HP E2520 Switch Series

Data sheet

Product overview

The HP E2520 Switch Series is ideally suited for small and medium businesses looking to deploy voice, video, or wireless solutions that require Power over Ethernet (PoE) connectivity. The series consists of four switches: the HP E2520-8-PoE, the HP E2520-24-PoE, the HP E2520-8G-PoE, and the HP E2520-24G-PoE Switch. The four models offer a choice of either Fast Ethernet or Gigabit Ethernet connectivity. All models also include support for dual-personality Gigabit Ethernet ports that can be used for either copper or fiber connectivity. All products are fully managed via SNMP, command-line interface (CLI), and graphical user interface (GUI) and offer a Layer 2 feature set. In addition, the products provide deployment flexibility with compact, quiet, and energy-efficient designs.

Key features

- Fully managed Layer 2 switch in 8 or 24 ports
- Choice of Fast Ethernet or Gigabit PoE models
- Power over Ethernet for voice, video, and wireless
- Energy-efficient design and quiet operation
- Rack-mountable and compact form factors

Features and benefits

Quality of Service (QoS)

- **Selectable queue configuration:** increases performance and/or traffic reliability by selecting the number of queues that best meet the requirements of your network applications; switch will map 8 priorities to either 2 or 4 queues

- **Simplified QoS configuration:**

  - **Port-based:** prioritize traffic by specifying a port and priority level

  - **VLAN based:** prioritize traffic by specifying a VLAN and priority level

- **IEEE 802.1p traffic prioritization:** honors and sets IEEE 802.1p priority in the VLAN tag

- **Type of service:**

  - **IP Precedence:** honors IP Precedence bits and allows mapping to a priority queue

  - **Differentiated Services Code Point values:** honors Differentiated Services Code Point (DSCP) bits and allows mapping to a priority queue

- **Flow control:** helps ensure reliable communications during full-duplex operation

Management

- **Choice of management interfaces:**

  - **Web graphical user interface (GUI):** easy-to-use graphical interface allows configuration of the switch from any Web browser

  - **Command-line interface (CLI):** robust command-line interface provides advanced configuration and diagnostics

  - **Simple Network Management Protocol (SNMPv2c/SNMPv3):** allows switch to be managed with a variety of third-party network management applications

- **Integration with HP PCM:** enables discovery, mapping, logging, and configuration via HP PCM, which is available as a free download from the Web

- **Virtual stacking:** single IP address manages up to 16 switches

- **Port mirroring:** allows traffic to be mirrored on any port or a network analyzer to assist with diagnostics or detecting network attacks

- **Multiple configuration files:** configuration file management tools allow up to three configuration files to be managed and stored on the switch

- **Dual flash images:** provide independent primary and secondary operating system files for backup while upgrading

- **Network tools:** command-line interface includes telnet client, ping, traceroute, and Layer 2 link test tools for diagnostics

- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP):** automated device discovery protocol for easy mapping by network management applications

- **Command authorization:** leverages RADIUS to link a custom list of CLI commands to individual network administrator's login; also provides an audit trail

- **Logging:** local and remote logging of events via SNMP (v2c and v3) and syslog

- **IPv6 host:** allows switches to be managed using IPv6 protocols

- **RMON:** provides advanced monitoring and reporting capabilities for statistics, history, alarms, and events

- **Find-Fix-Inform:** finds and fixes common network problems automatically, then informs administrator

- **Front-panel LEDs:**

  - **Locator LED:** allows users to set the locator LED on a specific switch to either turn on, blink, or turn off; simplifies troubleshooting by making it easy to locate a particular switch within a rack of similar switches

  - **Per-port LEDs:** provides an at-a-glance view of status, activity, speed, and full-duplex operation

  - **Power and fault LEDs:** display any issues

Connectivity

- **Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all ports

- **Small Form-Factor Pluggable (SFP) slots:** dual-personality ports allow for either copper or fiber connectivity such as Gigabit-SX, -LX, -LH, and -BX or 100-FX and -BX

- **IEEE 802.3af Power over Ethernet:** provides up to 15.4 W per port to IEEE 802.3af-compliant PoE-powered devices such as IP phones, wireless access points, and security cameras (see product specifications for total PoE power available); supports some prestandard PoE devices (see product FAQs for more details)

- **RJ-45 serial console port:** front of unit location provides easy access to switch CLI

