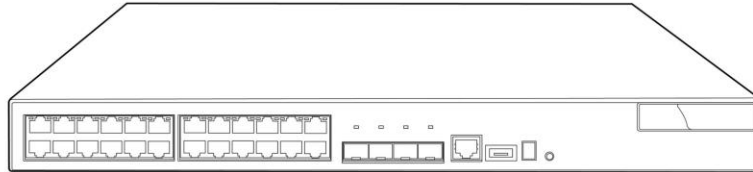
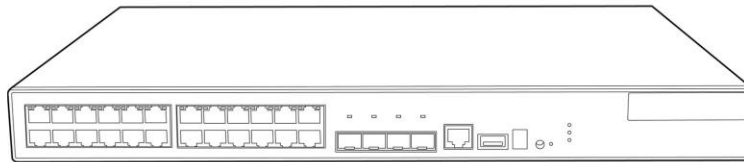


### Overview

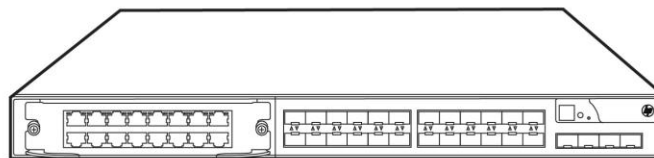
#### HP 5800 Switch Series



**HP 5800-24G-PoE+ Switch**

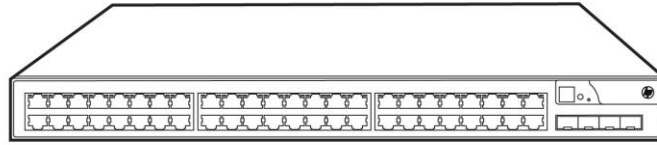


**HP 5800-24G Switch**

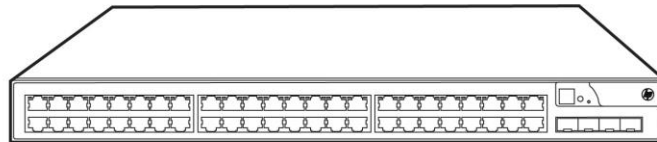


**HP 5800-24G-SFP Switch**

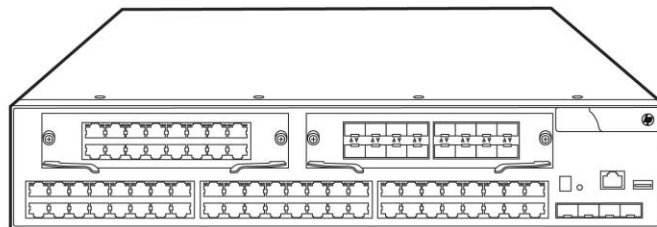
### Overview



**HP 5800-48G-PoE Switch**

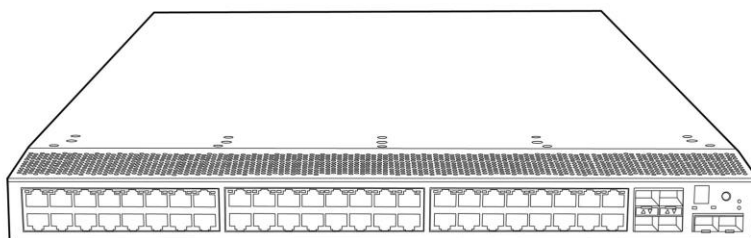


**HP 5800-48G Switch**



**HP 5800-48G Switch with 2 Slots**

### Overview



**HP 5800AF-48G Switch**

### Models

HP 5800-24G-PoE+ Switch	JC099A
HP 5800-24G Switch	JC100A
HP 5800-24G-SFP Switch	JC103A
HP 5800-48G-PoE Switch	JC104A
HP 5800-48G Switch	JC105A
HP 5800-48G Switch with 2 Slots	JC101A
HP 5800AF-48G Switch	JG225A

### Key features

- For enterprise edge, distribution, data center
- Cut-through design with low latency
- Support for up to 84 ports
- OAA module for flexible deployment
- Redundant, hot-swappable power supplies, fans

### Product overview

HP 5800 series switches offer an unmatched combination of Gigabit and 10-Gigabit Ethernet port density, high-availability architecture, and full Layer 2 and Layer 3 dual-stack IPv4 and IPv6 capabilities. In addition to wire-speed line-rate performance on all ports, the switches include patented Intelligent Resilient Framework (IRF) technology and Rapid Ring Protection Protocol (RRPP), which allow local or geographically distributed HP 5800 switches to be interconnected for higher resiliency and performance. Available in PoE and non-PoE models as well as 1 RU and 2 RU form factor configurations, HP 5800 switches are built on open standards and include an open application architecture (OAA) module slot that enables flexible deployment options for new services. These versatile switches are ideal for use in the network core of buildings or departments, or as high-performance switches in the convergence layer or network edge of enterprise campus networks.

### Features and benefits

#### Quality of Service (QoS)

- **Powerful QoS feature**  
creates traffic classes based on access control lists (ACLs), IEEE 802.1p precedence, IP, and DSCP or Type of Service (ToS) precedence; supports filter, redirect, mirror, or remark; supports the following congestion actions: strict priority (SP) queuing, weighted round robin (WRR), weighted fair queuing (WFQ), weighted random early discard (WRED), weighted deficit round robin (WDRR), and SP+WDRR
- **Integrated network services**

### Overview

with support for open application architecture (OAA) modules, extends and integrates application capability into the network

- **Ring Resiliency Protection Protocol (RRPP)**  
provides fast recovery for ring Ethernet-based topology; provides consistent application performance for applications such as VoIP

### Management

- **Remote configuration and management**  
is available through a secure Web browser or a command-line interface (CLI)
- **IEEE 802.1ab LLDP discovery**  
advertises and receives management information from adjacent devices on a network
- **USB support:**
  - **File copy**  
allows users to copy switch files to and from a USB flash drive
- **DHCP options:**
  - DNS Relay and SMTP Redirection
  - DHCP: Server (RFC 2131), Client, and Option-82 Relay (RFC 3046)
- **sFlow**  
provides scalable, ASIC-based network monitoring and accounting; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes
- **SNMPv1, v2c, and v3**  
facilitate centralized discovery, monitoring, and secure management of networking devices
- **Network Time Protocol (NTP)**  
synchronizes timekeeping among distributed time servers and clients; keeps consistent timekeeping among all clock-dependent devices within the network so that the devices can provide diverse applications based on the consistent time

### Connectivity

- **High-density port connectivity**  
supports up to 84 1-Gigabit ports per unit (612 per stack)
- **Auto-MDIX**  
automatically adjusts for straight-through or crossover cables on all 10/100 ports
- **Jumbo frames**  
on Gigabit Ethernet and 10-Gigabit ports, jumbo frames of 9k size allow high-performance remote backup and disaster-recovery services
- **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 (PoE+) support**  
simplifies deployment and dramatically reduces installation costs by helping to eliminate the time and cost involved in supplying local power at each access point location
- **IPv6 native support**
  - **IPv6 host**  
enables switches to be managed and deployed at the IPv6 network's edge
  - **Dual stack (IPv4/IPv6)**  
transitions from IPv4 to IPv6, supporting connectivity for both protocols
  - **MLD snooping**  
forwards IPv6 multicast traffic to the appropriate interface
  - **IPv6 ACL/QoS**  
supports ACL and QoS for IPv6 network traffic, preventing traffic flooding
  - **IPv6 routing**  
supports IPv6 static routes and IPv6 versions of RIP, OSPF, IS-IS, and BGP routing protocols

### Overview

#### Performance

- **Hardware-based wire-speed access control lists (ACLs)**  
feature-rich ACL implementation (TCAM-based) helps provide high levels of security and ease of administration without impacting network performance
- **Unique versatile architecture**  
supports the best of both fixed-port and modular configurations

#### Resiliency and high availability

- **Data center–optimized design**  
the HP 5800AF-48G Switch (JG225A) supports front-to-back/back-to-front airflow for hot/cold aisles, rear rack mounts, and redundant hot-swappable AC or DC power and fans

#### Manageability

- **Full-featured console**  
provides complete control of the switch with a familiar command-line interface (CLI)
- **Web interface**  
allows configuration of the switch from any Web browser on the network
- **RMON and sFlow**  
provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- **Multiple configuration files**  
allow multiple configuration files to be stored to a flash image
- **Troubleshooting**
  - **Ingress and egress port monitoring**  
enable network problem solving
  - **Traceroute and ping**  
enable testing of network connectivity
  - **Virtual cable tests**  
provide visibility to cable problems

