

### Overview

#### Models

HP 2530-48G-PoE+ Switch	J9772A
HP 2530-24G-PoE+ Switch	J9773A
HP 2530-8G-PoE+ Switch	J9774A
HP 2530-48-PoE+ Switch	J9778A
HP 2530-24-PoE+ Switch	J9779A
HP 2530-8-PoE+ Switch	J9780A
HP 2530-48G Switch	J9775A
HP 2530-24G Switch	J9776A
HP 2530-8G Switch	J9777A
HP 2530-48 Switch	J9781A
HP 2530-24 Switch	J9782A
HP 2530-8 Switch	J9783A

#### Key features

- Cost-effective, reliable, and secure fully managed Layer 2 switches
- 8, 24, or 48 Gigabit or Fast Ethernet ports with 4 Gigabit uplink ports(2 uplinks on 8-port models)
- PoE+ models for voice, video, and wireless deployments
- ACLs, EEE, and IPv4/IPv6 host support
- Includes lifetime warranty, all software releases, and technical phone support

#### Introduction

The HP 2530 Switch Series consists of 12 fully managed Layer 2 edge switches that deliver cost-effective, reliable, secure, and easy-to-use connectivity to business networks. Designed for entry-level to midsize enterprise networks, these Gigabit and Fast Ethernet switches deliver full Layer 2 capabilities with optional PoE+, enhanced access security, traffic prioritization, and IPv6 host support.

The HP 2530 Switch Series offers uplink flexibility with four Gigabit Ethernet uplinks on all 24- and 48-port models. Gigabit Ethernet uplinks are four small form-factor pluggable (SFP) slots for fiber connectivity on the 24- and 48-port Gigabit Ethernet models. The Fast Ethernet 24- and 48-port models have two SFPs and two RJ-45 Gigabit uplinks. The compact and fanless 8-port switches offer additional flexibility with two dual-personality ports that can be used as either RJ-45 Gigabit Ethernet or SFP ports. For customers implementing Power over Ethernet for voice, video, or wireless deployments, the HP 2530 PoE+ switches are IEEE 802.3af and IEEE 802.3at compliant with up to 30 W per port.

The switch series is easy to use, deploy, and manage via SNMP, CLI, and Web GUI. It offers flexible wall, table, and rack mounting; quiet operation with fanless and variable speed fan models; and improved power savings, with features such as IEEE 802.3 az (Energy Efficient Ethernet). These switches include a lifetime warranty, as well as all software releases and technical phone support.

#### Features and Benefits

##### Quality of Service (QoS)

- **Traffic prioritization (IEEE 802.1p)**  
allows real-time traffic classification with support for eight priority levels mapped to either two or four queues; uses weighted

### Overview

- deficit round robin (WDRR) or strict priority (SP)
- **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
- **Class of Service (CoS)**  
sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ
- **Rate limiting**  
sets per-port ingress enforced maximums for all ingressed traffic or for broadcast, multicast, or unknown destination traffic
- **Layer 4 prioritization**  
enables prioritization based on TCP/UDP port numbers
- **Flow control**  
helps deliver reliable communication during full-duplex operation

### Management

- **Choice of management interfaces**
  - **Web graphical user interface (GUI)**  
HTML-based easy-to-use graphical interface allows configuration of the switch from any Web browser
  - **Command-line interface (CLI)**  
provides advanced configuration and diagnostics through a robust CLI
  - **Simple Network Management Protocol (SNMPv1/v2c/v3)**  
allows a switch to be managed with a variety of third-party network management applications
- **Virtual stacking**  
provides single IP address management for up to 16 switches
- **sFlow (RFC 3176)**  
delivers wire-speed traffic accounting and monitoring configured by SNMP and CLI with three terminal encrypted receivers
- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP)**  
automates device discovery protocol for easy mapping by network management applications
- **Logging**  
provides local and remote logging of events via SNMP (v2c and v3) and syslog; provides log throttling and log filtering to reduce the number of log events generated
- **Port mirroring**  
allows traffic to be mirrored on any port or a network analyzer to assist with diagnostics or detecting network attacks
- **RMON (remote monitoring)**  
provides advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- **Find-Fix-and-Inform**  
finds and fixes common network problems automatically, then informs the administrator
- **Friendly port names**  
allows assignment of descriptive names to ports
- **Dual flash images**  
provides independent primary and secondary operating system files for backup while upgrading
- **Multiple configuration files**  
allows multiple configuration files to be stored to a flash image
- **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

### Overview

- **Per-port LEDs**  
provides an at-a-glance view of status, activity, speed, and full-duplex operation
- **Power and fault LEDs**  
display any issues
- **Comware CLI**
  - **Comware-compatible CLI**  
bridges the experience of HP Comware CLI users who are using the HP ProVision software CLI
  - **Display and fundamental Comware CLI commands**  
are embedded in the switch CLI as native commands; display output is formatted as on Comware-based switches, and fundamental commands provide a Comware-familiar initial switch setup
  - **Configuration Comware CLI commands**  
when Comware commands are entered, CLI help is elicited to formulate the correct ProVision software CLI command

### Connectivity

- **IPv6**
  - **IPv6 host**  
allows the switch to be deployed and managed at the edge of an IPv6 network
  - **Dual stack (IPv4/IPv6)**  
supports connectivity for both protocols; provides a transition mechanism from IPv4 to IPv6
  - **MLD snooping**  
forwards IPv6 multicast traffic to the appropriate interface; prevents IPv6 multicast traffic from flooding the network
- **IEEE 802.3af Power over Ethernet (PoE)**  
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
- **IEEE 802.3at Power over Ethernet Plus**  
provides up to 30 W per port to IEEE 802.3 for PoE/PoE+-powered devices such as video IP phones, IEEE 802.11n wireless access points, and advanced pan/tilt/zoom security cameras (see product specifications for total PoE power available)
- **Auto-MDIX**  
adjusts automatically for straight-through or crossover cables on all ports
- **Pre-standard PoE support**  
detects and provides power to pre-standard PoE devices; see list of supported devices in the product FAQ at [www.hp.com/networking/support](http://www.hp.com/networking/support)
- **Small form-factor pluggable (SFP) slots**  
provides fiber connectivity such as Gigabit-SX, -LX, -LH, and -BX with four SFP slots on all 24- and 48-port Gigabit Ethernet models; Fast Ethernet 24- and 48-port models have two SFP slots and two RJ-45 Gigabit uplinks; 8-port models have two dual-personality ports supporting either SFP or RJ-45 Gigabit uplinks
- **Dual-personality (RJ-45 or USB micro-B) serial console port**  
gives easy access to switch CLI with front of switch location and flexibility of using either RJ-45 or USB micro-B serial console port

### Layer 2 switching

- **VLANs**  
provides support for 512 VLANs and 4,094 VLAN IDs
- **Jumbo packet support**  
supports up to 9220-byte frame size to improve the performance of large data transfers; 8- and 24-port Fast Ethernet models automatically support up to 2000-byte frames with no configuration needed
- **16K MAC address table**  
provides access to many Layer 2 devices

### Overview

- **GARP VLAN Registration Protocol**  
allows automatic learning and dynamic assignment of VLANs
- **Per-VLAN Spanning Tree Plus (PVST+)**  
allows each VLAN to build a separate spanning tree to improve link bandwidth usage in network environments with multiple VLANs

### Security

- **Access control lists (ACLs)**  
accommodates IPv4/IPv6 port and VLAN-based ACLs (IPv6 ACL is supported only on Gigabit Ethernet and 48-port models)
- **Source-port filtering**  
allows only specified ports to communicate with each other
- **RADIUS/TACACS+**  
eases switch management security administration by using a password authentication server
- **Secure Sockets Layer (SSL)**  
encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- **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
- **Multiple user authentication methods**
  - **IEEE 802.1X**  
uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards
  - **Web-based authentication**  
provides a browser-based environment, similar to IEEE 802.1X, to authenticate clients that do not support the IEEE 802.1X supplicant
  - **MAC-based authentication**  
authenticates the client with the RADIUS server based on the client's MAC address
- **Secure shell (SSHv2; client and server)**  
encrypts all transmitted data for secure, remote CLI access over IP networks
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encrypts all transmitted data for secure remote CLI access over IP networks
- **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
- **Secure management access**  
delivers secure encryption of all access methods (CLI, GUI, or MIB) through SSHv2 and SNMPv3
- **Custom banner**  
displays security policy when users log in to the switch
- **Secure FTP**  
allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **Protected ports CLI**  
offers intuitive CLI to configure the source-port filters feature by allowing specified ports to be isolated from all other ports on the switch; the protected port or ports can communicate only with the uplink or shared resources
- **Authentication flexibility**
  - **Multiple IEEE 802.1X users per port**  
provides authentication for up to eight IEEE 802.1X users per port; prevents a user from "piggybacking" on another user's

### Overview

- IEEE 802.1X authentication
  - **Concurrent IEEE 802.1X and Web or MAC authentication schemes per port**  
allows a switch port to accept any IEEE 802.1X and either Web or MAC authentications
- **Switch management logon security**  
helps secure switch CLI logon by optionally requiring either RADIUS or TACACS+ authentication

### Convergence

- **LLDP-MED (Media Endpoint Discovery)**  
defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones
- **IP multicast (data-driven IGMP)**  
prevents flooding of IP multicast traffic
- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP)**  
facilitates easy mapping using network management applications with LLDP automated device discovery protocol
- **PoE and PoE+ allocations**  
support multiple method (automatic, IEEE 802.3at dynamic, LLDP-MED fine grain, IEEE 802.3af device class, or user specified) to allocate and manage PoE/PoE+ power for more efficient energy use
- **Voice VLAN**  
uses LLDP-MED to automatically configure a VLAN for IP phones
- **IP multicast (data-driven IGMPv3)**  
prevents flooding of IP multicast traffic
- **LLDP-CDP compatibility**  
receives and recognizes CDP packets from Cisco's IP phones for seamless interoperation