Performance

- **Switch on a chip:** provides highly integrated, high-performance switch design with a non-blocking architecture

- **Jumbo packet support:** supports up to 9216-byte frame size to improve performance of large data transfers (2520G switch)

Resiliency and high availability

- **Port trunking and link aggregation:**

  - **Trunking:** supports up to eight links per trunk to increase bandwidth and create redundant connections

  - **IEEE 802.3ad Link Aggregation Protocol (LACP):** eases configuration of trunks through automatic configuration

- **IEEE 802.1s Multiple Spanning Tree Protocol (MSTP):** provides high link availability in multiple VLAN environments by allowing multiple spanning trees; provides legacy support for IEEE 802.1w (Rapid Reconfiguration of Spanning Tree Protocol) and IEEE 802.1d (Spanning Tree Protocol)

Layer 2 switching

- **VLAN support and tagging:** supports the IEEE 802.1Q (4,094 VLAN IDs) and up to 256 port-based VLANs simultaneously

- **GARP VLAN Registration Protocol (GVRP):** allows automatic learning and dynamic assignment of VLANs

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

Security

- **Manager and operator privilege levels:** enables read-only (operator) and read-write (manager) access on management interfaces

- **RADIUS/TACACS+ for management access authentication:** eases switch management security administration by using a password authentication server

- **Secure protocols for encryption of management traffic:**

  - **Secure Shell (SSHv2):** encrypts all transmitted data for secure, remote CLI access over IP networks

  - **Secure Sockets Layer (SSL):** encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch

  - **Simple Network Management Protocol (SNMP) v3:** allows encryption of traffic between switch MIBs and network management software

  - **Secure FTP (SFTP):** encrypts uploads and downloads of configuration file

- **Protected ports:** prevents designated ports from communicating with each other while allowing access to unprotected ports

- **Port security:** allows access only to specified MAC addresses, which can be learned or specified by the administrator

- **MAC address lockout:** prevents particular configured MAC addresses from connecting to the network

- **MAC address lockdown:** allows only specified MAC addresses access to the network on a specified port

- **Denial-of-service (DoS) attack filtering:** automatically filters and drops common DoS attack traffic types

- **User authentication for port access:**

  - **IEEE 802.1X:** utilizes an industry-standard user authentication with an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server

  - **Web-based:** similar to IEEE 802.1X, it provides a browser-based environment to authenticate clients

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

  - **Concurrent authentication schemes:** each switch port will accept up to two sessions of IEEE 802.1X, Web, and/or MAC authentications concurrently

- **Custom banner:** displays security policy when users log in to the switch

- **Spanning Tree Protocol Bridge Protocol Data Unit (BPDU) port protection:** blocks BPDUs on ports that do not require BPDUs, preventing forged BPDU attacks

- **Spanning Tree Protocol Root Guard:** when running the spanning tree protocol, protects root bridge from malicious attack or configuration mistakes

- **Physical security:**

  – **Front-panel buttons:** provides the ability to disable reset and clear buttons on front panel for added security

  – **Kensington Lock:** 2520-8-PoE and 2520G-8-PoE switches include a Kensington Lock slot for securing the switches in open-space deployments

Convergence

- **LLDP-MED (Media Endpoint Discovery):** a standard extension of LLDP that automatically configures network devices such as IP phones

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

- **Voice VLAN:** uses LLDP-MED to automatically configure VLAN for IP phones

Flexibility

- **Quiet operation:**

  – **Fanless design (2520-8-PoE and 2520G-8-PoE switches):** enables quiet operation for deployment in open spaces

  – **Variable-speed fans (2520-24-PoE and 2520G-24-PoE switches):** improves fan speed for the operating environment while keeping noise and energy consumption levels to a minimum

- **Flexible mounting:**

  – **Rackable:** is mountable in a standard 19-inch rack with included hardware (2520-8-PoE and 2520G-8-PoE rack kit available free of charge via the Web)

  – **Wall mountable:** allows the switch to be mounted to a wall using included hardware

  – **Surface mountable:** allows the product to be mounted above or below a surface (such as a desk or table) with included hardware

- **Compact size:** products are designed to reduce space requirements (see product specifications for exact dimensions)

