Remote Operations MIB (Ping only) RFC 3056 Connection of IPv6 Domains via IPv4 Clouds RFC 3162 RADIUS and IPv6 RFC 3363 DNS support 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 3736 Stateless Dynamic Host Configuration Protocol (DHCP) Service for IPv6 RFC 4007 IPv6 Scoped Address Architecture RFC 4022 MIB for TCP RFC 4113 MIB for UDP RFC 4251 SSHv6 Architecture RFC 4252 SSHv6 Authentication RFC 4253 SSHv6 Transport Layer RFC 4254 SSHv6 Connection RFC 4291 IP Version 6 Addressing Architecture RFC 4293 MIB for IP RFC 4419 Key Exchange for SSH RFC 4443 ICMPv6 RFC 4541 IGMP & MLD Snooping Switch RFC 4861 IPv6 Neighbor Discovery RFC 4862 IPv6 Stateless Address Auto-configuration RFC 5095 Deprecation of Type 0 Routing Headers in IPv6 RFC 5722 Handling of Overlapping IPv6 Fragments **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 2571 SNMP Framework MIB RFC 2572 SNMP-MPD MIB RFC 2573 SNMP-Target MIB RFC 2618 RADIUS Authentication Client MIB RFC 2620 RADIUS Accounting Client MIB RFC 2665 Ethernet-Like-MIB RFC 2668 802.3 MAU 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 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) ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED) SNMPv1/v2c/v3

Specifications (continued)

	 HP 5120-24G-PoE+ (370W) Switch (JG091A)	 HP 5120-24G-PoE+ (170W) Switch (JG092A)
Ports	24 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 fixed Gigabit Ethernet SFP ports 1 RJ-45 serial console port	24 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 fixed Gigabit Ethernet SFP ports 1 RJ-45 serial console port
Physical characteristics		
Dimensions	16.54(d) x 17.32(w) x 1.72(h) in. (42 x 44.0 x 4.36 cm) (1U height)	16.54(d) x 17.32(w) x 1.72(h) in. (42 x 44.0 x 4.36 cm) (1U height)
Weight	15.43 lb. (7 kg)	15.43 lb. (7 kg)
Memory and processor	128 MB flash, 128 MB SDRAM; packet buffer size: 0.5 MB	128 MB flash, 128 MB SDRAM; packet buffer size: 0.5 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 μs	< 3 μs
Throughput	41.7 million pps	41.7 million pps
Routing/Switching capacity	56 Gbps	56 Gbps
Routing table size	32 entries	32 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	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	539 BTU/hr (568.65 kJ/hr)	290 BTU/hr (305.95 kJ/hr)
Voltage	100-240 VAC	100-240 VAC
DC voltage	-52 to -55 VDC	
Maximum power rating	832 W	255 W
PoE power	720 W	170 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). With AC input, the maximum power consumption is 523 W (370 W for PoE).	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).
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	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 (UV858E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV861E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV864E) 3-year, 24x7 SW phone support, software updates (UV867E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV859E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV862E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV865E) 4-year, 24x7 SW phone support, software updates (UV868E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV860E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV863E)	3-year, 4-hour onsite, 13x5 coverage for hardware (UV858E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV861E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV864E) 3-year, 24x7 SW phone support, software updates (UV867E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV859E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV862E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV865E) 4-year, 24x7 SW phone support, software updates (UV868E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV860E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV863E)

Specifications (continued)

	HP 5120-24G-PoE+ (370W) Switch (JG091A)	HP 5120-24G-PoE+ (170W) Switch (JG092A)
	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV866E)	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV866E)
	5-year, 24x7 SW phone support, software updates (UV869E)	5-year, 24x7 SW phone support, software updates (UV869E)
	3 Yr 6 hr Call-to-Repair Onsite (UW963E)	3 Yr 6 hr Call-to-Repair Onsite (UW963E)
	4 Yr 6 hr Call-to-Repair Onsite (UW964E)	4 Yr 6 hr Call-to-Repair Onsite (UW964E)
	5 Yr 6 hr Call-to-Repair Onsite (UW965E)	5 Yr 6 hr Call-to-Repair Onsite (UW965E)
	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.	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 802.1X PAE
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3x Flow Control
RFC 768 UDP
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 854 TELNET
RFC 951 BOOTP
RFC 1350 TFTP Protocol (revision 2)
RFC 2131 DHCP
RFC 2865 Remote Authentication Dial In User Service (RADIUS)
RFC 2866 RADIUS Accounting