#### Layer 2 switching

- **GARP VLAN Registration Protocol:**  
allows automatic learning and dynamic assignment of VLANs
- **32K MAC addresses**  
provide access to many Layer 2 devices
- **4,094 port-based VLANs**  
provide security between workgroups
- **IEEE 802.1ad QinQ and Selective QinQ**  
increase the scalability of an Ethernet network by providing a hierarchical structure; connect multiple LANs on a high-speed campus or metro network
- **Gigabit Ethernet port aggregation**  
allows grouping of ports to increase overall data throughput to a remote device
- **10 GbE port aggregation**  
allows grouping of ports to increase overall data throughput to a remote device
- **Spanning Tree/MSTP, RSTP, and STP Root Guard**  
prevent network loops
- **IPFIX/sFlow**  
allows traffic sampling
- **Spanning Tree Protocols (STP, MSTP, and RSTP) and STP root guard**

### Overview

helps prevent network loops; up to 32 MSTP instances available

### Layer 3 services

- **Address Resolution Protocol (ARP)**  
determines the MAC address of another IP host in the same subnet; supports static ARPs; gratuitous ARP allows detection of duplicate IP addresses; proxy ARP allows normal ARP operation between subnets or when subnets are separated by a Layer 2 network
- **Dynamic Host Configuration Protocol (DHCP)**  
simplifies the management of large IP networks and supports client and server; DHCP Relay enables DHCP operation across subnets

### Layer 3 routing

- **Layer 3 IPv4 routing**  
provides routing of IPv4 at media speed; supports static routes, RIP and RIPv2, OSPF, IS-IS, and BGP
- **RIP and RIPng support**  
provides complete support of RIP for both IPv4 and IPv6
- **OSPF and OSPFv3 support**  
provides complete support of OSPF for both IPv4 and IPv6
- **IS-IS and IS-ISv6 support**  
provides complete support of IS-IS for both IPv4 and IPv6
- **Layer 3 IPv6 routing**  
provides routing of IPv6 at media speed; supports static routes, RIPng, OSPFv3, IS-ISv6, and BGP4+
- **Bidirectional Forwarding Detection (BFD)**  
enables link connectivity monitoring and reduces network convergence time for RIP, OSPF, BGP, IS-IS, VRRP, MPLS, and IRF
- **Virtual Router Redundancy Protocol (VRRP) and VRRP Extended**  
allow quick failover of router ports
- **Policy-based routing**  
makes routing decisions based on policies set by the network administrator
- **IGMPv1, v2, and v3**  
allow individual hosts to be registered on a particular VLAN
- **PIM-SSM, PIM-DM, and PIM-SM** (for IPv4 and IPv6)  
support IP Multicast address management and inhibition of DoS attacks
- **Equal-Cost Multipath (ECMP)**  
enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth
- **NEW MPLS support**  
provides extended support of MPLS, including MPLS VPNs and MPLS Traffic Engineering (MPLS TE)
- **NEW VPLS support**  
provides extended support of VPLS for data center to data center communication at Layer 2; provides support of hierarchical VPLS for scalability

### Security

- **Unicast Reverse Path Forwarding (URPF)**  
allows normal packets to be forwarded correctly, but discards the attaching packet due to lack of reverse path route or incorrect inbound interface; prevents source spoofing and distributed attacks; supports distributed UPPF
- **Defense-in-depth security**  
provides integrated and distributed security enforcement that can be managed from a central location, such as the HP Intelligent Management Center (IMC)
- **Advanced processor queuing mechanism**  
helps prevent denial-of-service (DoS) attacks, while DHCP snooping helps ensure that devices can only receive an IP address from a legitimate DHCP server on the network

### Overview

- **IEEE 802.1X-based dynamic delivery of QoS, ACLs, and VLANs**  
allows complete control over user network access
- **Guest VLAN**  
similar to IEEE 802.1X, it provides a browser-based environment to authenticated clients
- **Port isolation**  
secures and adds privacy, and prevents malicious attackers from obtaining user information
- **MAC-based authentication**  
allows or denies access to the switch based on client MAC address
- **HTTPS management**  
provides secure Web management
- **Multi-Customer Edge (MCE)-Multicast Virtual Routing and Forwarding (MVRF)**  
provide MPLS Edge router support
- **Public Key Infrastructure (PKI)**  
is used to control access
- **RADIUS/HWTACACS**  
eases switch management security administration by using a password authentication server
- **Secure Shell (SSHv2)**  
encrypts all transmitted data for secure, remote CLI access over IP networks
- **IP Source Guard**  
helps prevent IP spoofing attacks; filters packets on a per-port basis, which prevents illegal packets from being forwarded
- **Access control lists (ACLs)**  
helps provide high levels of security and ease of administration; 6k ingress entries and 1k egress entries (IPv4 and IPv6)

### Convergence

- **Voice VLAN**  
automatically assigns VLAN and priority for IP phones, simplifying network configuration and maintenance
- **Internet Group Management Protocol (IGMP)**  
is used by IP hosts to establish and maintain multicast groups; supports v1, v2, and v3; utilizes Any-Source Multicast (ASM) or Source-Specific Multicast (SSM) to manage IPv4 multicast networks
- **Protocol Independent Multicast (PIM)**  
is used for IPv4 and IPv6 multicast applications; supports PIM Dense Mode (DM), Sparse Mode (SM), and Source-Specific Mode (SSM)
- **LLDP-MED (Media Endpoint Discovery)**  
is a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones

### Monitor and diagnostics

- **Port mirroring**  
enables traffic on a port to be simultaneously sent to a network analyzer for monitoring
- **OAM (IEEE 802.3ah)**  
operational, administration and maintenance (OAM) management capabilities detects data link layer problems that occurred in the "last mile"; monitors the status of the link between the two devices
- **CFD (IEEE 802.1ag)**  
connectivity fault detection (CFD) provides a Layer 2 link OAM mechanism used for link connectivity detection and fault locating

### Additional information

- **HP Intelligent Resilient Framework (IRF)**
  - Creates virtual resilient switching fabrics, where two or more switches perform as a single Layer 2 switch and

### Overview

- Layer 3 router
- Switches do not have to be co-located and can be part of a disaster-recovery system
- Servers or switches can be attached using standard LACP for automatic load balancing and high availability
- Simplifies network operation by eliminating the complexity of Spanning Tree Protocol, ECMP, or VRRP
- **OAA modules**  
support wireless network management and high-performance security applications; leverage network infrastructure investment
- **Green IT and power**  
use the latest advances in silicon development, shut off unused ports, and use variable-speed fans to improve energy efficiency
- **Higher scalability with IRF**  
simplifies the architecture of server access networks and reduces cost and complexity; up to nine 5800 Switches can be combined to deliver unmatched scalability of virtualized access layer switches and flatter, two-tier FlexFabric networks

### Warranty and support

- **Limited Lifetime warranty**  
advance hardware replacement with next-business-day delivery (available in most countries). See [www.hp.com/networking/warrantysummary](http://www.hp.com/networking/warrantysummary) for duration details.
- **Electronic and telephone support**  
limited electronic and telephone support is available from HP; to reach our support centers, refer to: [www.hp.com/networking/contact-support](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)



### 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.

#### Standard Switch Chassis

##### HP 5800-24G Switch

- 24 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included
- 1U - Height

JC100A

[See Configuration Note:1, 3](#)

##### PDU Cable NA/MEX/TW/JP

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

JC100A#B2B

##### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JC100A#B2C

##### HP 5800-24G-PoE Switch

- 24 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included
- 1U - Height

JC099A

[See Configuration Note:1, 3](#)

##### PDU Cable NA/MEX/TW/JP

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

JC099A#B2B

##### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JC099A#B2C

##### HP 5800-24G-SFP Switch

- 24 100/1000 SFP ports
- min=0 \ max=24 SFP Transceivers
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Must select min 1 Power Supply
- 1U - Height

JC103A

[See Configuration Note:1, 4](#)

### Configuration

#### HP 5800-48G Switch

- 48 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included
- 1U- Height

JC105A

[See Configuration Note:1, 3](#)

#### PDU Cable NA/MEX/TW/JP

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

JC105A#B2B

#### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JC105A#B2C

#### HP 5800AF-48G Switch

- 48 RJ-45 autosensing 10/100/1000 ports
- 6 fixed 1000/10000 SFP+ ports
- min=0 \ max=6 SFP+ Transceivers
- Must select min 1 Power Supply
- Must select min 2 Fan Trays
- 1U- Height

JG225A

[See Configuration Note:1](#)

#### HP 5800-48G-PoE Switch

- 48 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included
- 1U - Height

JC104A

[See Configuration Note:1, 3](#)

#### PDU Cable NA/MEX/TW/JP

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

JC104A#B2B

#### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JC104A#B2C

#### HP 5800-48G Switch with 2 Slots

- 48 RJ-45 autosensing 10/100/1000 ports
- 2 extended module slot
- 4 fixed 1000 SFP ports
- min=0 \ max=4 SFP Transceivers
- Must select min 1 Power Supply

JC101A

[See Configuration Note:4](#)

### Configuration

- 2U - Height

#### Configuration Rules

Note 1 The following Transceivers install into this switch:

HP X130 10G SFP+ LC SR Transceiver	JD092B
HP X130 10G SFP+ LC LRM Transceiver	JD093B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C

Note 3 Localization required on orders without #B2B, #B2C or #B2E options.