### Resiliency and high availability

- **Port trunking and link aggregation**
  - **Trunking**  
supports up to eight links per trunk to increase bandwidth and create redundant connections; supports L2, L3, and L4 trunk load-balancing algorithm (L4 trunk load balancing is supported only on Gigabit Ethernet and 48-port models)
  - **IEEE 802.3ad Link Aggregation Protocol (LACP)**  
eases configuration of trunks through automatic configuration
- **IEEE 802.1s Multiple Spanning Tree**  
provides high link availability in multiple VLAN environments by allowing multiple spanning trees; provides legacy support for IEEE 802.1d and IEEE 802.1w
- **SmartLink**  
provides easy-to-configure link redundancy of active and standby links

### Product Architecture

- **Energy-efficient design**
  - **IEEE 802.3az**  
reduces power consumption during periods of low data activity on Gigabit Ethernet switches
  - **Port low power mode**  
allows the port to automatically go into low-power mode to conserve energy when no link is detected
  - **Fans**  
decreases power consumption in fanless (all 8-port, 2530-24, and 2530-48 switches) and variable-speed fan switches
  - **Port LEDs**  
conserves energy by optionally turning off port link and activity LEDs

### Overview

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

### Flexibility

- **Flexible mounting**
  - **Rackable**  
accommodates mounting in a standard 19-inch rack using included hardware
  - **Wall mountable**  
allows the switch to be mounted to a wall using included hardware
  - **Surface mountable**  
allows the switch to be mounted above or below a surface (such as a desk or table) with included hardware
- **Quiet operation**  
lowers noise for deployments in acoustically sensitive environments such as conference rooms and office space
- **Compact size**  
reduces space requirements (see product specifications for exact dimensions)

### Warranty and support

- **Lifetime Warranty 2.0**  
advance hardware replacement for as long as you own the product with next-business-day delivery (available in most countries)†
- **Electronic and telephone support (for Lifetime Warranty 2.0)**  
limited 24x7 telephone support is available from HP for the first 3 years; limited electronic and business hours telephone support is available from HP for the entire warranty period; to reach our support centers, refer to [www.hp.com/networking/contact-support](http://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](http://www.hp.com/networking/warrantysummary)
- **Software releases**  
to find software for your product, refer to [www.hp.com/networking/support](http://www.hp.com/networking/support); for details on the software releases available with your product purchase, refer to [www.hp.com/networking/warrantysummary](http://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](http://www.hp.com/networking/warranty).

### Configuration

**Build To Order: BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or Rack-Shippable solution.**

#### HP 2530-8 Switch

- 8 RJ-45 autosensing 10/100 ports
- 2 dual-personality ports; RJ-45 10/100/1000 or SFP slot (Min 0 // Max 2 SFP)
- Power Supply Included
- 1U - Height

J9783A

See Configuration Note:1,  
3

#### HP 2530-8-PoE+ Switch

- 8 RJ-45 autosensing 10/100 PoE+ports
- 2 dual-personality ports; RJ-45 10/100/1000 or SFP slot (Min 0 // Max 2 SFP)
- Power Supply Included
- 1U - Height

J9780A

See Configuration Note:1,  
3

#### HP 2530-8G Switch

- 8 RJ-45 autosensing 10/100/1000 ports
- 2 dual-personality ports; RJ-45 10/100/1000 or SFP slot (Min 0 // Max 2 SFP)
- Power Supply Included
- 1U - Height

J9777A

See Configuration Note:1,  
3

#### HP 2530-8G-PoE+ Switch

- 8 RJ-45 autosensing 10/100/1000 PoE+ ports
- 2 dual-personality ports; RJ-45 10/100/1000 or SFP slot (Min 0 // Max 2 SFP)
- Power Supply Included
- 1U - Height

J9774A

See Configuration Note:1,  
3

#### HP 2530-24 Switch

- 24 RJ-45 autosensing 10/100 ports
- 2 fixed Gigabit Ethernet SFP ports (Min 0 // Max 2 SFP)
- 2 RJ-45 autosensing 10/100/1000 ports
- Power Supply Included
- 1U - Height

J9782A

See Configuration Note:1,  
2

#### PDU CABLE NA/MEX/TW/JP

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

J9782A#B2B

#### PDU CABLE ROW

- C15 PDU Jumper Cord (ROW)

J9782A#B2C

#### HP 2530-24-PoE+ Switch

J9779A

### Configuration

- 24 RJ-45 autosensing 10/100 PoE+ ports
- 2 fixed Gigabit Ethernet SFP ports (Min 0 // Max 2 SFP)
- 2 RJ-45 autosensing 10/100/1000 ports
- Power Supply Included
- 1U - Height

See Configuration Note:1,  
2

#### PDU CABLE NA/MEX/TW/JP

J9779A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

#### PDU CABLE ROW

J9779A#B2C

- C15 PDU Jumper Cord (ROW)

#### HP 2530-24G Switch

J9776A

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 fixed Gigabit Ethernet SFP ports (Min 0 // Max 4 SFP)
- Power Supply Included
- 1U - Height

See Configuration Note:1,  
2

#### PDU CABLE NA/MEX/TW/JP

J9776A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

#### PDU CABLE ROW

J9776A#B2C

- C15 PDU Jumper Cord (ROW)

#### HP 2530-24G-PoE+ Switch

J9773A

- 24 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 fixed Gigabit Ethernet SFP ports (Min 0 // Max 4 SFP)
- Power Supply Included
- 1U - Height

See Configuration Note:1,  
2

#### PDU CABLE NA/MEX/TW/JP

J9773A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

#### PDU CABLE ROW

J9773A#B2C

- C15 PDU Jumper Cord (ROW)

#### HP 2530-48 Switch

J9781A

- 48 RJ-45 autosensing 10/100 ports
- 2 fixed Gigabit Ethernet SFP ports (Min 0 // Max 2 SFP)
- 2 RJ-45 autosensing 10/100/1000 ports
- Power Supply Included
- 1U - Height

See Configuration Note:1,  
2

#### PDU CABLE NA/MEX/TW/JP

J9781A#B2B





### Configuration

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

#### PDU CABLE ROW

J9781A#B2C

- C15 PDU Jumper Cord (ROW)

#### HP 2530-48-PoE+ Switch

J9778A

- 48 RJ-45 autosensing 10/100 PoE+ ports
- 2 fixed Gigabit Ethernet SFP ports (Min 0 // Max 2 SFP)
- 2 RJ-45 autosensing 10/100/1000 ports
- Power Supply Included
- 1U - Height

See Configuration Note:1,  
2

#### PDU CABLE NA/MEX/TW/JP

J9778A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

#### PDU CABLE ROW

J9778A#B2C

- C15 PDU Jumper Cord (ROW)

#### HP 2530-48G Switch

J9775A

- 48 RJ-45 autosensing 10/100/1000 ports
- 4 fixed Gigabit Ethernet SFP ports (Min 0 // Max 4 SFP)
- Power Supply Included
- 1U - Height

See Configuration Note:1,  
2

#### PDU CABLE NA/MEX/TW/JP

J9775A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

#### PDU CABLE ROW

J9775A#B2C

- C15 PDU Jumper Cord (ROW)

#### HP 2530-48G-PoE+ Switch

J9772A

- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 fixed Gigabit Ethernet SFP ports (Min 0 // Max 4 SFP)
- Power Supply Included
- 1U - Height

See Configuration Note:1,  
2

#### PDU CABLE NA/MEX/TW/JP

J9772A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

#### PDU CABLE ROW

J9772A#B2C

- C15 PDU Jumper Cord (ROW)

### Configuration

#### Configuration Rules:

<b>Note 1</b>	The following Transceivers install into this switch:	
	HP X121 1G SFP LC SX Transceiver	J4858C
	HP X121 1G SFP LC LX Transceiver	J4859C
	HP X111 100M SFP LC FX Transceiver	J9054C
	HP X112 100M SFP LC BX-D Transceiver	J9099B
	HP X112 100M SFP LC BX-U Transceiver	J9100B
	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
	HP X121 1G SFP RJ45 T Transceiver	J8177C

**Note 2** Localization required on orders without #B2B, #B2C or #B2E options.

**Note 3** Localization cable required. No B2x options

#### Remarks:

Drop down under power supply should offer the following options and results:

Switch/Router/Power Supply to PDU Power Cord - #B2B in North America, Mexico, Taiwan, and Japan or #B2C ROW. (Watson Default B2B or B2C for Rack Level CTO)

Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)

### Rack Level Integration CTO Models

HP 2530-24 Switch	J9782A
<ul style="list-style-type: none"><li>• 24 RJ-45 autosensing 10/100 ports</li><li>• 2 fixed Gigabit Ethernet SFP ports (Min 0 // Max 2 SFP)</li><li>• 2 RJ-45 autosensing 10/100/1000 ports</li><li>• Power Supply Included</li><li>• 1U - Height</li></ul>	See Configuration Note:1, 2, 3, 4
PDU CABLE NA/MEX/TW/JP	J9782A#B2B
<ul style="list-style-type: none"><li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li></ul>	
PDU CABLE ROW	J9782A#B2C
<ul style="list-style-type: none"><li>• C15 PDU Jumper Cord (ROW)</li></ul>	

### Configuration

#### HP 2530-24-PoE+ Switch

J9779A

- 24 RJ-45 autosensing 10/100 PoE+ ports
- 2 fixed Gigabit Ethernet SFP ports (Min 0 // Max 2 SFP)
- 2 RJ-45 autosensing 10/100/1000 ports
- Power Supply Included
- 1U - Height

See Configuration Note:1,  
2, 3, 4

#### PDU CABLE NA/MEX/TW/JP

J9779A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

#### PDU CABLE ROW

J9779A#B2C

- C15 PDU Jumper Cord (ROW)

#### HP 2530-24G Switch

J9776A

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 fixed Gigabit Ethernet SFP ports (Min 0 // Max 4 SFP)
- Power Supply Included
- 1U - Height

See Configuration Note:1,  
2, 3, 4

#### PDU CABLE NA/MEX/TW/JP

J9776A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

#### PDU CABLE ROW

J9776A#B2C

- C15 PDU Jumper Cord (ROW)

#### HP 2530-24G-PoE+ Switch

J9773A

- 24 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 fixed Gigabit Ethernet SFP ports (Min 0 // Max 4 SFP)
- Power Supply Included
- 1U - Height