Product architecture

- **Energy-efficient design:**

  – **Fans:** fanless (2520-8-PoE and 2520G-8-PoE) and variable-speed fans (2520-24-PoE and 2520G-24-PoE) help reduce power consumption

  – **Port LEDs:** port link and activity LEDs can be turned off to conserve energy

  – **Port low-power mode:** when no link is detected on a port, the port will automatically go into low-power mode to conserve energy (2520G switch)

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)

HP E2520 Switch Series

Specifications

	HP E2520-8-PoE Switch (J9137A)	HP E2520-24-PoE Switch (J9138A)
Ports	8 RJ-45 auto-sensing 10/100 PoE ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3af PoE); Media Type: Auto-MDIX; Duplex: half or full	24 RJ-45 auto-sensing 10/100 PoE ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3af PoE); Media Type: Auto-MDIX; Duplex: half or full
	2 dual-personality ports; each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX; IEEE 802.3ab 1000Base-T Gigabit Ethernet) or as a SFP slot (for use with SFP transceivers)	2 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
	1 RJ-45 serial console port	2 dual-personality ports; each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX; IEEE 802.3ab 1000Base-T Gigabit Ethernet) or as a SFP slot (for use with SFP transceivers)
		1 RJ-45 serial console port
Physical characteristics		
Dimensions	6.28(d) x 10(w) x 1.75(h) in. (15.95 x 25.4 x 4.45 cm) (1U height)	9.69(d) x 17.44(w) x 1.75(h) in. (24.61 x 44.3 x 4.45 cm) (1U height)
Weight	3.62 lb. (1.64 kg) including power adapter and power cord	7.1 lb. (3.22 kg)
Memory and processor		
Processor	Freescale PowerPC 8313 @ 266 MHz, 32 MB flash, 128 MB DDR2 SDRAM; packet buffer size: 384 KB dynamically allocated	Freescale PowerPC 8313 @ 266 MHz, 32 MB flash, 128 MB DDR2 SDRAM; packet buffer size: 384 KB dynamically allocated
Mounting	Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting	Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting
Performance		
100 Mb Latency	< 1.9 μs (LIFO 64-byte packets)	< 1.9 μs (LIFO 64-byte packets)
1000 Mb Latency	< 1.5 μs (LIFO 64-byte packets)	< 1.5 μs (LIFO 64-byte packets)
Throughput	4.1 million pps	6.2 million pps
Switching capacity	5.6 Gbps	12.8 Gbps
MAC address table size	8,000 entries	8,000 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	15% to 95% @ 104°F (40°C), non-condensing	15% to 95% @ 104°F (40°C), 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	15% to 95% @ 149°F (65°C), non-condensing	15% to 95% @ 149°F (65°C), non-condensing
Altitude	up to 10,000 ft. (3 km)	up to 10,000 ft. (3 km)
Acoustic	Power: 0 dB, Pressure: 0 dB	Power: 27.9 dB, Pressure: 36.0 dB; DIN 45635T.19 per ISO 7779
Electrical characteristics		
Description	Use only the external power adapter module (5070-6082, PA1 AC adapter) supplied with this product	
Maximum heat dissipation	87 BTU/hr (91.79 kJ/hr)	208 BTU/hr (219.44 kJ/hr)
Voltage	100-240 VAC	100-127 / 200-240 VAC
Current	1.5 A	3.3 / 1.6 A
Idle power	9.4 W	21.6 W
Maximum power rating	85.5 W	257 W
PoE power	67 W	195 W
Frequency	50 / 60 Hz	50 / 60 Hz
Notes	Idle power is the actual power consumption of the device with no ports connected. 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 total power budget available to all PoE ports.	Idle power is the actual power consumption of the device with no ports connected. 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 total power budget available to all PoE ports.
Safety	cUL (CSA 22.2 No. 60950); CE Labeled; UL 60950-1; UL Listed; CAN/CSA 22.2 No. 60950; EN 60825; AS/NZS 60950; IEC 60950-1; EN 60950-1	cUL (CSA 22.2 No. 60950); CE Labeled; UL 60950-1; UL Listed; CAN/CSA 22.2 No. 60950; EN 60825; AS/NZS 60950; IEC 60950-1; EN 60950-1
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 (Canada); AS/NZS CISPR 22; IEC/EN 61000-3-2; IEC/EN 61000-3-3; IEC 61000:4-2, 4-3, 4-4, 4-5, 4-6, 4-8, 4-11	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 (Canada); AS/NZS CISPR 22; IEC/EN 61000-3-2; IEC/EN 61000-3-3; IEC 61000:4-2, 4-3, 4-4, 4-5, 4-6, 4-8, 4-11
Immunity		
Generic	EN 55024, CISPR 24	EN 55024, CISPR 24
EN	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4	IEC 61000-4-4