Note 4 The following Transceivers install into this Switch:

HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X115 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC BX 10-D Transceiver	JD101A
HP X125 1G SFP LC LH70 Transceiver	JD063B

Note 7 #B2E is Offered only NA, Mexico, Taiwan, and Japan.

### Box Level Integration CTO Models

#### CTO Solution Sku

HP 58xx CTO Switch Solution

JG478A

- SSP trigger sku

#### CTO Base Sku

HP 5800-24G Switch

JC100A

### Configuration

- 24 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included
- 1U - Height

See Configuration Note:1, 3,  
6,10, 11

#### PDU Cable NA/MEX/TW/JP

JC100A#B2B

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

#### PDU Cable ROW

JC100A#B2C

- C15 PDU Jumper Cord (ROW)

#### HP 5800-24G-PoE Switch

JC099A

- 24 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included
- 1U - Height

See Configuration Note:1, 3,  
6,10, 11

#### PDU Cable NA/MEX/TW/JP

JC099A#B2B

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

#### PDU Cable ROW

JC099A#B2C

- C15 PDU Jumper Cord (ROW)

#### HP 5800-24G-SFP Switch

JC103A

- 24 100/1000 SFP ports
- min=0 \ max=24 SFP Transceivers
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Must select min 1 Power Supply
- 1U - Height

See Configuration Note:1, 4, 5,10

#### HP 5800-48G Switch

JC105A

- 48 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included

See Configuration Note:1, 3,  
6,10, 11

### Configuration

- 1U- Height

PDU Cable NA/MEX/TW/JP

JC105A#B2B

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

PDU Cable ROW

JC105A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5800AF-48G Switch

JG225A

- 48 RJ-45 autosensing 10/100/1000 ports
- 6 fixed 1000/10000 SFP+ ports (min=0 \ max=6 SFP+ Transceivers)
- Must select min 1 Power Supply
- Must select min 2 Fan Trays
- 1U - Height

See Configuration Note:1, 8, 10

HP 5800-48G-PoE Switch

JC104A

- 48 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included
- 1U - Height

See Configuration Note:1, 3, 6,10, 11

PDU Cable NA/MEX/TW/JP

JC104A#B2B

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

C15 PDU ROW

JC104A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5800-48G Switch with 2 Slots

JC101A

- 48 RJ-45 autosensing 10/100/1000 ports
- 2 extended module slot
- 4 fixed 1000 SFP ports
- min=0 \ max=4 SFP Transceivers
- Must select min 1 Power Supply
- 2U - Height

See Configuration Note:4, 5,10

### Configuration Rules

**Note 1** The following Transceivers install into this switch: (Use #0D1 or #B01 if switch is CT0)  
If Applicable -  
HP X130 10G SFP+ LC SR Transceiver

JD092B

### Configuration

HP X130 10G SFP+ LC LRM Transceiver	JD093B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C

**Note 3** Localization required on orders without #B2B, #B2C or #B2E options.

**Note 4** The following Transceivers install into this Switch: (Use #0D1 if switch is CTO) If Applicable -

HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X115 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC BX 10-D Transceiver	JD101A
HP X125 1G SFP LC LH70 Transceiver	JD063B

**Note 5** If this Switch is selected at least one of these Power Supply with #0D1 is required:

HP 5500 150WAC Power Supply	JD362A
HP 5800 300W AC Power Supply	JC087A
HP 5800 750W AC Power Supply	JC089A

**Note 6** If this Switch is selected, Then a Minimum of one of the following must be included:

- 1 factory integrated accessory per switch. See Menu below, option must be ether #0D1 or #B01.
- or
2. A Factory Express Service. (For Watson and CLIC Only: See Factory Express Tab on Menu)

**Note 8** If this Switch is selected at least one of these Power Supply with #0D1 is required:

- JC680A - HP A58x0AF 650W AC Power Supply
- JC681A - HP 58x0AF 650W DC Power Supply

**Note 9** B2E is Offered only in . NA, Mexico, Taiwan, and Japan.

**Note 10** If the Switch Chassis is to be Box Level Factory Integrated (CTO), Then the #0D1 is required on the Switch Chassis and integrated to the JG478A - HP 58xx CTO Enablement. (Min 1/Max 1 Switch per SSP)

### Configuration

**Note 11** If this Switch is selected, Then a Minimum of 1 factory integrated accessory, OR Factory Service, must be ordered and integrated to CTO chassis. See Menu below, option must have a #0D1 to be integrated to the CTO Chassis.

### Rack Level Integration CTO Models

#### Standard Switch Chassis

##### HP 5800-24G Switch

- 24 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included
- 1U - Height

JC100A

See Configuration Note:1, 3, 10

##### PDU Cable NA/MEX/TW/JP

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

JC100A#B2B

##### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JC100A#B2C

##### HP 5800-24G-PoE Switch

- 24 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included
- 1U - Height

JC099A

See Configuration Note:1, 3, 10

##### PDU Cable NA/MEX/TW/JP

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

JC099A#B2B

##### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JC099A#B2C

##### HP 5800-24G-SFP Switch

- 24 100/1000 SFP ports
- min=0 \ max=24 SFP Transceivers
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Must select min 1 Power Supply
- 1U - Height

JC103A

See Configuration Note:1, 4, 10

### Configuration

#### HP 5800-48G Switch

- 48 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included
- 1U- Height

JC105A

See Configuration Note:1, 3, 10

#### PDU Cable NA/MEX/TW/JP

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

JC105A#B2B

#### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JC105A#B2C

#### HP 5800AF-48G Switch

- 48 RJ-45 autosensing 10/100/1000 ports
- 6 fixed 1000/10000 SFP+ ports (min=0 \ max=6 SFP+ Transceivers)
- Must select min 1 Power Supply
- Must select min 2 Fan Trays
- 1U - Height

JG225A

See Configuration Note:1, 10

#### HP 5800-48G-PoE Switch

- 48 RJ-45 autosensing 10/100/1000 ports
- 1 extended module slot
- 4 fixed 1000/10000 SFP+ ports
- min=0 \ max=4 SFP+ Transceivers
- Power Supply included
- 1U - Height

JC104A

See Configuration Note:1, 3, 10

#### PDU Cable NA/MEX/TW/JP

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

JC104A#B2B

#### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JC104A#B2C

#### HP 5800-48G Switch with 2 Slots

- 48 RJ-45 autosensing 10/100/1000 ports
- 2 extended module slot
- 4 fixed 1000 SFP ports
- min=0 \ max=4 SFP Transceivers
- Must select min 1 Power Supply

JC101A

See Configuration Note:4, 10



### Configuration

- 2U - Height

#### Configuration Rules:

**Note 1** The following Transceivers install into this switch:

HP X130 10G SFP+ LC SR Transceiver	JD092B
HP X130 10G SFP+ LC LRM Transceiver	JD093B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C

**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 4** The following Transceivers install into this Switch:

HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X115 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC BX 10-D Transceiver	JD101A
HP X125 1G SFP LC LH70 Transceiver	JD063B

**Note 10** If HP CTO Switch Chassis is selected for Rack Level Integration, Then the Switch needs to integrate (with #0D1) to the HP Rack.