See Configuration Note:1,  
2, 3, 4

#### PDU CABLE NA/MEX/TW/JP

J9773A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

#### PDU CABLE ROW

J9773A#B2C

- C15 PDU Jumper Cord (ROW)

#### HP 2530-48 Switch

J9781A

- 48 RJ-45 autosensing 10/100 ports
- 2 fixed Gigabit Ethernet SFP ports (Min 0 // Max 2 SFP)
- 2 RJ-45 autosensing 10/100/1000 ports
- Power Supply Included
- 1U - Height

See Configuration Note:1,  
2, 3, 4

### Configuration

PDU CABLE NA/MEX/TW/JP	J9781A#B2B
<ul style="list-style-type: none"><li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li></ul>	
PDU CABLE ROW	J9781A#B2C
<ul style="list-style-type: none"><li>• C15 PDU Jumper Cord (ROW)</li></ul>	
HP 2530-48-PoE+ Switch	J9778A
<ul style="list-style-type: none"><li>• 48 RJ-45 autosensing 10/100 PoE+ ports</li><li>• 2 fixed Gigabit Ethernet SFP ports (Min 0 // Max 2 SFP)</li><li>• 2 RJ-45 autosensing 10/100/1000 ports</li><li>• Power Supply Included</li><li>• 1U - Height</li></ul>	See Configuration Note:1, 2, 3, 4
PDU CABLE NA/MEX/TW/JP	J9778A#B2B
<ul style="list-style-type: none"><li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li></ul>	
PDU CABLE ROW	J9778A#B2C
<ul style="list-style-type: none"><li>• C15 PDU Jumper Cord (ROW)</li></ul>	
HP 2530-48G Switch	J9775A
<ul style="list-style-type: none"><li>• 48 RJ-45 autosensing 10/100/1000 ports</li><li>• 4 fixed Gigabit Ethernet SFP ports (Min 0 // Max 4 SFP)</li><li>• Power Supply Included</li><li>• 1U - Height</li></ul>	See Configuration Note:1, 2, 3, 4
PDU CABLE NA/MEX/TW/JP	J9775A#B2B
<ul style="list-style-type: none"><li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li></ul>	
PDU CABLE ROW	J9775A#B2C
<ul style="list-style-type: none"><li>• C15 PDU Jumper Cord (ROW)</li></ul>	
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PDU CABLE NA/MEX/TW/JP	J9772A#B2B
<ul style="list-style-type: none"><li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li></ul>	
PDU CABLE ROW	J9772A#B2C
<ul style="list-style-type: none"><li>• C15 PDU Jumper Cord (ROW)</li></ul>	

### Configuration

#### Configuration Rules:

- Note 1**                    The following Transceivers install into this switch:
- |                                      |        |
|--------------------------------------|--------|
| HP X121 1G SFP LC SX Transceiver     | J4858C |
| HP X121 1G SFP LC LX Transceiver     | J4859C |
| HP X111 100M SFP LC FX Transceiver   | J9054C |
| HP X112 100M SFP LC BX-D Transceiver | J9099B |
| HP X112 100M SFP LC BX-U Transceiver | J9100B |
| 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 |
| HP X121 1G SFP RJ45 T Transceiver    | J8177C |
- Note 2**                    If this switch is factory installed in any HP Universal Racks, Then the J9583A#0D1 is required.
- Note 3**                    Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) . (See Localization Menu)
- REMARK: When Switches/Routers are Factory Racked, Then #B2B, or #B2C should be the Defaulted Power Cable option on the Switches/Routers.
- Note 3**                    #B2B is required in AMS, and #B2C in APJ and EMEA. (Only when Factory Racked)
- Note 4**                    If HP CTO Switch Chassis is selected for Rack Level Integration, Then the CTO Switch Chassis needs to integrate (with #0D1) to the HP Networking Universal Rack.
- Remarks:**
- Drop down under power supply should offer the following options and results:
- Switch/Router/Power Supply to PDU Power Cord - #B2B in North America, Mexico, Taiwan, and Japan or #B2C ROW. (Watson Default B2B or B2C for Rack Level CTO)
- Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)

### Internal Power Supplies

Internal Power supplies included

**Enter the following menu selections as integrated to the CTO Model X server above if order is factory built.**

### Configuration

#### Transceivers

##### SFP Transceivers

HP X121 1G SFP LC SX Transceiver	J4858C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X111 100M SFP LC FX Transceiver	J9054C
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
HP X112 100M SFP LC BX-D Transceiver	J9099B
HP X112 100M SFP LC BX-U Transceiver	J9100B
HP X121 1G SFP RJ45 T Transceiver	J8177C

#### Cables

##### Multi-Mode Cables

HP .5m Multi-mode OM3 LC/LC FC Cable	AJ833A
HP 1m Multi-mode OM3 LC/LC FC Cable	AJ834A
HP 2 m Multimode OM3 LC/LC FC Cable	AJ835A
HP 5 m Multimode OM3 LC/LC FC Cable	AJ836A
HP 15 m Multimode OM3 LC/LC FC Cable	AJ837A
HP 30 m Multimode OM3 LC/LC FC Cable	AJ838A
HP 50 m Multimode OM3 LC/LC FC Cable	AJ839A
HP Premier Flex LC/LC OM4 2f 1m Cbl	QK732A
HP Premier Flex LC/LC OM4 2f 2m Cbl	QK733A
HP Premier Flex LC/LC OM4 2f 5m Cbl	QK734A
HP Premier Flex LC/LC OM4 2f 15m Cbl	QK735A
HP Premier Flex LC/LC OM4 2f 30m Cbl	QK736A
HP Premier Flex LC/LC OM4 2f 50m Cbl	QK737A

#### Switch Enclosure Options

##### Cable Guard

HP X510 1U Cable Guard	J9700A
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[See Configuration Note:1](#)

### Configuration

#### Configuration Rules:

Note 1                      This Cable Guard is supported only on the J9783A, J9780A, J9777A and J9774A.

#### **Option Mounting Kit**

HP 2530 8-port Switch Pwr Adptr Shelf

J9820A

See Configuration Note:1

#### Configuration Rules:

Note 1                      This Power Adapter Shelf is supported only on the J9783A, J9780A, J9777A and J9774A.

#### **Rack Mount Kit**

HP X410 1U Univ 4-post Rack Mnt Kit

J9583A

See Configuration Note:1, 2

#### Configuration Rules:

Note 1                      If this Mounting Kit is order with #0D1 then it integrates to the HP Universal Rack. (not the switch)

Note 2                      If the J9583A is ordered in EMEA fire the following UNBUILDABLE error:  
"The J9583A cannot be ordered with option integrated to the Rack in the EMEA region. The Rack Mount kit must be ordered as BTO using supplier 80CZ."

### Technical Specifications

#### HP 2530-48G-PoE+ Switch I/O ports and slots (J9772A)

48 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+); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only

4 fixed Gigabit Ethernet SFP ports

1 Dual-personality (RJ-45 or USB micro-B) serial console port

<b>Physical characteristics</b>	<b>Dimensions</b>	17.44(w) x 13.00(d) x 1.75(h) in (44.3 x 32.26 x 4.45 cm) (1U height)
	<b>Weight</b>	10.4 lb (4.72 kg)
<b>Memory and processor</b>	<b>Processor</b>	ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 3 MB dynamically allocated
<b>Mounting</b>	Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting	
<b>Performance</b>	<b>IPv6 Ready Certified</b>	
	<b>100 Mb Latency</b>	< 7.4 $\mu$ s (LIFO 64-byte packets)
	<b>1000 Mb Latency</b>	< 2.3 $\mu$ s (LIFO 64-byte packets)
	<b>Throughput</b>	up to 77.3 million pps (64-byte packets)
	<b>Switching capacity</b>	104 Gbps
	<b>MAC address table size</b>	16000 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing
	<b>Non-operating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Non-operating/Storage relative humidity</b>	15% to 90% @ 149°F (65°C), noncondensing
	<b>Altitude</b>	up to 10,000 ft (3 km)
	<b>Acoustic</b>	Power: 33.6 dB, Pressure: 43.9 dB
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	236 BTU/hr (248.98 kJ/hr), (switch only: 236 BTU/hr; combined switch + max. PoE devices: 1624 BTU/hr)
	<b>AC voltage</b>	100-127/200-240 VAC
	<b>Current</b>	5.8/2.9 A
	<b>Maximum power rating</b>	476 W
	<b>Idle power</b>	40.1 W
	<b>PoE power</b>	382 W
	<b>Safety</b>	UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1
<b>Emissions</b>	FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A	
<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24



### Technical Specifications

	<b>EN</b>	EN 55024, CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	EN 61000-3-2, IEC 61000-3-2
	<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3
<b>Management</b>		IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C or Micro USB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB
<b>Notes</b>		IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.
<b>Services</b>		<p>3-year, 4-hour onsite, 13x5 coverage for hardware (U4683E)</p> <p>3-year, 4-hour onsite, 24x7 coverage for hardware (U4835E)</p> <p>3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SWupdates (U6321E)</p> <p>3-year, 24x7 SW phone support, software updates (UF792E)</p> <p>4-year, 4-hour onsite, 13x5 coverage for hardware (UR948E)</p> <p>4-year, 4-hour onsite, 24x7 coverage for hardware (UR949E)</p> <p>4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR950E)</p> <p>4-year, 24x7 SW phone support, software updates (UR951E)</p> <p>5-year, 4-hour onsite, 13x5 coverage for hardware (UR952E)</p> <p>5-year, 4-hour onsite, 24x7 coverage for hardware (UR953E)</p> <p>5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR954E)</p> <p>3 Yr 6 hr Call-to-Repair Onsite (UW368E)</p> <p>4 Yr 6 hr Call-to-Repair Onsite (UW369E)</p> <p>5 Yr 6 hr Call-to-Repair Onsite (UW370E)</p> <p>1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E)</p> <p>1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E)</p> <p>1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)</p> <p>1-year, 24x7 software phone support, software updates (HR852E)</p> <p>1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)</p> <p>1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)</p> <p>1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)</p> <p>3-year, 24x7 software phone support, software updates + Next Business Day</p>

### Technical Specifications

Hardware Exchange (HS556E)  
 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)  
 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)  
 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)  
 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)  
 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at [www.hp.com/networking/services](http://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.