Specifications (continued)

	HP E2520-8-PoE Switch (J9137A)	HP E2520-24-PoE Switch (J9138A)
Surge	IEC 61000-4-5	IEC 61000-4-5
Conducted	IEC 61000-4-6	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8	IEC 61000-4-8
Voltage dips and interruptions	IEC 61000-4-11	IEC 61000-4-11
Harmonics	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2
Flicker	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3
Management	HP PCM+; HP PCM; command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	HP PCM+; HP PCM; command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB
Notes	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required. When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required.	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required. When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required.
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U4683E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U4835E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (U6321E) 3-year, 24x7 SW phone support, software updates (UF792E) Installation with minimum configuration, system-based pricing (U4826E) Installation with HP-provided configuration, system-based pricing (U4830E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR948E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR949E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR950E) 4-year, 24x7 SW phone support, software updates (UR951E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UR952E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UR953E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR954E) 5-year, 24x7 SW phone support, software updates (UR955E) 3 Yr 6 hr Call-to-Repair Onsite (UW368E) 4 Yr 6 hr Call-to-Repair Onsite (UW369E) 5 Yr 6 hr Call-to-Repair Onsite (UW370E) 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 (U4683E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U4835E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (U6321E) 3-year, 24x7 SW phone support, software updates (UF792E) Installation with minimum configuration, system-based pricing (U4826E) Installation with HP-provided configuration, system-based pricing (U4830E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR948E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR949E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR950E) 4-year, 24x7 SW phone support, software updates (UR951E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UR952E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UR953E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR954E) 5-year, 24x7 SW phone support, software updates (UR955E) 3 Yr 6 hr Call-to-Repair Onsite (UW368E) 4 Yr 6 hr Call-to-Repair Onsite (UW369E) 5 Yr 6 hr Call-to-Repair Onsite (UW370E) 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)

Denial of service protection
CPU DoS Protection

Device management
RFC 1591 DNS (client)
SSHv1/SSHv2 Secure Shell

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 802.3 Type 10BASE-T
IEEE 802.3ab 1000BASE-T
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3af Power over Ethernet
IEEE 802.3x Flow Control
RFC 768 UDP
RFC 783 TFTP Protocol (revision 2)
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 854 TELNET
RFC 868 Time Protocol
RFC 951 BOOTP
RFC 1350 TFTP Protocol (revision 2)
RFC 1542 BOOTP Extensions
RFC 2030 Simple Network Time Protocol (SNTP) v4
RFC 2131 DHCP

IP multicast
RFC 3376 IGMPv3 (host joins only)

IPv6
RFC 1981 IPv6 Path MTU Discovery
RFC 2460 IPv6 Specification
RFC 2925 Remote Operations MIB (Ping only)
RFC 3315 DHCPv6 (client only)
RFC 3513 IPv6 Addressing Architecture
RFC 3596 DNS Extension for IPv6
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 4293 MIB for IP
RFC 4419 Key Exchange for SSH
RFC 4443 ICMPv6
RFC 4861 IPv6 Neighbor Discovery
RFC 4862 IPv6 Stateless Address Auto-configuration

MIBs
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 2021 RMONv2 MIB
RFC 2613 SMON MIB
RFC 2618 RADIUS Client MIB
RFC 2620 RADIUS Accounting MIB
RFC 2665 Ethernet-Like-MIB
RFC 2668 802.3 MAU MIB
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
RFC 2737 Entity MIB (Version 2)

RFC 2863 The Interfaces Group MIB

Network management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 1098 A Simple Network Management Protocol (SNMP)
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
SNMPv1/v2c/v3

QoS/CoS
RFC 2474 DiffServ precedence, with 4 queues per port
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 2138 RADIUS Authentication
RFC 2866 RADIUS Accounting
Secure Sockets Layer (SSL)

Specifications (continued)