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

### Modules

#### Ethernet Modules

### Configuration

(JC101x, JG242x, Switch Only ) System (std 0 // max 2) User Selection (min 0 // max 2) per chassis

(JC100x, JC099x, JC103x, JC105x, JC104x, JG254x, JG255x, JG256x, JG257x, JG258x, Switch Only ) System (std 0 // max 1) User Selection (min 0 // max 1) per chassis

#### HP 5800 16-port SFP Module

- min=0 \ max=16 SFP Transceivers

JC095A

See Configuration Note:2

#### HP 5800 4-port 10GbE SFP+ Module

- min=0 \ max=4 SFP and SFP + Transceivers

JC091A

See Configuration Note:1

#### HP 5800 2-port 10GbE SFP+ Module

- min=0 \ max=2 SFP and SFP + Transceivers

JC092B

See Configuration Note:1

#### HP 5800 16-port Gig-T Module

- No Transceivers

JC094A

### Configuration Rules:

**Note 1** The following Transceivers install into this Module: (Use #0D1 if switch is CTO) If Applicable -

HP X130 10G SFP+ LC SR Transceiver	JD092B
HP X130 10G SFP+ LC LRM Transceiver	JD093B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C

**Note 2** The following Transceivers install into this Module: (Use #0D1 if switch is CTO) If Applicable -

HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X110 100M SFP LC LH40 Transceiver	JD090A

### Configuration

HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X115 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC BX 10-D Transceiver	JD101A
HP X125 1G SFP LC LH70 Transceiver	JD063B

### Access Control Modules

(JC101x and JG242x Switch Only ) System (std 0 // max 1) User Selection (min 0 // max 1) per chassis

HP 5800 ACM for 32-64 Aps	JD443A
<ul style="list-style-type: none"> <li>No Transceivers</li> </ul>	

HP 5800 ACM for 64-256 Aps	JD441A
<ul style="list-style-type: none"> <li>No Transceivers</li> </ul>	See Configuration Note:1

HP 5820 VPN Firewall Module	JD255A
<ul style="list-style-type: none"> <li>No Transceivers</li> </ul>	See Configuration Note:1

### Configuration Rules:

Note 1 This Module install to the following switches only:  
JC101x - HP 5800-48G Switch with 2 Slots

### PoE Modules

(JC101x and JG242x Switch Only ) System (std 0 // max 1) User Selection (min 0 // max 1) per chassis

HP 5800 PoE Module	JC097B
<ul style="list-style-type: none"> <li>No Transceivers</li> </ul>	

## Transceivers

### SFP+ Transceivers

HP X130 10G SFP+ LC SR Transceiver	JD092B
HP X130 10G SFP+ LC LRM Transceiver	JD093B
HP X130 10G SFP+ LC LR Transceiver	JD094B
HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
HP X240 10G SFP+ SFP+ 0.65m DAC Cable	JD095C#B01
HP X240 10G SFP+ SFP+ 1.2m DAC Cable	JD096C#B01
HP X240 10G SFP+ SFP+ 3m DAC Cable	JD097C#B01

### Configuration

HP X240 10G SFP+ SFP+ 5m DAC Cable

JG081C#B01

### SFP Transceivers

HP X110 100M SFP LC LH40 Transceiver

JD090A

HP X110 100M SFP LC LH80 Transceiver

JD091A

HP X115 100M SFP LC FX Transceiver

JD102B

HP X110 100M SFP LC LX Transceiver

JD120B

HP X110 100M SFP LC BX 10-U Transceiver

JD100A

HP X110 100M SFP LC BX 10-D Transceiver

JD101A

HP X120 1G SFP LC LH40 1550nm XCVR

JD062A

HP X120 1G SFP RJ45 T Transceiver

JD089B

HP X120 1G SFP LC SX Transceiver

JD118B

HP X120 1G SFP LC LX Transceiver

JD119B

HP X125 1G SFP LC LH40 1310nm XCVR

JD061A

HP X125 1G SFP LC LH70 Transceiver

JD063B

### Internal Power Supplies

(JC103x and JG256x Only) System (std 0 // max 2) User Selection (min 1 // max 2) per switch

(JC101x and JG242x Only) System (std 0 // max 2) User Selection (min 1 // max 2) per switch

(JG225A only) System (std 0 // max 2) User Selection (min 1 // max 2) per switch

HP 5500 150WAC Power Supply

JD362A

See Configuration Note:1, 2, 3

PDU Cable NA/MEX/TW/JP

JD362A#B2B

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

PDU Cable ROW

JD362A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5500 150WDC Power Supply

JD366A

See Configuration Note:1, 3

HP 5800 300W AC Power Supply

JC087A

See Configuration Note:1, 2, 4

PDU Cable NA/MEX/TW/JP

JC087A#B2B

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

PDU Cable ROW

JC087A#B2C

- C15 PDU Jumper Cord (ROW)

### Configuration

HP 5800 300W DC Power Supply	JC090A <a href="#">See Configuration Note:1, 4</a>
HP 5800 750W AC PoE Power Supply	JC089A <a href="#">See Configuration Note:1, 2, 4</a>
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	JC089A#B2B
PDU Cable ROW <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	JC089A#B2C
HP A58x0AF 650W AC Power Supply <ul style="list-style-type: none"> <li>includes 1 x c13, 650w</li> </ul>	JC680A <a href="#">See Configuration Note:1, 2, 6</a>
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	JC680A#B2B
PDU Cable ROW <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	JC680A#B2C
HP 58x0AF 650W DC Power Supply	JC681A <a href="#">See Configuration Note:1, 6</a>

### Configuration Rules:

- Note 1** If 2 power supplies are selected then they must be the same Sku number.
- Note 2** 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** This power supply only supported on JC103x and JG256x Only.
- Note 4** This power supply only supported on JC101x and JG242x Only.
- Note 6** This power supply only supported on JG225A Only.

### 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)

### Configuration

#### Switch Options

##### Fan Trays

(JG225A only) System (std 0 // max 2) User Selection (min 2 // max 2) per switch

HP 58x0AF Bck(pwr)-Frt(ports) Fan Tray

JC682A  
See Configuration Note:1

HP 58x0AF Frt(ports)-Bck(pwr) Fan Tray

JC683A  
See Configuration Note:1

##### Configuration Rules:

Note 1 Fan Trays cannot be mixed in the same switch enclosure

Remark: Watson Blue Text:

If there is any empty space below the switch in a rack when using Back to Front Fan Trays, JC682A, the rack will receive an Air Plenum kit that takes up 1U of additional space in the rack. The Air Plenum kit is not required on fully configured racks. This only applies for CTO Rack Level Integration. The Air Plenum Kit is a non-saleable SKU, and is brought in automatically for CTO Factory Rack Level Integration.

##### Fan Options

HP 5800 2RU Spare Fan Assembly

JC096A  
See Configuration Note:1

HP 5800 1RU Spare Fan Assembly

JC098A  
See Configuration Note:2

##### Configuration Rules:

Note 1 This Spare Fan is only supported on switches JC101A and JG242A.

Note 2 This Spare Fan is only supported on switches JC099A, JC100A, JC103A, JC104A, JC105A, JG254A, JG255A, JG256A, JG257A and JG258A.

##### Opacity Shield Kit

System (std 0 // max 1) User Selection (min 0 // max 1)

HP 5800-24G / -48G PoE Opcty Shld Kit

- Supported on JG254A, JG257A

JG560A

HP 58xx 2-slot Switch Opcty Shld Kit

- Supported on JG242A

JG561A

HP 5800-24G-SFP Opcty Shld Kit

JG562A

### Configuration

- Supported on JG256A

HP 5800-24G / -48G Opcty Shld Kit

JG563A

- Supported on JG255A, JG258A

### Tamper Evidence Labels

HP 12mm x 60mm Tmpr-Evidence (30) Lbl

JG585A

- Supported on JG560A, JG561A, JG562A or JG563A

Remarks Each JG560A, JG561A, JG562A or JG563A would use 1 of JG585A.

### License

HP WX5000 32 AP License Upgrade

JD463A

See Configuration Note:1

### Configuration Rules:

Note 1 If this license is selected, Then one of these modules should be selected or be on site:  
JD443A - HP A5800 Access Controller Module for 32-64 Aps  
JD441A - HP A5800 Access Controller Module for 64-256 Aps

### External Redundant Power Supplies

HP RPS 800 Redundant Power Supply

JD183A

- Height = 1U
- includes 1 x c13

See Configuration Note:2, 4

HP RPS1600 Redundant Power System

JG136A

- Height = 1U
- includes 1 x c13, 1600w and Power Supply port

See Configuration Note:2, 3, 5

HP RPS1600 1600W AC Power Supply

JG137A

- Installs into JG136A only

See Configuration Note:1, 3

### Configuration Rules:

Note 1 If this power supply is selected, The JG136A - HP A-RPS1600 Redundant Power System must be on order or onsite.

Note 2 Localization required.

Note 3 Each switch will only support 1 JG136A and 1 JG137A Power supply systems.