IPv6
RFC 1350 TFTP
RFC 1886 DNS Extension for IPv6
RFC 1887 IPv6 Unicast Address Allocation Architecture
RFC 1981 IPv6 Path MTU Discovery
RFC 2292 Advanced Sockets API for IPv6
RFC 2373 IPv6 Addressing Architecture
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 2465 Management Information Base for IP Version 6: Textual Conventions and General Group(partially support, only "IPv6 Interface Statistics table")
RFC 2475 IPv6 DiffServ Architecture
RFC 2553 Basic Socket Interface Extensions for IPv6
RFC 2711 IPv6 Router Alert Option
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 2925 Remote Operations MIB (Ping only)
RFC 3056 Connection of IPv6 Domains via IPv4 Clouds
RFC 3162 RADIUS and IPv6
RFC 3363 DNS support
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 3736 Stateless Dynamic Host Configuration Protocol (DHCP) Service for IPv6
RFC 4007 IPv6 Scoped Address Architecture
RFC 4022 MIB for TCP
RFC 4113 MIB for UDP
RFC 4251 SSHv6 Architecture
RFC 4252 SSHv6 Authentication
RFC 4253 SSHv6 Transport Layer
RFC 4254 SSHv6 Connection
RFC 4291 IP Version 6 Addressing Architecture
RFC 4293 MIB for IP
RFC 4419 Key Exchange for SSH
RFC 4443 ICMPv6
RFC 4541 IGMP & MLD Snooping Switch
RFC 4861 IPv6 Neighbor Discovery
RFC 4862 IPv6 Stateless Address Auto-configuration
RFC 5095 Deprecation of Type 0 Routing Headers in IPv6
RFC 5722 Handling of Overlapping IPv6 Fragments

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 2571 SNMP Framework MIB
RFC 2572 SNMP-MPD MIB
RFC 2573 SNMP-Target MIB
RFC 2618 RADIUS Authentication Client MIB
RFC 2620 RADIUS Accounting Client MIB
RFC 2665 Ethernet-Like-MIB
RFC 2668 802.3 MAU 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 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)
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3

HP 5120 SI Switch Series accessories

Transceivers

HP X120 1G SFP LC SX Transceiver (JD118B)
HP X120 1G SFP LC LX Transceiver (JD119B)
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 BX 10-U Transceiver (JD098B)
HP X120 1G SFP LC BX 10-D Transceiver (JD099B)
HP X120 1G SFP RJ45 T Transceiver (JD089B)

Cables

HP 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)
HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)
HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)
HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)
HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)
HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)
HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)
HP 0.5 m PremierFlex OM3+ LC/LC Optical Cable (BK837A)
HP 1 m PremierFlex OM3+ LC/LC Optical Cable (BK838A)
HP 2 m PremierFlex OM3+ LC/LC Optical Cable (BK839A)
HP 5 m PremierFlex OM3+ LC/LC Optical Cable (BK840A)
HP 15 m PremierFlex OM3+ LC/LC Optical Cable (BK841A)
HP 30 m PremierFlex OM3+ LC/LC Optical Cable (BK842A)
HP 50 m PremierFlex OM3+ LC/LC Optical Cable (BK843A)
HP 3600 Switch SFP Stacking Kit (JD324B)

Power Supply

HP RPS1600 Redundant Power System (JG136A)
HP RPS1600 1600W AC Power Supply (JG137A)

Power cords

HP X290 1000 A JD5 2m RPS Cable (JD187A)

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