	HP E2520-8G-PoE Switch (J9298A)	HP E2520-24G-PoE Switch (J9299A)
Ports	8 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	20 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
	2 dual-personality ports; each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX; IEEE 802.3ab 1000Base-T Gigabit Ethernet) or as a SFP slot (for use with SFP transceivers)	4 dual-personality ports; each port can be used as either an RJ-45 10/100/1000 PoE port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX; IEEE 802.3ab 1000Base-T Gigabit Ethernet, IEEE 802.3af) or as an SFP slot (for use with SFP transceivers)
	1 RJ-45 serial console port	1 RJ-45 serial console port
Physical characteristics		
Dimensions	6.28(d) x 10(w) x 1.75(h) in. (15.95 x 25.4 x 4.45 cm) (1U height)	9.69(d) x 17.44(w) x 1.75(h) in. (24.61 x 44.3 x 4.45 cm) (1U height)
Weight	3.66 lb. (1.66 kg) including power adapter and power cord	7.21 lb. (3.27 kg)
Memory and processor		
Processor	Freescale PowerPC 8313 @ 266 MHz, 32 MB flash, 128 MB DDR2 SDRAM; packet buffer size: 512 KB dynamically allocated	Freescale PowerPC 8313 @ 266 MHz, 32 MB flash, 128 MB DDR2 SDRAM; packet buffer size: 512 KB dynamically allocated
Mounting	Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting	Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting
Performance		
100 Mb Latency	< 5.3 µs (LIFO 64-byte packets)	< 5.3 µs (LIFO 64-byte packets)
1000 Mb Latency	< 2.7 µs (LIFO 64-byte packets)	< 2.7 µs (LIFO 64-byte packets)
Throughput	14.8 million pps	35.7 million pps
Switching capacity	20 Gbps	48 Gbps
MAC address table size	8,000 entries	8,000 entries
Environment		
Operating temperature	32°F to 113°F (0°C to 45°C)	32°F to 122°F (0°C to 50°C)
Operating relative humidity	15% to 95% @ 104°F (40°C), non-condensing	15% to 95% @ 104°F (40°C), 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	15% to 95% @ 149°F (65°C), non-condensing	15% to 95% @ 149°F (65°C), non-condensing
Altitude	up to 10,000 ft. (3 km)	up to 10,000 ft. (3 km)
Acoustic	Power: 0 dB, Pressure: 0 dB	Power: 28.3 dB, Pressure: 37.7 dB; DIN 45635T.19 per ISO 7779
Electrical characteristics		
Description	Use only the external power adapter module (5070-6082, PA1 AC adapter) supplied with this product	
Maximum heat dissipation	89 BTU/hr (93.9 kJ/hr)	223 BTU/hr (235.27 kJ/hr)
Voltage	100-240 VAC	100-127 / 200-240 VAC
Current	1.5 A	3.3 / 1.6 A
Idle power	9.3 W	21.8 W
Maximum power rating	86.2 W	260.4 W
PoE power	67 W	195 W
Frequency	50 / 60 Hz	50 / 60 Hz
Notes	Idle power is the actual power consumption of the device with no ports connected. 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 total power budget available to all PoE ports.	Idle power is the actual power consumption of the device with no ports connected. 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 total power budget available to all PoE ports.
Safety	cUL (CSA 22.2 No. 60950); CE Labeled; UL 60950-1; UL Listed; CAN/CSA 22.2 No. 60950; EN 60825; AS/NZS 60950; IEC 60950-1; EN 60950-1	cUL (CSA 22.2 No. 60950); CE Labeled; UL 60950-1; UL Listed; CAN/CSA 22.2 No. 60950; EN 60825; AS/NZS 60950; IEC 60950-1; EN 60950-1
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 (Canada); AS/NZS CISPR 22; IEC/EN 61000-3-2; IEC/EN 61000-3-3; IEC 61000:4-2, 4-3, 4-4, 4-5, 4-6, 4-8, 4-11	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 (Canada); AS/NZS CISPR 22; IEC/EN 61000-3-2; IEC/EN 61000-3-3; IEC 61000:4-2, 4-3, 4-4, 4-5, 4-6, 4-8, 4-11
Immunity		
Generic	EN 55024, CISPR 24	EN 55024, CISPR 24
EN	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4	IEC 61000-4-4
Surge	IEC 61000-4-5	IEC 61000-4-5
Conducted	IEC 61000-4-6	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8	IEC 61000-4-8