### Configuration

**Note 4** This power supply only supported on switches JC105A and JC100A.

**Note 5** This power supply only supported on switches JC099A, JC101A, JC103A, JC104A.

#### Options for the HP RPS 800 and 1600 External RPS Power Supplies

HP X290 1000 A JD5 2m RPS Cable

JD187A

[See Configuration Note:3](#)

HP X290 1000 A JD5 Non-PoE 2m RPS Cable

JD188A

[See Configuration Note:2](#)

HP X290 1000 B JD5 2m RPS Cable

JD189A

[See Configuration Note:4](#)

HP X290 500/800 1m RPS Cable

JD190A

[See Configuration Note:1](#)

#### Configuration Rules:

**Note 1** This Cable is only supported on switches JC105A and JC100A when used with the RPS 800 (JD183A)

**Note 2** This Cable is only supported on switch JC103A when used with the RPS 1600 (JG136A)

**Note 3** This Cable is only supported on switches JC099A, JC101A, JC104A, and when used with the RPS 1600 (JG136A).

**Note 4** This Cable is only supported on switches JC101A (Runing On Non-PoE mode), JC103A when used with the RPS 1600 (JG136A)

**Remarks:** These cables are used to connect the External Power System to Switch.



### Technical Specifications

#### HP 5800-24G-PoE+ Switch (JC099A)

<b>Ports</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	
	1 extended module slot	
	4 fixed 1000/10000 SFP+ ports	
	1 RJ-45 serial console port	
<b>Physical characteristics</b>	<b>Dimensions</b>	17.3(w) x 16.8(d) x 1.71(h) in (43.94 x 42.67 x 4.34 cm) (1U height)
	<b>Weight</b>	17.64 lb (8 kg)
<b>Memory and processor</b>	1024 MB SDRAM, 512 MB flash; packet buffer size: 4 MB	
<b>Performance</b>	<b>Latency</b>	4.02 $\mu$ s (Store and Forward) (64-byte packets)
	<b>Throughput</b>	155 million pps
	<b>Routing/Switching capacity</b>	208 Gbps
	<b>Routing table size</b>	16000 entries
	<b>MAC address table size</b>	32000 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	10% to 90%
	<b>Acoustic</b>	Low-speed fan: 47.5 dB, High-speed fan: 52.4 dB
<b>Electrical characteristics</b>	<b>Maximum heat dissipation</b>	2968 BTU/hr (3131.24 kJ/hr)
	<b>Voltage</b>	100-120/200-240 VAC
	<b>Frequency</b>	50/60 Hz
<b>Safety</b>	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance	
<b>Emissions</b>	VCCI Class A; EN 55022 Class A; ICES-003 Class A; ANSI C63.4 2003; AS/NZS CISPR22 Class A; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	
<b>Immunity</b>	<b>Generic</b>	ETSI EN 300 386 V1.3.3
	<b>EN</b>	EN 55024:1998+ A1:2001 + A2:2003
	<b>ESD</b>	EN 61000-4-2; IEC 61000-4-2
	<b>Radiated</b>	EN 61000-4-3; IEC 61000-4-3
	<b>EFT/Burst</b>	EN 61000-4-4; IEC 61000-4-4
	<b>Surge</b>	EN 61000-4-5; IEC 61000-4-5
	<b>Conducted</b>	EN 61000-4-6; IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8; EN 61000-4-8
	<b>Voltage dips and interruptions</b>	EN 61000-4-11; 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; SNMP Manager; Telnet; HTTPS; RMON1; FTP	
<b>Services</b>	3-year, 4-hour onsite, 13x5 coverage for hardware (UV882E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV885E)	

### Technical Specifications

3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV888E)  
 3-year, 24x7 SW phone support, software updates (UV891E)  
 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR565E)  
 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR566E)  
 4-year, 4-hour onsite, 13x5 coverage for hardware (UV883E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware (UV886E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV889E)  
 4-year, 24x7 SW phone support, software updates (UV892E)  
 5-year, 4-hour onsite, 13x5 coverage for hardware (UV884E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware (UV887E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV890E)  
 5-year, 24x7 SW phone support, software updates (UV893E)  
 3 Yr 6 hr Call-to-Repair Onsite (UW969E)  
 4 Yr 6 hr Call-to-Repair Onsite (UW970E)  
 5 Yr 6 hr Call-to-Repair Onsite (UW971E)  
 1-year, 6 hour Call-To-Repair Onsite for hardware (HR568E)  
 1-year, 24x7 software phone support, software updates (HR567E)  
 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS650E)  
 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS651E)  
 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS652E)  
 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS653E)  
 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS654E)  
 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS655E)  
 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS656E)  
 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS657E)

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 5800-24G Switch (JC100A)

<b>Ports</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 1 extended module slot 4 fixed 1000/10000 SFP+ ports 1 RJ-45 serial console port	
<b>Physical characteristics</b>	<b>Dimensions</b>	17.32(w) x 14.35(d) x 1.72(h) in (44.0 x 36.45 x 4.36 cm) (1U height)
	<b>Weight</b>	13.23 lb (6 kg)
<b>Memory and processor</b>	1024 MB SDRAM, 512 MB flash; packet buffer size: 4 MB	
<b>Performance</b>	<b>Latency</b>	4.02 µs (Store and Forward) (64-byte packets)
	<b>Throughput</b>	155 million pps
	<b>Routing/Switching capacity</b>	208 Gbps
	<b>Routing table size</b>	16000 entries
	<b>MAC address table size</b>	32000 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative</b>	10% to 90%

### Technical Specifications

	<b>humidity</b>	
	<b>Acoustic</b>	Low-speed fan: 42.3 dB, High-speed fan: 52.9 dB
<b>Electrical characteristics</b>	<b>Maximum heat dissipation</b>	358 BTU/hr (377.69 kJ/hr)
	<b>Voltage</b>	100-120-240 VAC
	<b>Frequency</b>	50/60 Hz
<b>Safety</b>	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance	
<b>Emissions</b>	VCCI Class A; EN 55022 Class A; ICES-003 Class A; ANSI C63.4 2003; AS/NZS CISPR22 Class A; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	
<b>Immunity</b>	<b>Generic</b>	ETSI EN 300 386 V1.3.3
	<b>EN</b>	EN 55024:1998+ A1:2001 + A2:2003
	<b>ESD</b>	EN 61000-4-2; IEC 61000-4-2
	<b>Radiated</b>	EN 61000-4-3; IEC 61000-4-3
	<b>EFT/Burst</b>	EN 61000-4-4; IEC 61000-4-4
	<b>Surge</b>	EN 61000-4-5; IEC 61000-4-5
	<b>Conducted</b>	EN 61000-4-6; IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8; EN 61000-4-8
	<b>Voltage dips and interruptions</b>	EN 61000-4-11; 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; SNMP Manager; Telnet; HTTPS; RMON1; FTP	
<b>Services</b>	3-year, 4-hour onsite, 13x5 coverage for hardware (UV882E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV885E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV888E) 3-year, 24x7 SW phone support, software updates (UV891E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR565E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR566E) Installation with minimum configuration, system-based pricing (UW451E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV883E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV886E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV889E) 4-year, 24x7 SW phone support, software updates (UV892E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV884E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV887E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV890E) 5-year, 24x7 SW phone support, software updates (UV893E) 3 Yr 6 hr Call-to-Repair Onsite (UW969E) 4 Yr 6 hr Call-to-Repair Onsite (UW970E) 5 Yr 6 hr Call-to-Repair Onsite (UW971E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR568E) 1-year, 24x7 software phone support, software updates (HR567E) 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS650E) 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS651E)	

### Technical Specifications

3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS652E)

3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS653E)

4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS654E)

4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS655E)

5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS656E)

5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS657E)

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 5800-24G-SFP Switch with 1 Interface Slot (JC103A)

<b>Ports</b>	24 SFP fixed Gigabit Ethernet SFP ports	
	1 extended module slot	
	4 fixed 1000/10000 SFP+ ports	
	1 RJ-45 serial console port	
<b>Power supplies</b>	2 power supply slots	
	1 minimum power supplies required (ordered separately)	
<b>Physical characteristics</b>	<b>Dimensions</b>	17.32(w) x 16.81(d) x 1.72(h) in (44.0 x 42.7 x 4.36 cm) (1U height)
	<b>Weight</b>	18.74 lb (8.5 kg)
<b>Memory and processor</b>	1024 MB SDRAM, 512 MB flash; packet buffer size: 4 MB	
<b>Performance</b>	<b>Latency</b>	4.02 $\mu$ s (Store and Forward) (64-byte packets)
	<b>Throughput</b>	155 million pps
	<b>Routing/Switching capacity</b>	208 Gbps
	<b>Routing table size</b>	16000 entries
	<b>MAC address table size</b>	32000 entries
	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	10% to 90%
<b>Environment</b>	<b>Acoustic</b>	Low-speed fan: 49.6 dB, High-speed fan: 58.1 dB
	<b>Maximum heat dissipation</b>	498 BTU/hr (525.39 kJ/hr)
<b>Electrical characteristics</b>	<b>Voltage</b>	100-120/200-240 VAC
	<b>DC voltage</b>	-48 VDC to -60 VDC
	<b>Frequency</b>	50/60 Hz
<b>Safety</b>	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance	
<b>Emissions</b>	VCCI Class A; EN 55022 Class A; ICES-003 Class A; ANSI C63.4 2003; AS/NZS CISPR22 Class A; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	
<b>Immunity</b>	<b>Generic</b>	ETSI EN 300 386 V1.3.3
	<b>EN</b>	EN 55024:1998+ A1:2001 + A2:2003
	<b>ESD</b>	EN 61000-4-2; IEC 61000-4-2
	<b>Radiated</b>	EN 61000-4-3; IEC 61000-4-3

### Technical Specifications

<b>EFT/Burst</b>	EN 61000-4-4; IEC 61000-4-4
<b>Surge</b>	EN 61000-4-5; IEC 61000-4-5
<b>Conducted</b>	EN 61000-4-6; IEC 61000-4-6
<b>Power frequency magnetic field</b>	IEC 61000-4-8; EN 61000-4-8
<b>Voltage dips and interruptions</b>	EN 61000-4-11; 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

**Management** IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager; Telnet; HTTPS; RMON1; FTP

**Notes** Customer must order a power supply, as the device does not come with a PSU. At least one JD362A or JD366A is required.