#### HP 2530-24G-PoE+ Switch I/O ports and slots (J9773A)

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+); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only

4 fixed Gigabit Ethernet SFP ports

1 dual-personality (RJ-45 or USB micro-B) serial console port

#### Physical characteristics

##### Dimensions

17.44(w) x 13.00(d) x 1.75(h) in (44.3 x 33.02 x 4.45 cm) (1U height)

##### Weight

8.7 lb (3.95 kg)

#### Memory and processor

##### Processor

ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 1.5 MB dynamically allocated

#### Mounting

Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting

#### Performance

##### IPv6 Ready Certified

##### 100 Mb Latency

< 7.4  $\mu$ s (LIFO 64-byte packets)

##### 1000 Mb Latency

< 2.3  $\mu$ s (LIFO 64-byte packets)

##### Throughput

up to 41.6 million pps (64-byte packets)

##### Switching capacity

56 Gbps

##### MAC address table size

16000 entries

#### Environment

##### Operating temperature

32°F to 113°F (0°C to 45°C)

##### Operating relative humidity

15% to 95% @ 104°F (40°C), noncondensing

##### Non-operating/Storage temperature

-40°F to 158°F (-40°C to 70°C)

##### Non-operating/Storage relative humidity

15% to 90% @ 149°F (65°C), noncondensing

##### Altitude

up to 10,000 ft (3 km)

##### Acoustic

Power: 43.9 dB, Pressure: 39.6 dB

### Technical Specifications

<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	135 BTU/hr (142.42 kJ/hr), (switch only: 135 BTU/hr; combined switch + max. PoE devices: 843 BTU/hr)
	<b>AC voltage</b>	100-127/200-240 VAC
	<b>Current</b>	3.2/1.6 A
	<b>Maximum power rating</b>	247 W
	<b>Idle power</b>	25.2 W
	<b>PoE power</b>	195 W
<b>Safety</b>	UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1	
<b>Emissions</b>	FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A	
<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24
	<b>EN</b>	EN 55024, CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	EN 61000-3-2, IEC 61000-3-2
	<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C or Micro USB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	
<b>Notes</b>	IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.	
<b>Services</b>	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 SW phone support and SWupdates (U6321E) 3-year, 24x7 SW phone support, software updates (UF792E) 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	

### Technical Specifications

- (UR954E)
- 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)
- 1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E)
- 1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E)
- 1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)
- 1-year, 24x7 software phone support, software updates (HR852E)
- 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)
- 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)
- 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)
- 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)
- 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)
- 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)
- 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)
- 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)
- 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at [www.hp.com/networking/services](http://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.

**HP 2530-8G-PoE+ Switch I/O ports and slots**  
(J9774A)

8 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+); 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)

1 dual-personality (RJ-45 or USB micro-B) serial console port

<b>Physical characteristics</b>	<b>Dimensions</b>	10(w) x 6.28(d) x 1.75(h) in (25.4 x 15.95 x 4.45 cm) (1U height)
	<b>Weight</b>	2.2 lb (1 kg)
<b>Memory and processor</b>	<b>Processor</b>	ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 1.5 MB dynamically allocated
<b>Mounting</b>		Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting

### Technical Specifications

<b>Performance</b>	<b>IPv6 Ready Certified</b>	
	<b>100 Mb Latency</b>	< 7.4µs (LIFO 64-byte packets)
	<b>1000 Mb Latency</b>	< 2.6 µs (LIFO 64-byte packets)
	<b>Throughput</b>	up to 14.8 million pps (64-byte packets)
	<b>Switching capacity</b>	20 Gbps
	<b>MAC address table size</b>	16000 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), non-condensing
	<b>Non-operating/ Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Non-operating/ Storage relative humidity</b>	15% to 90% @ 149°F (65°C), noncondensing
	<b>Altitude</b>	up to 10,000 ft (3 km)
	<b>Acoustic</b>	Power: 0 dB, Pressure: 0 dB
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	65 BTU/hr (68.58 kJ/hr), (switch only: 65 BTU/hr; combined switch + max. PoE devices: 293 BTU/hr)
	<b>AC voltage</b>	100-127/200-240 VAC
	<b>Current</b>	1.4 A
	<b>Maximum power rating</b>	86 W
	<b>Idle power</b>	13.4 W
	<b>PoE power</b>	67 W
	<b>Safety</b>	UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1
<b>Emissions</b>	FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A	
<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24
	<b>EN</b>	EN 55024, CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	EN 61000-3-2, IEC 61000-3-2
<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3	
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; out-of-band management (Serial RS-232C or Micro USB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	

### Technical Specifications

<b>Notes</b>	IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.
<b>Services</b>	<p>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 SW phone support and SWupdates (U6321E) 3-year, 24x7 SW phone support, software updates (UF792E) 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) 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) 1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E) 1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E) 1-year, 24x7 software phone support, software updates (HR852E) 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E) 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E) 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E) 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E) 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E) 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E) 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E) 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E) 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)</p> <p>Refer to the HP website at <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> 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.</p>

**HP 2530-48-PoE+ Switch I/O ports and slots**  
(J9778A)

48 RJ-45 autosensing 10/100 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3at PoE+); Media Type: Auto-MDIX;



### Technical Specifications

		Duplex: half or full
		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
		2 fixed Gigabit Ethernet SFP ports
		1 dual-personality (RJ-45 or USB micro-B) serial console port
<b>Physical characteristics</b>	<b>Dimensions</b>	17.4(w) x 12.7(d) x 1.75(h) in (44.2 x 32.26 x 4.45 cm) (1U height)
	<b>Weight</b>	10.1 lb (4.58 kg)
<b>Memory and processor</b>	<b>Processor</b>	ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 3 MB dynamically allocated
<b>Mounting</b>		Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting
<b>Performance</b>	<b>IPv6 Ready Certified</b>	
	<b>100 Mb Latency</b>	< 6.6 $\mu$ s (LIFO 64-byte packets)
	<b>1000 Mb Latency</b>	< 2.2 $\mu$ s (LIFO 64-byte packets)
	<b>Throughput</b>	up to 13 million pps (64-byte packets)
	<b>Switching capacity</b>	17.6 Gbps
	<b>MAC address table size</b>	16000 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing
	<b>Non-operating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Non-operating/Storage relative humidity</b>	15% to 90% @ 149°F (65°C), noncondensing
	<b>Altitude</b>	up to 10,000 ft (3 km)
	<b>Acoustic</b>	Power: 31.8 dB, Pressure: 37.9 dB
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	170 BTU/hr (179.35 kJ/hr), (switch only: 170 BTU/hr; combined switch + max. PoE devices: 1505 BTU/hr)
	<b>AC voltage</b>	100-127/200-240 VAC
	<b>Current</b>	5.2/2.6 A
	<b>Maximum power rating</b>	441 W
	<b>Idle power</b>	37.5 W
	<b>PoE power</b>	382 W
<b>Safety</b>		UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1
<b>Emissions</b>		FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A
<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24
	<b>EN</b>	EN 55024, CISPR 24

### Technical Specifications

	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	EN 61000-3-2, IEC 61000-3-2
	<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; out-of-band management (Serial RS-232C or Micro USB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	
<b>Notes</b>	IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.	
<b>Services</b>	<p>3-year, 4-hour onsite, 13x5 coverage for hardware (U4683E)</p> <p>3-year, 4-hour onsite, 24x7 coverage for hardware (U4835E)</p> <p>3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SWupdates (U6321E)</p> <p>3-year, 24x7 SW phone support, software updates (UF792E)</p> <p>4-year, 4-hour onsite, 13x5 coverage for hardware (UR948E)</p> <p>4-year, 4-hour onsite, 24x7 coverage for hardware (UR949E)</p> <p>4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR950E)</p> <p>4-year, 24x7 SW phone support, software updates (UR951E)</p> <p>5-year, 4-hour onsite, 13x5 coverage for hardware (UR952E)</p> <p>5-year, 4-hour onsite, 24x7 coverage for hardware (UR953E)</p> <p>5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR954E)</p> <p>3 Yr 6 hr Call-to-Repair Onsite (UW368E)</p> <p>4 Yr 6 hr Call-to-Repair Onsite (UW369E)</p> <p>5 Yr 6 hr Call-to-Repair Onsite (UW370E)</p> <p>1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E)</p> <p>1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E)</p> <p>1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)</p> <p>1-year, 24x7 software phone support, software updates (HR852E)</p> <p>1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)</p> <p>1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)</p> <p>1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)</p> <p>3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)</p>	



### Technical Specifications

3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)  
4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)  
4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)  
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)  
5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at [www.hp.com/networking/services](http://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.