Specifications (continued)

	HP E2520-8G-PoE Switch (J9298A)	HP E2520-24G-PoE Switch (J9299A)
Voltage dips and interruptions	IEC 61000-4-11	IEC 61000-4-11
Harmonics	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2
Flicker	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3
Management	HP PCM+; HP PCM; command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	HP PCM+; HP PCM; command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB
Notes	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required. When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required.	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required. When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required.
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U4683E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U4835E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (U6321E) 3-year, 24x7 SW phone support, software updates (UF792E) Installation with minimum configuration, system-based pricing (U4826E) Installation with HP-provided configuration, system-based pricing (U4830E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR948E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR949E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR950E) 4-year, 24x7 SW phone support, software updates (UR951E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UR952E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UR953E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR954E) 5-year, 24x7 SW phone support, software updates (UR955E) 3 Yr 6 hr Call-to-Repair Onsite (UW368E) 4 Yr 6 hr Call-to-Repair Onsite (UW369E) 5 Yr 6 hr Call-to-Repair Onsite (UW370E) 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 (U4683E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U4835E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (U6321E) 3-year, 24x7 SW phone support, software updates (UF792E) Installation with minimum configuration, system-based pricing (U4826E) Installation with HP-provided configuration, system-based pricing (U4830E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR948E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR949E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR950E) 4-year, 24x7 SW phone support, software updates (UR951E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UR952E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UR953E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR954E) 5-year, 24x7 SW phone support, software updates (UR955E) 3 Yr 6 hr Call-to-Repair Onsite (UW368E) 4 Yr 6 hr Call-to-Repair Onsite (UW369E) 5 Yr 6 hr Call-to-Repair Onsite (UW370E) 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)

Denial of service protection
CPU DoS Protection

Device management
RFC 1591 DNS (client)
SSHv1/SSHv2 Secure Shell

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 802.3 Type 10BASE-T
IEEE 802.3ab 1000BASE-T
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3af Power over Ethernet
IEEE 802.3x Flow Control
RFC 768 UDP
RFC 783 TFTP Protocol (revision 2)
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 854 TELNET
RFC 868 Time Protocol
RFC 951 BOOTP
RFC 1350 TFTP Protocol (revision 2)
RFC 1542 BOOTP Extensions
RFC 2030 Simple Network Time Protocol (SNTP) v4
RFC 2131 DHCP

IP multicast
RFC 3376 IGMPv3 (host joins only)

IPv6
RFC 1981 IPv6 Path MTU Discovery
RFC 2460 IPv6 Specification
RFC 2925 Remote Operations MIB (Ping only)
RFC 3315 DHCPv6 (client only)
RFC 3513 IPv6 Addressing Architecture
RFC 3596 DNS Extension for IPv6
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 4293 MIB for IP
RFC 4419 Key Exchange for SSH
RFC 4443 ICMPv6
RFC 4861 IPv6 Neighbor Discovery
RFC 4862 IPv6 Stateless Address Auto-configuration

MIBs
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 2021 RMONv2 MIB
RFC 2613 SMON MIB
RFC 2618 RADIUS Client MIB
RFC 2620 RADIUS Accounting MIB
RFC 2665 Ethernet-Like-MIB
RFC 2668 802.3 MAU MIB
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
RFC 2737 Entity MIB (Version 2)

RFC 2863 The Interfaces Group MIB

Network management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 1098 A Simple Network Management Protocol (SNMP)
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
SNMPv1/v2c/v3

QoS/CoS
RFC 2474 DiffServ precedence, with 4 queues per port
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 2138 RADIUS Authentication
RFC 2866 RADIUS Accounting
Secure Sockets Layer (SSL)

HP E2520 Switch Series accessories

Transceivers

HP X111 100M SFP LC FX Transceiver (J9054B)
HP X112 100M SFP LC BX-D Transceiver (J9099B)
HP X112 100M SFP LC BX-U Transceiver (J9100B)
HP X121 1G SFP LC SX Transceiver (J4858C)
HP X121 1G SFP LC LX Transceiver (J4859C)
HP X121 1G SFP LC LH Transceiver (J4860C)
HP X122 1G SFP LC BX-D Transceiver (J9142B)
HP X122 1G SFP LC BX-U Transceiver (J9143B)

Cables

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)

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