**Services**

- 3-year, 4-hour onsite, 13x5 coverage for hardware (UV882E)
- 3-year, 4-hour onsite, 24x7 coverage for hardware (UV885E)
- 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV888E)
- 3-year, 24x7 SW phone support, software updates (UV891E)
- 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR565E)
- 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR566E)
- Installation with minimum configuration, system-based pricing (UW451E)
- 4-year, 4-hour onsite, 13x5 coverage for hardware (UV883E)
- 4-year, 4-hour onsite, 24x7 coverage for hardware (UV886E)
- 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV889E)
- 4-year, 24x7 SW phone support, software updates (UV892E)
- 5-year, 4-hour onsite, 13x5 coverage for hardware (UV884E)
- 5-year, 4-hour onsite, 24x7 coverage for hardware (UV887E)
- 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV890E)
- 5-year, 24x7 SW phone support, software updates (UV893E)
- 3 Yr 6 hr Call-to-Repair Onsite (UW969E)
- 4 Yr 6 hr Call-to-Repair Onsite (UW970E)
- 5 Yr 6 hr Call-to-Repair Onsite (UW971E)
- 1-year, 24x7 software phone support, software updates (HR567E)
- 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS650E)
- 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS651E)
- 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS652E)
- 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS653E)
- 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS654E)
- 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS655E)
- 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS656E)
- 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS657E)

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 5800-48G-PoE+ Switch with 1 Interface Slot (JC104A)

**Ports** 48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only

### Technical Specifications

	1 extended module slot
	4 fixed 1000/10000 SFP+ ports
	1 RJ-45 serial console port
<b>Physical characteristics</b>	<b>Dimensions</b> 17.32(w) x 16.81(d) x 1.72(h) in (44.0 x 42.7 x 4.36 cm) (1U height)
	<b>Weight</b> 18.74 lb (8.5 kg)
<b>Memory and processor</b>	1024 MB SDRAM, 512 MB flash; packet buffer size: 8 MB
<b>Performance</b>	<b>Latency</b> 4.02 $\mu$ s (Store and Forward) (64-byte packets)
	<b>Throughput</b> 190 million pps
	<b>Routing/Switching capacity</b> 256 Gbps
	<b>Routing table size</b> 16000 entries
	<b>MAC address table size</b> 32000 entries
<b>Environment</b>	<b>Operating temperature</b> 32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b> 10% to 90%
	<b>Acoustic</b> Low-speed fan: 50.5 dB, High-speed fan: 57.9 dB
<b>Electrical characteristics</b>	<b>Maximum heat dissipation</b> 3320 BTU/hr (3502.6 kJ/hr)
	<b>Voltage</b> 100-120/200-240 VAC
	<b>Frequency</b> 50/60 Hz
<b>Safety</b>	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance
<b>Emissions</b>	VCCI Class A; EN 55022 Class A; ICES-003 Class A; ANSI C63.4 2003; AS/NZS CISPR22 Class A; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A
<b>Immunity</b>	<b>Generic</b> ETSI EN 300 386 V1.3.3
	<b>EN</b> EN 55024:1998+ A1:2001 + A2:2003
	<b>ESD</b> EN 61000-4-2; IEC 61000-4-2
	<b>Radiated</b> EN 61000-4-3; IEC 61000-4-3
	<b>EFT/Burst</b> EN 61000-4-4; IEC 61000-4-4
	<b>Surge</b> EN 61000-4-5; IEC 61000-4-5
	<b>Conducted</b> EN 61000-4-6; IEC 61000-4-6
	<b>Power frequency magnetic field</b> IEC 61000-4-8; EN 61000-4-8
	<b>Voltage dips and interruptions</b> EN 61000-4-11; 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; SNMP Manager; Telnet; HTTPS; RMON1; FTP
<b>Services</b>	3-year, 4-hour onsite, 13x5 coverage for hardware (HQ063E) 3-year, 4-hour onsite, 24x7 coverage for hardware (HQ064E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (HQ067E) 3-year, 24x7 SW phone support, software updates (HQ066E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR569E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR570E) Installation with minimum configuration, system-based pricing (UW451E)



### Technical Specifications

4-year, 4-hour onsite, 13x5 coverage for hardware (HQ068E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware (HQ069E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HQ076E)  
 4-year, 24x7 SW phone support, software updates (HQ074E)  
 5-year, 4-hour onsite, 13x5 coverage for hardware (HQ071E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware (HQ072E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HQ077E)  
 5-year, 24x7 SW phone support, software updates (HQ075E)  
 3 Yr 6 hr Call-to-Repair Onsite (HQ065E)  
 4 Yr 6 hr Call-to-Repair Onsite (HQ070E)  
 5 Yr 6 hr Call-to-Repair Onsite (HQ073E)  
 1-year, 6 hour Call-To-Repair Onsite for hardware (HR573E)  
 1-year, 24x7 software phone support, software updates (HR572E)  
 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR571E)  
 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS666E)  
 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS667E)

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 5800-48G Switch with 1 Interface Slot (JC105A)

Ports	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	1 extended module slot	
	4 fixed 1000/10000 SFP+ ports	
	1 RJ-45 serial console port	
Physical characteristics	Dimensions	17.32(w) x 14.45(d) x 1.72(h) in (44.0 x 36.7 x 4.36 cm) (1U height)
	Weight	14.33 lb (6.5 kg)
Memory and processor	1024 MB SDRAM, 512 MB flash; packet buffer size: 8 MB	
Performance	Latency	4.02 μs (Store and Forward) (64-byte packets)
	Throughput	190 million pps
	Routing/Switching capacity	256 Gbps
	Routing table size	16000 entries
	MAC address table size	32000 entries
Environment	Operating temperature	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 90%
	Acoustic	Low-speed fan: 45.3 dB, High-speed fan: 56.5 dB
Electrical characteristics	Maximum heat dissipation	557 BTU/hr (587.64 kJ/hr)
	Voltage	100-120/200-240 VAC
	Frequency	50/60 Hz
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance	
Emissions	VCCI Class A; EN 55022 Class A; ICES-003 Class A; ANSI C63.4 2003; AS/NZS CISPR22 Class A; EN 61000-	

### Technical Specifications

	3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	
Immunity	Generic	ETSI EN 300 386 V1.3.3
	EN	EN 55024:1998+ A1:2001 + A2:2003
	ESD	EN 61000-4-2; IEC 61000-4-2
	Radiated	EN 61000-4-3; IEC 61000-4-3
	EFT/Burst	EN 61000-4-4; IEC 61000-4-4
	Surge	EN 61000-4-5; IEC 61000-4-5
	Conducted	EN 61000-4-6; IEC 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8; EN 61000-4-8
	Voltage dips and interruptions	EN 61000-4-11; IEC 61000-4-11
	Harmonics	EN 61000-3-2; IEC 61000-3-2
	Flicker	EN 61000-3-3; IEC 61000-3-3
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager; Telnet; HTTPS; RMON1; FTP	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (HQ063E)	
	3-year, 4-hour onsite, 24x7 coverage for hardware (HQ064E)	
	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (HQ067E)	
	3-year, 24x7 SW phone support, software updates (HQ066E)	
	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR569E)	
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR570E)	
	Installation with minimum configuration, system-based pricing (UW451E)	
	4-year, 4-hour onsite, 13x5 coverage for hardware (HQ068E)	
	4-year, 4-hour onsite, 24x7 coverage for hardware (HQ069E)	
	4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HQ076E)	
	4-year, 24x7 SW phone support, software updates (HQ074E)	
	5-year, 4-hour onsite, 13x5 coverage for hardware (HQ071E)	
	5-year, 4-hour onsite, 24x7 coverage for hardware (HQ072E)	
	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HQ077E)	
	5-year, 24x7 SW phone support, software updates (HQ075E)	
	3 Yr 6 hr Call-to-Repair Onsite (HQ065E)	
	4 Yr 6 hr Call-to-Repair Onsite (HQ070E)	
	5 Yr 6 hr Call-to-Repair Onsite (HQ073E)	
	1-year, 6 hour Call-To-Repair Onsite for hardware (HR573E)	
	1-year, 24x7 software phone support, software updates (HR572E)	
	1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR571E)	
	1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS666E)	
	1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS667E)	
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 5800-48G Switch with 2 Slots (JC101A)