#### HP 2530-24-PoE+ Switch I/O ports and slots (J9779A)

24 RJ-45 autosensing 10/100 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3at PoE+); Media Type: Auto-MDIX; Duplex: half or full

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

2 fixed Gigabit Ethernet SFP ports

1 dual-personality (RJ-45 or USB micro-B) serial console port

#### Physical characteristics

##### Dimensions

17.4(w) x 12.7(d) x 1.75(h) in (44.2 x 32.26 x 4.45 cm) (1U height)

##### Weight

8.4 lb (3.81 kg)

#### Memory and processor

##### Processor

ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 1.5 MB dynamically allocated

#### Mounting

Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting

#### Performance

##### IPv6 Ready Certified

##### 100 Mb Latency

< 1.7  $\mu$ s (LIFO 64-byte packets)

##### 1000 Mb Latency

< 1.1  $\mu$ s (LIFO 64-byte packets)

##### Throughput

up to 9.5 million pps (64-byte packets)

##### Switching capacity

12.8 Gbps

##### MAC address table size

16000 entries

#### Environment

##### Operating temperature

32°F to 113°F (0°C to 45°C)

##### Operating relative humidity

15% to 95% @ 104°F (40°C), noncondensing

##### Non-operating/Storage temperature

-40°F to 158°F (-40°C to 70°C)

##### Non-operating/Storage relative humidity

15% to 90% @ 149°F (65°C), noncondensing

##### Altitude

up to 10,000 ft (3 km)

### Technical Specifications

	<b>Acoustic</b>	Power: 31.7 dB, Pressure: 40.4 dB
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	99 BTU/hr (104.45 kJ/hr), (switch only: 99 BTU/hr; combined switch + max. PoE devices: 809 BTU/hr)
	<b>AC voltage</b>	100-127/200-240 VAC
	<b>Current</b>	2.8/1.4 A
	<b>Maximum power rating</b>	237 W
	<b>Idle power</b>	21.8 W
	<b>PoE power</b>	195 W
	<b>Safety</b>	UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1
<b>Emissions</b>	FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A	
<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24
	<b>EN</b>	EN 55024, CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	EN 61000-3-2, IEC 61000-3-2
	<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C or Micro USB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	
<b>Notes</b>	IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.	
<b>Services</b>	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 SW phone support and SWupdates (U6321E)	
	3-year, 24x7 SW phone support, software updates (UF792E)	
	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		

### Technical Specifications

- (UR954E)
- 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)
- 1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E)
- 1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E)
- 1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)
- 1-year, 24x7 software phone support, software updates (HR852E)
- 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)
- 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)
- 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)
- 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)
- 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)
- 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)
- 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)
- 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)
- 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at [www.hp.com/networking/services](http://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.

<b>HP 2530-8-PoE+ Switch</b> (J9780A)	<b>I/O ports and slots</b>	8 RJ-45 autosensing 10/100 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3at 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) ports
		1 dual-personality (RJ-45 or USB micro-B) serial console port
	<b>Physical characteristics</b>	<b>Dimensions</b> 10(w) x 6.28(d) x 1.75(h) in (25.4 x 15.95 x 4.45 cm) (1U height)
		<b>Weight</b> 2.0 lb (0.91 kg)
	<b>Memory and processor</b>	<b>Processor</b> ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 1.5 MB dynamically allocated
	<b>Mounting</b>	Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting
	<b>Performance</b>	<b>IPv6 Ready Certified</b>

### Technical Specifications

	<b>100 Mb Latency</b>	< 1.3 $\mu$ s (LIFO 64-byte packets)	
	<b>1000 Mb Latency</b>	< 2.3 $\mu$ s (LIFO 64-byte packets)	
	<b>Throughput</b>	up to 4.1 million pps (64-byte packets)	
	<b>Switching capacity</b>	5.6 Gbps	
	<b>MAC address table size</b>	16000 entries	
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)	
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing	
	<b>Non-operating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)	
	<b>Non-operating/Storage relative humidity</b>	15% to 90% @ 149°F (65°C), noncondensing	
	<b>Altitude</b>	up to 10,000 ft (3 km)	
	<b>Acoustic</b>	Power: 0 dB, Pressure: 0 dB	
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz	
	<b>Maximum heat dissipation</b>	29 BTU/hr (30.6 kJ/hr), (switch only: 29 BTU/hr; combined switch + max. PoE devices: 262 TU/hr)	
	<b>AC voltage</b>	100-127/200-240 VAC	
	<b>Current</b>	1.4 A	
	<b>Maximum power rating</b>	76.7 W	
	<b>Idle power</b>	5.8 W	
	<b>PoE power</b>	67 W	
	<b>Safety</b>	UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1	
	<b>Emissions</b>	FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A	
	<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24
<b>EN</b>		EN 55024, CISPR 24	
<b>ESD</b>		IEC 61000-4-2	
<b>Radiated</b>		IEC 61000-4-3	
<b>EFT/Burst</b>		IEC 61000-4-4	
<b>Surge</b>		IEC 61000-4-5	
<b>Conducted</b>		IEC 61000-4-6	
<b>Power frequency magnetic field</b>		IEC 61000-4-8	
<b>Voltage dips and interruptions</b>		IEC 61000-4-11	
<b>Harmonics</b>		EN 61000-3-2, IEC 61000-3-2	
<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3		
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C or Micro USB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB		

### Technical Specifications

<b>Notes</b>	IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.
<b>Services</b>	<p>3-year, 4-hour onsite, 13x5 coverage for hardware (U4683E)</p> <p>3-year, 4-hour onsite, 24x7 coverage for hardware (U4835E)</p> <p>3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SWupdates (U6321E)</p> <p>3-year, 24x7 SW phone support, software updates (UF792E)</p> <p>4-year, 4-hour onsite, 13x5 coverage for hardware (UR948E)</p> <p>4-year, 4-hour onsite, 24x7 coverage for hardware (UR949E)</p> <p>4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR950E)</p> <p>4-year, 24x7 SW phone support, software updates (UR951E)</p> <p>5-year, 4-hour onsite, 13x5 coverage for hardware (UR952E)</p> <p>5-year, 4-hour onsite, 24x7 coverage for hardware (UR953E)</p> <p>5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR954E)</p> <p>3 Yr 6 hr Call-to-Repair Onsite (UW368E)</p> <p>4 Yr 6 hr Call-to-Repair Onsite (UW369E)</p> <p>5 Yr 6 hr Call-to-Repair Onsite (UW370E)</p> <p>1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E)</p> <p>1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E)</p> <p>1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)</p> <p>1-year, 24x7 software phone support, software updates (HR852E)</p> <p>1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)</p> <p>1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)</p> <p>1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)</p> <p>3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)</p> <p>3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)</p> <p>4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)</p> <p>4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)</p> <p>5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)</p> <p>5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)</p> <p>Refer to the HP website at <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> 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.</p>

**HP 2530-48G Switch**  
(J9775A)

**I/O ports and slots**

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:



### Technical Specifications

		10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
		4 fixed Gigabit Ethernet SFP ports
		1 dual-personality (RJ-45 or USB micro-B) serial console port
<b>Physical characteristics</b>	<b>Dimensions</b>	17.44(w) x 10.00(d) x 1.75(h) in (44.3 x 25.4 x 4.45 cm) (1U height)
	<b>Weight</b>	6.8 lb (3.08 kg)
<b>Memory and processor</b>	<b>Processor</b>	ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 3 MB dynamically allocated
<b>Mounting</b>		Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting
<b>Performance</b>	<b>IPv6 Ready Certified</b>	
	<b>100 Mb Latency</b>	< 7.4 $\mu$ s (LIFO 64-byte packets)
	<b>1000 Mb Latency</b>	< 2.3 $\mu$ s (LIFO 64-byte packets)
	<b>Throughput</b>	up to 77.3 million pps (64-byte packets)
	<b>Switching capacity</b>	104 Gbps
	<b>MAC address table size</b>	16000 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing
	<b>Non-operating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Non-operating/Storage relative humidity</b>	15% to 90% @ 149°F (65°C), noncondensing
	<b>Altitude</b>	up to 10,000 ft (3 km)
	<b>Acoustic</b>	Power: 31.0 dB, Pressure: 34.5 dB
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz Achieved Miercom Certified Green Award
	<b>Maximum heat dissipation</b>	203 BTU/hr (214.17 kJ/hr)
	<b>AC voltage</b>	100-127/200-240 VAC
	<b>Current</b>	1.2/0.7 A
	<b>Maximum power rating</b>	59.5 W
	<b>Idle power</b>	29.5 W
<b>Safety</b>		UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1
<b>Emissions</b>		FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A
<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24
	<b>EN</b>	EN 55024, CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4

### Technical Specifications

	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	EN 61000-3-2, IEC 61000-3-2
	<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; out-of-band management (Serial RS-232C or Micro USB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	
<b>Notes</b>	IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.	
<b>Services</b>	<p>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 SW phone support and SWupdates (U6321E)            3-year, 24x7 SW phone support, software updates (UF792E)            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)            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)            1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E)            1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E)            1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)            1-year, 24x7 software phone support, software updates (HR852E)            1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)            1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)            1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)            3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)            3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)            4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)</p>	

### Technical Specifications

4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)  
 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)  
 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at [www.hp.com/networking/services](http://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.

#### HP 2530-24G Switch (J9776A)

<b>I/O ports and slots</b>	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	
	4 fixed Gigabit Ethernet SFP ports	
	1 dual-personality (RJ-45 or USB micro-B) serial console port	
	Supports a maximum of 28 Gigabit Ethernet ports	
<b>Physical characteristics</b>	<b>Dimensions</b>	17.44(w) x 10.00(d) x 1.75(h) in (44.3 x 25.4 x 4.45 cm) (1U height)
	<b>Weight</b>	6.1 lb (2.77 kg)
<b>Memory and processor</b>	<b>Processor</b>	ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 1.5 MB dynamically allocated
<b>Mounting</b>	Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting	
<b>Performance</b>	<b>IPv6 Ready Certified</b>	
	<b>100 Mb Latency</b>	< 7.4 $\mu$ s (LIFO 64-byte packets)
	<b>1000 Mb Latency</b>	< 2.3 $\mu$ s (LIFO 64-byte packets)
	<b>Throughput</b>	up to 41.6 million pps (64-byte packets)
	<b>Switching capacity</b>	56 Gbps
	<b>MAC address table size</b>	16000 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing
	<b>Non-operating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Non-operating/Storage relative humidity</b>	15% to 90% @ 149°F (65°C), noncondensing
	<b>Altitude</b>	up to 10,000 ft (3 km)
	<b>Acoustic</b>	Power: 26.4 dB, Pressure: 34.0 dB
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	164 BTU/hr (173.02 kJ/hr)
	<b>AC voltage</b>	100-127/200-240 VAC



### Technical Specifications

	<b>Current</b>	.6/.4 A
	<b>Maximum power rating</b>	48.0 W
	<b>Idle power</b>	28.8 W
<b>Safety</b>		UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1
<b>Emissions</b>		FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A
<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24
	<b>EN</b>	EN 55024, CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	EN 61000-3-2, IEC 61000-3-2
	<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3
<b>Management</b>		IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; Out-of-band management (serial RS-232C or MicroUSB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB
<b>Notes</b>		IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.
<b>Services</b>		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 SW phone support and SWupdates (U6321E) 3-year, 24x7 SW phone support, software updates (UF792E) 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) 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) 1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E) 1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)

### Technical Specifications

- 1-year, 24x7 software phone support, software updates (HR852E)
- 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)
- 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)
- 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)
- 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)
- 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)
- 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)
- 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)
- 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)
- 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at [www.hp.com/networking/services](http://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.

#### HP 2530-8G Switch (J9777A)

#### I/O ports and slots

8 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); 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) ports

1 dual-personality (RJ-45 or USB micro-B) serial console port

#### Physical characteristics

##### Dimensions

10(w) x 6.28(d) x 1.75(h) in (25.4 x 15.95 x 4.45 cm) (1U height)

##### Weight

2.0 lb (0.91 kg)

#### Memory and processor

##### Processor

ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 1.5 MB dynamically allocated

#### Mounting

Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting

#### Performance

##### IPv6 Ready Certified

##### 100 Mb Latency

< 7.4  $\mu$ s (LIFO 64-byte packets)

##### 1000 Mb Latency

< 2.6  $\mu$ s (LIFO 64-byte packets)

##### Throughput

up to 14.8 million pps (64-byte packets)

##### Switching capacity

20 Gbps

##### MAC address table size

16000 entries

### Technical Specifications

<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing
	<b>Non-operating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Non-operating/Storage relative humidity</b>	15% to 90% @ 149°F (65°C), noncondensing
	<b>Altitude</b>	up to 10,000 ft (3 km)
	<b>Acoustic</b>	Power: 0 dB, Pressure: 0 dB
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	63 BTU/hr (66.46 kJ/hr), (switch only: 63 BTU/hr)
	<b>AC voltage</b>	100-127/200-240 VAC
	<b>Current</b>	0.5 A
	<b>Maximum power rating</b>	18.6 W
	<b>Idle power</b>	13.6 W
	<b>Safety</b>	UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1
<b>Emissions</b>	FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A	
<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24
	<b>EN</b>	EN 55024, CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	EN 61000-3-2, IEC 61000-3-2
<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3	
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; Out-of-band management (serial RS-232C or MicroUSB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	
<b>Notes</b>	IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.	
<b>Services</b>	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 SW phone support and SWupdates (U6321E)	

### Technical Specifications

3-year, 24x7 SW phone support, software updates (UF792E)  
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)  
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)  
1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E)  
1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E)  
1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)  
1-year, 24x7 software phone support, software updates (HR852E)  
1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)  
1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)  
1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)  
3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)  
3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)  
4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)  
4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)  
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)  
5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at [www.hp.com/networking/services](http://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.

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#### HP 2530-48 Switch (J9781A)

#### I/O ports and slots

48 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full  
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  
2 fixed Gigabit Ethernet SFP ports  
1 dual-personality (RJ-45 or USB micro-B) serial console port

### Technical Specifications

<b>Physical characteristics</b>	<b>Dimensions</b>	17.4(w) x 9.7(d) x 1.75(h) in (44.2 x 24.64 x 4.45 cm) (1U height)
	<b>Weight</b>	6.3 lb (2.86 kg)
<b>Memory and processor</b>	<b>Processor</b>	ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 3 MB dynamically allocated
<b>Mounting</b>	Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting	
<b>Performance</b>	<b>IPv6 Ready Certified</b>	
	<b>100 Mb Latency</b>	< 6.6 $\mu$ s (LIFO 64-byte packets)
	<b>1000 Mb Latency</b>	< 2.2 $\mu$ s (LIFO 64-byte packets)
	<b>Throughput</b>	up to 13 million pps (64-byte packets)
	<b>Switching capacity</b>	17.6 Gbps
	<b>MAC address table size</b>	16000 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing
	<b>Non-operating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Non-operating/Storage relative humidity</b>	15% to 90% @ 149°F (65°C), noncondensing
	<b>Altitude</b>	up to 10,000 ft (3 km)
	<b>Acoustic</b>	Power: 0 dB, Pressure: 0 dB
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	102 BTU/hr (107.61 kJ/hr)
	<b>AC voltage</b>	100-127/200-240 VAC
	<b>Current</b>	0.7/0.4 A
	<b>Maximum power rating</b>	29.9 W
	<b>Idle power</b>	17.1 W
<b>Safety</b>	UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1	
<b>Emissions</b>	FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A	
<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24
	<b>EN</b>	EN 55024, CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8

### Technical Specifications

	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	EN 61000-3-2, IEC 61000-3-2
	<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; Out-of-band management (serial RS-232C or MicroUSB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	
<b>Notes</b>	IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.	
<b>Services</b>	<p>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 SW phone support and SWupdates (U6321E)          3-year, 24x7 SW phone support, software updates (UF792E)          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)          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)          1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E)          1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E)          1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)          1-year, 24x7 software phone support, software updates (HR852E)          1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)          1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)          1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)          3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)          3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)          4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)          4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)          5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)          5-year, 24x7 software phone support, software updates + 4 hour Hardware</p>	

### Technical Specifications

Exchange (HS561E)

Refer to the HP website at [www.hp.com/networking/services](http://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.

#### HP 2530-24 Switch (J9782A)

<b>I/O ports and slots</b>	<p>24 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full</p> <p>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</p> <p>2 fixed Gigabit Ethernet SFP ports</p> <p>1 dual-personality (RJ-45 or USB micro-B) serial console port</p>
<b>Physical characteristics</b>	<p><b>Dimensions</b> 17.4(w) x 9.7(d) x 1.75(h) in (44.2 x 24.64 x 4.45 cm) (1U height)</p> <p><b>Weight</b> 5.7 lb (2.59 kg)</p>
<b>Memory and processor</b>	<p><b>Processor</b> ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 1.5 MB dynamically allocated</p>
<b>Mounting</b>	<p>Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting</p>
<b>Performance</b>	<p><b>IPv6 Ready Certified</b></p> <p><b>100 Mb Latency</b> &lt; 1.7 <math>\mu</math>s (LIFO 64-byte packets)</p> <p><b>1000 Mb Latency</b> &lt; 1.1 <math>\mu</math>s (LIFO 64-byte packets)</p> <p><b>Throughput</b> up to 9.5 million pps (64-byte packets)</p> <p><b>Switching capacity</b> 12.8 Gbps</p> <p><b>MAC address table size</b> 16000 entries</p>
<b>Environment</b>	<p><b>Operating temperature</b> 32°F to 113°F (0°C to 45°C)</p> <p><b>Operating relative humidity</b> 15% to 95% @ 104°F (40°C), noncondensing</p> <p><b>Non-operating/Storage temperature</b> -40°F to 158°F (-40°C to 70°C)</p> <p><b>Non-operating/Storage relative humidity</b> 15% to 90% @ 149°F (65°C), noncondensing</p> <p><b>Altitude</b> up to 10,000 ft (3 km)</p> <p><b>Acoustic</b> Power: 0 dB, Pressure: 0 dB</p>
<b>Electrical characteristics</b>	<p><b>Frequency</b> 50/60 Hz</p> <p><b>Maximum heat dissipation</b> 50 BTU/hr (52.75 kJ/hr)</p> <p><b>AC voltage</b> 100-127/200-240 VAC</p> <p><b>Current</b> 0.3/0.2 A</p> <p><b>Maximum power rating</b> 14.7 W</p>

### Technical Specifications

	<b>Idle power</b>	8.4 W
<b>Safety</b>	UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1	
<b>Emissions</b>	FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A	
<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24
	<b>EN</b>	EN 55024, CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	EN 61000-3-2, IEC 61000-3-2
	<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; Out-of-band management (serial RS-232C or MicroUSB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	
<b>Notes</b>	IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.	
<b>Services</b>	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 SW phone support and SWupdates (U6321E) 3-year, 24x7 SW phone support, software updates (UF792E) 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) 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) 1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E) 1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E) 1-year, 24x7 software phone support, software updates (HR852E) 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)	



### Technical Specifications

- 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)
- 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)
- 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)
- 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)
- 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)
- 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)
- 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)
- 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at [www.hp.com/networking/services](http://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.

#### HP 2530-8 Switch (J9783A)

#### I/O ports and slots

8 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); 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) ports

1 dual-personality (RJ-45 or USB micro-B) serial console port

#### Physical characteristics

##### Dimensions

10(w) x 6.28(d) x 1.75(h) in (25.4 x 15.95 x 4.45 cm) (1U height)

##### Weight

1.8 lb (0.82 kg)

#### Memory and processor

##### Processor

ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 1.5 MB dynamically allocated

#### Mounting

Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); horizontal surface mounting; wall mounting

#### Performance

##### IPv6 Ready Certified

##### 100 Mb Latency

< 1.3  $\mu$ s (LIFO 64-byte packets)

##### 1000 Mb Latency

< 1.3  $\mu$ s (LIFO 64-byte packets)

##### Throughput

up to 4.1 million pps (64-byte packets)

##### Switching capacity

5.6 Gbps

##### MAC address table size

16000 entries

#### Environment

##### Operating temperature

32°F to 113°F (0°C to 45°C)

##### Operating relative humidity

15% to 95% @ 104°F (40°C), noncondensing

### Technical Specifications

	<b>Non-operating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Non-operating/Storage relative humidity</b>	15% to 90% @ 149°F (65°C), noncondensing
	<b>Altitude</b>	up to 10,000 ft (3 km)
	<b>Acoustic</b>	Power: 0 dB, Pressure: 0 dB
<b>Electrical characteristics</b>	<b>Frequency</b>	50/60 Hz
	<b>Maximum heat dissipation</b>	25 BTU/hr (26.38 kJ/hr)
	<b>AC voltage</b>	100-127/200-240 VAC
	<b>Current</b>	0.5 A
	<b>Maximum power rating</b>	7.2 W
	<b>Idle power</b>	4.5 W
<b>Safety</b>		UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN 60950-1
<b>Emissions</b>		FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A
<b>Immunity</b>	<b>Generic</b>	EN 55024, CISPR 24
	<b>EN</b>	EN 55024, CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	EN 61000-3-2, IEC 61000-3-2
	<b>Flicker</b>	EN 61000-3-3, IEC 61000-3-3
<b>Management</b>		IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; Out-of-band management (serial RS-232C or MicroUSB); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB
<b>Notes</b>		IEEE 802.3az applies to Gigabit models only; IEEE 802.3at and IEEE 802.3af apply to PoE+ models only. When using SFPs with this product, SFPs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.
<b>Services</b>		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 SW phone support and SWupdates (U6321E) 3-year, 24x7 SW phone support, software updates (UF792E) 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