<b>Ports</b>	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
	2 extended module slots



### Technical Specifications

	1 open module slot
	4 SFP fixed Gigabit Ethernet SFP ports
	1 RJ-45 serial console port
<b>Power supplies</b>	2 power supply slots
	1 minimum power supplies required (ordered separately)
<b>Physical characteristics</b>	<b>Dimensions</b> 17.32(w) x 18.31(d) x 3.39(h) in (44.0 x 46.5 x 8.61 cm) (2U height)
	<b>Weight</b> 39.7 lb (18.0 kg)
<b>Memory and processor</b>	1024 MB SDRAM, 512 MB flash; packet buffer size: 8 MB
<b>Performance</b>	<b>Latency</b> 4.02 $\mu$ s (Store and Forward) (64-byte packets)
	<b>Throughput</b> 211 million pps
	<b>Routing/Switching capacity</b> 284 Gbps
	<b>Routing table size</b> 16000 entries
	<b>MAC address table size</b> 32000 entries
<b>Environment</b>	<b>Operating temperature</b> 32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b> 10% to 90%
	<b>Acoustic</b> Low-speed fan: 54 dB, High-speed fan: 58.5 dB
<b>Electrical characteristics</b>	<b>Maximum heat dissipation</b> 6278 BTU/hr (6623.29 kJ/hr)
	<b>Voltage</b> 100-120/200-240 VAC
	<b>DC Voltage</b> 300 W DC: -48 VDC to -60 VDC; 750 W DC: -54 VDC to -57 VDC
	<b>Frequency</b> 50/60 Hz
<b>Safety</b>	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance
<b>Emissions</b>	VCCI Class A; EN 55022 Class A; ICES-003 Class A; ANSI C63.4 2003; AS/NZS CISPR22 Class A; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A
<b>Immunity</b>	<b>Generic</b> ETSI EN 300 386 V1.3.3
	<b>EN</b> EN 55024:1998+ A1:2001 + A2:2003
	<b>ESD</b> EN 61000-4-2; IEC 61000-4-2
	<b>Radiated</b> EN 61000-4-3; IEC 61000-4-3
	<b>EFT/Burst</b> EN 61000-4-4; IEC 61000-4-4
	<b>Surge</b> EN 61000-4-5; IEC 61000-4-5
	<b>Conducted</b> EN 61000-4-6; IEC 61000-4-6
	<b>Power frequency magnetic field</b> IEC 61000-4-8; EN 61000-4-8
	<b>Voltage dips and interruptions</b> EN 61000-4-11; 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; SNMP Manager; Telnet; HTTPS; RMON1; FTP
<b>Notes</b>	Customer must order power supply, as the device does not come with a PSU. At least one JC087A/JC090A/JC089A is required.
<b>Services</b>	3-year, 4-hour onsite, 13x5 coverage for hardware (HQ063E)

### Technical Specifications

3-year, 4-hour onsite, 24x7 coverage for hardware (HQ064E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (HQ067E)  
 3-year, 24x7 SW phone support, software updates (HQ066E)  
 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR569E)  
 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR570E)  
 Installation with minimum configuration, system-based pricing (UW451E)  
 4-year, 4-hour onsite, 13x5 coverage for hardware (HQ068E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware (HQ069E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HQ076E)  
 4-year, 24x7 SW phone support, software updates (HQ074E)  
 5-year, 4-hour onsite, 13x5 coverage for hardware (HQ071E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware (HQ072E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HQ077E)  
 5-year, 24x7 SW phone support, software updates (HQ075E)  
 3 Yr 6 hr Call-to-Repair Onsite (HQ065E)  
 4 Yr 6 hr Call-to-Repair Onsite (HQ070E)  
 5 Yr 6 hr Call-to-Repair Onsite (HQ073E)  
 1-year, 6 hour Call-To-Repair Onsite for hardware (HR573E)  
 1-year, 24x7 software phone support, software updates (HR572E)  
 1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR571E)  
 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS666E)  
 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS667E)

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 5800AF-48G Switch (JG225A)

<b>Ports</b>	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 6 fixed 1000/10000 SFP+ ports 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 USB 2.0								
<b>Power supplies</b>	2 power supply slots 1 minimum power supply required (ordered separately)								
<b>Fan tray</b>	2 fan tray slots The customer must order fan trays, as fan trays are not included with the switch. This system requires two same-direction airflow fan trays to function properly. The system should not be operated with only one fan tray for more than 24 hours. The system should not be operated without a fan tray more than two minutes. The system should not be operated outside of the temperature range of 32°F (0°C) to 113°F (45°C). Failure to comply with these operating requirements may void the product warranty.								
<b>Physical characteristics</b>	<table> <tr> <td data-bbox="368 1688 667 1719"><b>Dimensions</b></td><td data-bbox="678 1688 1505 1719">17.32(w) x 25.98(d) x 1.72(h) in (43.99 x 65.99 x 4.37 cm) (1U height)</td></tr> <tr> <td data-bbox="368 1726 667 1761"><b>Weight</b></td><td data-bbox="678 1726 1505 1761">22.05 lb (10 kg), Fully loaded</td></tr> </table>	<b>Dimensions</b>	17.32(w) x 25.98(d) x 1.72(h) in (43.99 x 65.99 x 4.37 cm) (1U height)	<b>Weight</b>	22.05 lb (10 kg), Fully loaded				
<b>Dimensions</b>	17.32(w) x 25.98(d) x 1.72(h) in (43.99 x 65.99 x 4.37 cm) (1U height)								
<b>Weight</b>	22.05 lb (10 kg), Fully loaded								
<b>Memory and processor</b>	1024 MB flash, 512 MB SDRAM; packet buffer size: 8 MB								
<b>Performance</b>	<table> <tr> <td data-bbox="368 1806 667 1837"><b>Latency</b></td><td data-bbox="678 1806 1505 1837">&lt; 5 µs (64-byte packets)</td></tr> <tr> <td data-bbox="368 1843 667 1875"><b>Throughput</b></td><td data-bbox="678 1843 1505 1875">161 million pps</td></tr> <tr> <td data-bbox="368 1881 667 1944"><b>Routing/Switching capacity</b></td><td data-bbox="678 1881 1505 1944">216 Gbps</td></tr> <tr> <td data-bbox="368 1950 667 1980"><b>Routing table size</b></td><td data-bbox="678 1950 1505 1980">16000 entries</td></tr> </table>	<b>Latency</b>	< 5 µs (64-byte packets)	<b>Throughput</b>	161 million pps	<b>Routing/Switching capacity</b>	216 Gbps	<b>Routing table size</b>	16000 entries
<b>Latency</b>	< 5 µs (64-byte packets)								
<b>Throughput</b>	161 million pps								
<b>Routing/Switching capacity</b>	216 Gbps								
<b>Routing table size</b>	16000 entries								

### Technical Specifications

<b>Environment</b>	<b>MAC address table size</b>	32000 entries
	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	10% to 90%
<b>Electrical characteristics</b>	<b>Acoustic</b>	Low-speed fan: 60.1 dB, High-speed fan: 69.9 dB
	<b>Maximum heat dissipation</b>	426 BTU/hr (449.43 kJ/hr)
	<b>Voltage</b>	100-120/200-240 VAC
	<b>DC Voltage</b>	650W DC: -36 VDC to -72 VDC
<b>Safety</b>	<b>Frequency</b>	50/60 Hz
	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance	
<b>Emissions</b>	VCCI Class A; EN 55022 Class A; ICES-003 Class A; ANSI C63.4 2003; AS/NZS CISPR22 Class A; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	
<b>Immunity</b>	<b>Generic</b>	ETSI EN 300 386 V1.3.3
	<b>EN</b>	EN 55024:1998+ A1:2001 + A2:2003
	<b>ESD</b>	EN 61000-4-2; IEC 61000-4-2
	<b>Radiated</b>	EN 61000-4-3; IEC 61000-4-3
	<b>EFT/Burst</b>	EN 61000-4-4; IEC 61000-4-4
	<b>Surge</b>	EN 61000-4-5; IEC 61000-4-5
	<b>Conducted</b>	EN 61000-4-6; IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8; EN 61000-4-8
	<b>Voltage dips and interruptions</b>	EN 61000-4-11; 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; SNMP Manager; Telnet; HTTPS; RMON1; FTP	
<b>Notes</b>	The customer must order a power supply, as the device does not come with a PSU. At least one JC680A or JC681A is required.	
<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.	
<b>Standards and protocols</b> (applies to all products in series)	<b>General protocols</b>	RFC 4022 MIB for TCP
	IEEE 802.1ag Service Layer OAM	RFC 4251 SSHv6 Architecture
	IEEE 802.1D MAC Bridges	RFC 4252 SSHv6 Authentication
	IEEE 802.1p Priority	RFC 4253 SSHv6 Transport Layer
	IEEE 802.1Q VLANs	RFC 4254 SSHv6 Connection
	IEEE 802.1s (MSTP)	RFC 4293 MIB for IP
	IEEE 802.1v VLAN classification by Protocol and Port	RFC 4419 Key Exchange for SSH
	IEEE 802.1w Rapid Reconfiguration of Spanning Tree	RFC 4443 ICMPv6
	IEEE 802.1X PAE	RFC 4541 IGMP & MLD Snooping Switch
	IEEE 802.3ad Link Aggregation Control Protocol (LACP)	RFC 4861 IPv6 Neighbor Discovery
		RFC 4862 IPv6 Stateless Address Auto-configuration