### Technical Specifications

- (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)
- 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)
- 1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E)
- 1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E)
- 1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)
- 1-year, 24x7 software phone support, software updates (HR852E)
- 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)
- 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)
- 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)
- 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)
- 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)
- 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)
- 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)
- 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)
- 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at [www.hp.com/networking/services](http://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**

**Device management**

**General protocols**

Network DoS Filter

RFC 1591 DNS (client)  
SSHv1/SSHv2 Secure Shell

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 802.3at Power over Ethernet Plus

### Technical Specifications

	IEEE 802.3az Energy Efficient 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
<b>IP multicast</b>	RFC 3376 IGMPv3 (host joins only)
<b>IPv6</b>	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 4252 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
<b>MIBs</b>	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 Client 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
<b>Network management</b>	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)
	ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)

### Technical Specifications

	SNMPv1/v2c/v3
<b>QoS/CoS</b>	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)
<b>Security</b>	IEEE 802.1X Port Based Network Access Control RFC 1492 TACACS+ RFC 2138 RADIUS Authentication RFC 2866 RADIUS Accounting Secure Sockets Layer (SSL)

### Accessories

#### HP 2530 Switch Series accessories

<b>Transceivers</b>	<a href="#">HP X121 1G SFP LC SX Transceiver</a>	J4858C
	<a href="#">HP X121 1G SFP LC LX Transceiver</a>	J4859C
	<a href="#">HP X121 1G SFP LC LH Transceiver</a>	J4860C
	<a href="#">HP X111 100M SFP LC FX Transceiver</a>	J9054C
	<a href="#">HP X112 100M SFP LC BX-D Transceiver</a>	J9099B
	<a href="#">HP X112 100M SFP LC BX-U Transceiver</a>	J9100B
	<a href="#">HP X122 1G SFP LC BX-D Transceiver</a>	J9142B
	<a href="#">HP X122 1G SFP LC BX-U Transceiver</a>	J9143B
	<a href="#">HP X121 1G SFP RJ45 T Transceiver</a>	J8177C
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<b>Mounting Kit</b>	<a href="#">HP X410 1U Universal 4-post Rack Mounting Kit</a>	J9583A
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<b>HP 2530-8G-PoE+ Switch (J9774A)</b>	<a href="#">HP X510 1U Cable Guard</a>	J9700A
	<a href="#">HP 2530 8-port Switch Power Adapter Shelf</a>	J9820A
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<b>HP 2530-8-PoE+ Switch (J9780A)</b>	<a href="#">HP X510 1U Cable Guard</a>	J9700A
	<a href="#">HP 2530 8-port Switch Power Adapter Shelf</a>	J9820A
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<b>HP 2530-8G Switch (J9777A)</b>	<a href="#">HP X510 1U Cable Guard</a>	J9700A
	<a href="#">HP 2530 8-port Switch Power Adapter Shelf</a>	J9820A
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<b>HP 2530-8 Switch (J9783A)</b>	<a href="#">HP X510 1U Cable Guard</a>	J9700A
	<a href="#">HP 2530 8-port Switch Power Adapter Shelf</a>	J9820A
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### Accessory Product Details

**NOTE:** Details are not available for all accessories. The following specifications were available at the time of publication.

<b>HP X111 100M SFP LC FX Transceiver (J9054C)</b>	<b>Ports</b>	1 LC 100BASE-FX port (IEEE 802.3u Type 100BASE-FX); Duplex: half or full
	<b>Physical characteristics</b>	Dimensions: 2.7(d) x 0.54(w) x 0.48(h) in. (6.86 x 1.38 x 1.22 cm) Weight: 0.06 lb. (0.03 kg)
	<b>Environment</b>	Operating temperature: 32°F to 158°F (0°C to 70°C) Operating relative humidity: 5% to 95% Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C) Nonoperating/Storage relative humidity: 5% to 85% Altitude: up to 10,000 ft. (3 km)
	<b>Cabling</b>	Type: <ul style="list-style-type: none"> <li>● 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively</li> </ul> <p>Maximum distance:</p> <ul style="list-style-type: none"> <li>● 2 km (full duplex) or 412 m (half duplex)</li> </ul>
<b>Notes</b>	Transmitter wavelength: 1310nm Power consumption is 1.1 watt maximum.	
<b>Services</b>	For supported platforms and minimum software requirements to support this product, see the document titled "Support for the J9054B 100-FX SFP-LC Transceiver" on the "HP Mini-GBICs and SFPs" Manuals Web page. Refer to the HP website at <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> 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.	

<b>HP X112 100M SFP LC BX-D Ports Transceiver (J9099B)</b>  A small form-factor pluggable (SFP) 100-Megabit BX (bi-directional) "downstream" transceiver that provides 100 Mbps full-duplex connectivity up to 10 km on one strand of singlemode fiber. The J9099B connects to the J9100B "upstream" transceiver, or to any IEEE-standard 100BASE-BX10-U ("upstream") device.	<b>Physical characteristics</b>	1 LC 100BASE-BX10 port (IEEE 802.3ah Type 100BASE-BX10-D); Duplex: full only
	<b>Dimensions</b>	2.7(d) x 0.55(w) x 0.48(h) in. (6.86 x 1.39 x 1.22 cm)
	<b>Weight</b>	0.04 lb. (0.03 kg)
	<b>Environment</b>	<b>Operating temperature</b> 32°F to 158°F (0°C to 70°C) <b>Operating relative humidity</b> 0% to 95%, noncondensing <b>Nonoperating/Storage temperature</b> -40°F to 185°F (-40°C to 85°C)
<b>Cabling</b>	Type:  Single-mode fiber optic, complying with ITU-T G.652;  Maximum distance: <ul style="list-style-type: none"> <li>● 0.5-10,000 m (single-mode fiber)</li> </ul>	

### Accessory Product Details

<b>Notes</b>	Transmit wavelength: 1550 nm. Receive wavelength: 1310 nm. Power consumption is 1.1 watt maximum. For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HP BX Transceivers" on the "HP Mini-GBICs and SFPs" Manuals Web page. The J9099B connects to the J9100B "upstream" transceiver, or to any IEEE-standard 100BASE-BX10-U ("upstream") device. (A 100-BX-D transceiver can only connect to a 100-BX-U product. You cannot connect two 100-BX-D transceivers together.)
<b>Services</b>	Refer to the HP website at <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> 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.

#### HP X112 100M SFP LC BX-U Ports Transceiver (J9100B)

A small form-factor pluggable (SFP) 100-Megabit BX (bi-directional) "upstream" transceiver that provides 100 Mbps full-duplex connectivity up to 10 km on one strand of singlemode fiber. The J9100B connects to the J9099B "downstream" transceiver, or to any IEEE-standard 100BASE-BX10-D ("downstream") device.

<b>Physical characteristics</b>	<b>Dimensions</b>	1 LC 100BASE-BX10 port (IEEE 802.3ah Type 100BASE-BX10-U); Duplex: full only 2.7(d) x 0.55(w) x 0.48(h) in. (6.86 x 1.39 x 1.22 cm)
<b>Environment</b>	<b>Weight</b>	0.07 lb. (.03 kg)
<b>Environment</b>	<b>Operating temperature</b>	32°F to 158°F (0°C to 70°C)
<b>Environment</b>	<b>Operating relative humidity</b>	0% to 95%, noncondensing
<b>Environment</b>	<b>Nonoperating/Storage temperature</b>	-40°F to 185°F (-40°C to 85°C)
<b>Cabling</b>	<b>Type:</b>	Single-mode fiber optic, complying with ITU-T G.652;
<b>Cabling</b>	<b>Maximum distance:</b>	<ul style="list-style-type: none"><li>0.5-10,000 m (single-mode fiber)</li></ul>
<b>Notes</b>		For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HP BX Transceivers" on the "HP Mini-GBICs and SFPs" Manuals Web page. The J9100B connects to the J9099B "downstream" transceiver, or to any IEEE-standard 100BASE-BX10-D ("downstream") device. (A 100-BX-U transceiver can only connect to a 100-BX-D product. You cannot connect two 100-BX-U transceivers together.) Transmit wavelength: 1310 nm. Receive wavelength: 1550 nm. Power consumption is 1.1 watts maximum.
<b>Services</b>		Refer to the HP website at <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> 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.



### Accessory Product Details

<p><b>HP X121 1G SFP LC SX Transceiver (J4858C)</b></p>	<p><b>Ports</b> <b>Physical characteristics</b></p>	<p>1 LC 1000BASE-SX port; Duplex: full only Dimensions: 2.24(d) x 0.54(w) x 0.48(h) in. (5.69 x 1.37 x 1.22 cm) Weight: 0.04 lb. (0.02 kg) Transceiver form factor: SFP</p>
<p>A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550 m on multimode fiber.</p>	<p><b>Environment</b></p>	<p>Operating temperature: 32°F to 158°F (0°C to 70°C) Operating relative humidity: 5% to 85%, noncondensing Nonoperating/Storage temperature: -40°F to 203°F (-40°C to 85°C) Altitude: up to 10,000 ft. (3 km)</p>
	<p><b>Electrical characteristics</b></p>	<p>Power consumption typical: 0.4 W Power consumption maximum: 0.7 W</p>
	<p><b>Cabling</b></p>	<p>Type:</p> <ul style="list-style-type: none"> <li>● 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively;</li> </ul> <p>Maximum distance:</p> <ul style="list-style-type: none"> <li>● 2-220 m (62.5 µm core diameter, 160 MHz*km bandwidth)</li> <li>● 2-275 m (62.5 µm core diameter, 200 MHz*km bandwidth)</li> <li>● 2-500 m (50 µm core diameter, 400 MHz*km bandwidth)</li> <li>● 2-550 m (50 µm core diameter, 500 MHz*km bandwidth)</li> </ul>
	<p><b>Services</b></p>	<p>Cable length: 2-550m Fiber type: Multi Mode Refer to the HP website at <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> 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.</p>

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<p><b>HP X121 1G SFP LC LX Transceiver (J4859C)</b></p>	<p><b>Ports</b> <b>Physical characteristics</b></p>	<p>1 LC 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX); Duplex: full only Dimensions: 2.24(d) x 0.54(w) x 0.486(h) in. (5.69 x 1.37 x 1.23 cm) Weight: 0.04 lb. (0.02 kg)</p>
<p>HP X121 1G SFP LC LX Transceiver: An SFP format gigabit transceiver with LC connectors using LX technology.</p>	<p><b>Environment</b></p>	<p>Operating temperature: 32°F to 158°F (0°C to 70°C) Operating relative humidity: 0% to 85%, noncondensing Nonoperating/Storage temperature: -40°F to 212°F (-40°C to 100°C) Altitude: up to 10,000 ft. (3 km)</p>
	<p><b>Cabling</b></p>	<p>Type:</p> <ul style="list-style-type: none"> <li>● Either single mode or multimode; 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively; Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1;</li> </ul> <p>Maximum distance:</p> <ul style="list-style-type: none"> <li>● 2-550 m (multimode 62.5 µm core diameter, 500 MHz*km bandwidth)</li> <li>● 2-550 m (multimode 50 µm core diameter, 400 MHz*km bandwidth)</li> <li>● 2-550 m (multimode 50 µm core diameter, 500 MHz*km bandwidth)</li> <li>● 2-10,000 m (single-mode fiber)</li> </ul>

### Accessory Product Details

<b>Notes</b>	A mode conditioning patch cord may be needed in some multimode fiber installations. Wavelength: 1310nm Power Consumption: < 500mW Typical
<b>Services</b>	Refer to the HP website at <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> 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.

#### HP X121 1G SFP LC LH Transceiver (J4860C)

A small form-factor pluggable (SFP) Gigabit LH transceiver that provides a full-duplex Gigabit solution up to 70 km on single-mode fiber.

<b>Ports</b>	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics); Duplex: full only
<b>Physical characteristics</b>	Dimensions: 2.17(d) x 0.60(w) x 0.46(h) in. (5.5 x 1.53 x 1.18 cm) Weight: 0.04 lb. (0.02 kg)
<b>Environment</b>	Operating temperature: -40°F to 185°F (-40°C to 85°C) Operating relative humidity: 0% to 95% @ 77°F (25°C), noncondensing Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C) Altitude: up to 10,000 ft. (3 km)
<b>Cabling</b>	Cable type: <ul style="list-style-type: none"><li>• Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1;</li></ul> Maximum distance: <ul style="list-style-type: none"><li>• 10-70,000 m (single-mode fiber)</li></ul>
<b>Notes</b>	Power consumption is 0.8 watts typical with 1 watt maximum at 100% utilization. For distances less than 20 km, a 10 dB attenuator must be used. For distances between 20 km and 40 km, a 5 dB attenuator must be used. Attenuators can be purchased from most cable vendors.
<b>Services</b>	Refer to the HP website at <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> 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.

### Accessory Product Details

<p><b>HP X122 1G SFP LC BX-D Transceiver (J9142B)</b></p> <p>A small form-factor pluggable (SFP) Gigabit-BX (bi-directional) "downstream" transceiver that provides a full-duplex Gigabit solution up to 10 km on one strand of single-mode fiber. The J9142B connects to the J9143B "upstream" transceiver, or to any IEEE-standard 1000BASE-BX10-U ("upstream") device.</p>	<p><b>Ports</b></p> <p>1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-D); Duplex: full only</p>	<p><b>Physical characteristics</b></p> <p><b>Dimensions</b> 2.19(d) x 0.54(w) x 0.46(h) in. (5.57 x 1.37 x 1.18 cm)</p> <p><b>Weight</b> 0.04 lb. (0.02 kg)</p>
<p><b>Environment</b></p>	<p><b>Operating temperature</b> 32°F to 158°F (0°C to 70°C)</p> <p><b>Operating relative humidity</b> 0% to 95%, non-condensing</p> <p><b>Non-operating/ Storage temperature</b> -40°F to 185°F -40°C to 85°C</p>	<p><b>Cabling</b></p> <p>Type: Single-mode fiber optic, complying with ITU-T G.652;</p> <p>Maximum distance:</p> <ul style="list-style-type: none"> <li>● 0.5-10,000 m (single-mode fiber)</li> </ul>
<p><b>Notes</b></p>	<p>Transmit wavelength: 1490 nm. Receive wavelength: 1310 nm. Power consumption is 1 watt maximum. For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HP BX Transceivers" on the "HP Mini-GBICs and SFPs" Manuals Web page. The J9142B connects to the J9143B "upstream" transceiver, or to any IEEE-standard 1000BASE-BX10-U ("upstream") device. (A 1000-BX-D transceiver can only connect to a 1000-BX-U product. You cannot connect two 1000-BX-D transceivers together.)</p>	
<p><b>Services</b></p>	<p>Refer to the HP website at <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> 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.</p>	

<p><b>HP X122 1G SFP LC BX-U Transceiver (J9143B)</b></p> <p>A small form-factor pluggable (SFP) Gigabit-BX (bi-directional) "upstream" transceiver that provides a full-duplex Gigabit solution up to 10 km on one strand of single-mode fiber. The J9143B connects to the J9142B "downstream" transceiver, or to any IEEE-standard 1000BASE-BX10-D ("downstream") device.</p>	<p><b>Ports</b></p> <p>1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-U); Duplex: full only</p>	<p><b>Physical characteristics</b></p> <p><b>Dimensions</b> 2.19(d) x 0.54(w) x 0.46(h) in. (5.57 x 1.37 x 1.18 cm)</p> <p><b>Weight</b> 0.04 lb. (0.02 kg)</p>
<p><b>Environment</b></p>	<p><b>Operating temperature</b> 32°F to 158°F (0°C to 70°C)</p> <p><b>Operating relative humidity</b> 0% to 95%, non-condensing</p> <p><b>Non-operating/ Storage temperature</b> -40°F to 185°F -40°C to 85°C</p>	<p><b>Cabling</b></p> <p>Type: Single-mode fiber optic, complying with ITU-T G.652;</p> <p>Maximum distance:</p> <ul style="list-style-type: none"> <li>● 0.5-10,000 m (single-mode fiber)</li> </ul>
<p><b>Notes</b></p>	<p>Transmit wavelength: 1310 nm. Receive wavelength: 1490 nm.</p>	

### Accessory Product Details

For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HP BX Transceivers" on the "HP Mini-GBICs and SFPs" Manuals Web page.

The J9143B connects to the J9142B "downstream" transceiver, or to any IEEE-standard 1000BASE-BX10-D ("downstream") device. (A 1000-BX-U transceiver can only connect to a 1000-BX-D product. You cannot connect two 1000-BX-U transceivers together.)

Power consumption is 1 watt maximum.

#### Services

Refer to the HP website at [www.hp.com/networking/services](http://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.

#### HP X121 1G SFP RJ45 T Transceiver (J8177C)

A small form-factor pluggable (SFP) Gigabit copper transceiver that provides a full-duplex Gigabit solution up to 100 m on Category 5 or better cable

#### Ports

1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T); Duplex: full only

#### Physical characteristics

Dimensions: 0.54(w) x 2.71(d) x 0.55(h) in (1.37 x 6.88 x 1.4 cm)

Weight: 0.06 lb (0.03 kg)

#### Environment

Operating temperature: 32°F to 158°F (0°C to 70°C); with 100 LFM airflow over the SFP module

Operating relative humidity: 0% to 95% @ 75°F (25°C), noncondensing

Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C)

Nonoperating/Storage relative humidity: 0% to 95% @ 77°F (25°C), noncondensing

Altitude: up to 10,000 ft. (3000 km)

#### Cabling

Cable type:

1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;

Maximum distance:

- 100 m

#### Notes

Power consumption is nominally 1 watt.

For supported platforms and minimum software requirements to support this product, see the document titled "Support for the J8177C 1000Base-T Mini-GBIC" on the "HP Mini-GBICs and SFPs" Manuals Web page.

The J8177C Gigabit copper mini-GBIC is not supported on dual-personality ports.

The J8177C is capable of 100 Mb operation. This is supported on only the HP ProCurve Switch 8200zl, 5400zl, and 6200yl Series using software version K.12.21 or later. Use the "auto-100" port setting to enable 100 Mb operation. Important: Important: The earlier J8177B does not support 100 Mb operation. When used in the ProCurve Switch gl 20-Port 10/100/1000 Module (J4908A), the J8177C mini-GBIC can be installed in either the upper or lower mini-GBIC port, but will block access to the other port.

### Accessory Product Details

#### HP X410 1U Universal 4-post Rack Mounting Kit (J9583A)

- Notes** The rack mounting kit supports the 1U, full width switches in the following switch series and the power supply: V1810 Series, E2510 Series, E2520 Series, E2610 Series, E2810 Series, E2910 Series, E3500 Series, and the E620 Power Supply  
This universal rack mounting kit is design to fit the following racks: HP 10K 10642, HP 10K 10842, Panduit CN, Panduit CS, Wrightline Vantage S2, APC Netshelter 600mm, and APC Netshelter 800mm. It may well fit many other brands and models too.
- Services** Refer to the HP website at: [www.hp.com/networking/services](http://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.

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<b>HP 2530 8-port Switch Power Adapter Shelf (J9820A)</b>	<b>Physical characteristics</b>	6.75(w) x 5.25(d) x 1.75(h) in (17.15 x 13.34 x 4.45 cm) (1U height)
	Weight	0.6 lb (0.27 kg)
	<b>Notes</b>	The HP 2530 8-Port Switch Power Adapter Shelf is an accessory for the HP 2530 8-port switches. The shelf mounts on the back of the switch providing a place to hold the external power adapter.
	<b>Services</b>	Refer to the HP website at <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> 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.

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