### Technical Specifications

IEEE 802.3ae 10-Gigabit Ethernet  
IEEE 802.3af Power over Ethernet  
IEEE 802.3at  
IEEE 802.3x Flow Control  
RFC 768 UDP  
RFC 792 ICMP  
RFC 793 TCP  
RFC 826 ARP  
RFC 854 TELNET  
RFC 925 Multi-LAN Address Resolution  
RFC 951 BOOTP  
RFC 1058 RIPv1  
RFC 1350 TFTP Protocol (revision 2)  
RFC 1519 CIDR  
RFC 1542 BOOTP Extensions  
RFC 1812 IPv4 Routing  
RFC 2131 DHCP  
RFC 2236 IGMP Snooping  
RFC 2370 OSPF Opaque LSA Option  
RFC 2385 TCP MD5 Authentication for BGPv4  
RFC 2453 RIPv2  
RFC 2475 Architecture for Differentiated Services  
RFC 2597 Assured Forwarding PHB Group  
RFC 3046 DHCP Relay Agent Information Option  
RFC 3209 RSVP-TE Extensions to RSVP for LSP Tunnels  
RFC 3576 Ext to RADIUS (CoA only)  
RFC 3584 Coexistence between Version 1 and Version 2 of the Internet-standard Network Management Framework  
RFC 3623 Graceful OSPF Restart  
RFC 3768 VRRP  
RFC 4090 Fast Reroute Extensions to RSVP-TE for LSP Tunnels  
RFC 4291 IP Version 6 Addressing Architecture  
RFC 4675 RADIUS VLAN & Priority  
RFC 4762 Virtual Private LAN Service (VPLS) Using Label Distribution Protocol (LDP) Signaling

#### **IP multicast**

RFC 2934 Protocol Independent Multicast MIB for IPv4  
RFC 3376 IGMPv3 (host joins only)  
RFC 3618 Multicast Source Discovery Protocol (MSDP)  
RFC 3973 Draft 2 PIM Dense Mode  
RFC 4601 PIM Sparse Mode

#### **IPv6**

RFC 2080 RIPng for IPv6  
RFC 2460 IPv6 Specification  
RFC 2710 Multicast Listener Discovery (MLD) for IPv6  
RFC 2740 OSPFv3 for IPv6  
RFC 2925 Remote Operations MIB (Ping only)  
RFC 3019 MLDv1 MIB

#### **MIBs**

IEEE 8021-PAE-MIB  
IEEE 8023-LAG-MIB  
RFC 1213 MIB II  
RFC 1493 Bridge MIB  
RFC 1657 BGP-4 MIB  
RFC 1724 RIPv2 MIB  
RFC 1850 OSPFv2 MIB  
RFC 2011 SNMPv2 MIB for IP  
RFC 2013 SNMPv2 MIB for UDP  
RFC 2233 Interface MIB  
RFC 2273 SNMP-NOTIFICATION-MIB  
RFC 2452 IPV6-TCP-MIB  
RFC 2454 IPV6-UDP-MIB  
RFC 2465 IPv6 MIB  
RFC 2466 ICMPv6 MIB  
RFC 2571 SNMP Framework MIB  
RFC 2572 SNMP-MPD MIB  
RFC 2573 SNMP-Notification MIB  
RFC 2618 RADIUS Client MIB  
RFC 2620 RADIUS Accounting MIB  
RFC 2665 Ethernet-Like-MIB  
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB  
RFC 2688 MAU-MIB  
RFC 2787 VRRP MIB  
RFC 2819 RMON MIB  
RFC 2925 Ping MIB  
RFC 3414 SNMP-User based-SM MIB  
RFC 3415 SNMP-View based-ACM MIB  
RFC 3418 MIB for SNMPv3  
RFC 3621 Power Ethernet MIB  
RFC 3826 AES for SNMP's USM MIB  
RFC 4133 Entity MIB (Version 3)  
LLDP-EXT-DOT1-MIB  
LLDP-EXT-DOT3-MIB  
LLDP-MIB

#### **Network management**

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)  
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)  
RFC 3176 sFlow  
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)  
SNMPv1/v2c/v3

#### **OSPF**

RFC 2328 OSPFv2  
RFC 3101 OSPF NSSA

#### **Security**

IEEE 802.1X Port Based Network Access Control  
RFC 1492 TACACS+  
RFC 2865 RADIUS (client only)  
RFC 2866 RADIUS Accounting  
Access Control Lists (ACLs)

### Technical Specifications

RFC 3162 RADIUS and IPv6  
RFC 3315 DHCPv6 (client and relay)  
RFC 3315 DHCPv6 (client only)  
RFC 3810 MLDv2 (host joins only)

Secure Sockets Layer (SSL)  
SSHv2 Secure Shell

### Accessories

#### HP 5800 Switch Series accessories

##### Modules

HP 5800 4-port 10GbE SFP+ Module	JC091A
HP 5800 2-port 10GbE SFP+ Module	JC092B
HP 5800 16-port Gig-T Module	JC094A
HP 5800 16-port GbE SFP Module	JC095A

##### Transceivers

HP X124 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X110 100M SFP LC LH40 Transceiver	JD090A
HP X110 100M SFP LC LH80 Transceiver	JD091A
HP X115 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC BX 10-D Transceiver	JD101A
HP X110 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B
HP X130 SFP+ LC SR Transceiver	JD092B
HP X130 SFP+ LC LRM Transceiver	JD093B
HP X130 SFP+ LC LR Transceiver	JD094B
HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HP X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C

##### Cables

HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A

##### Power Supply

HP 5800/5500 150W AC Power Supply	JD362A
HP 5800/5500 150W DC Power Supply	JD366A
HP 5800 300W AC Power Supply	JC087A
HP 5800 300W DC Power Supply	JC090A
HP 5800 750W AC PoE Power Supply	JC089A
HP RPS 800 Redundant Power Supply	JD183A
HP RPS1600 Redundant Power System	JG136A
HP RPS1600 1600W AC Power Supply	JG137A

##### EPS/RPS

HP 5800 PoE Module	JC097B
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##### Fan Tray

### Accessories

HP 5800 2RU Spare Fan Assembly	JC096A
HP 5800 1RU Spare Fan Assembly	JC098A
<b>Appliance</b>	
<a href="#">HP 5820 VPN Firewall Module</a>	JD255A
<b>HP 5800-48G Switch with 2 Slots (JC101A)</b>	
<a href="#">HP 5820 VPN Firewall Module</a>	JD255A
<b>HP 5800AF-48G Switch (JG225A)</b>	
HP 58x0AF 650W AC Power Supply	JC680A
HP 58x0AF 650W DC Power Supply	JC681A
HP 58x0AF Back (power side) to Front (port side) Airflow Fan Tray	JC682A
HP 58x0AF Front (port side) to Back (power side) Airflow Fan Tray	JC683A

### Accessory Product Details

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

<b>HP X125 1G SFP LC LH40 1310nm Transceiver (JD061A)</b>  A small form-factor pluggable SFP Gigabit LH40 transceiver that provides a full duplex Gigabit solution up to 40km on a single-mode fiber.	<b>Ports</b>	1 LC 1000Base-LH port (no IEEE standard exists for 1550 nm optics)	
	<b>Connectivity</b>	Connector type	LC
		Wavelength	1310 nm
	<b>Physical characteristics</b>	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
	<b>Electrical characteristics</b>	Full configuration weight	0.04 lb. (0.02 kg)
		Power consumption typical	0.8 W
		Power consumption maximum	1.0 W
	<b>Cabling</b>	Cable type:	Single-mode fiber optic, complying with ITU-T G.652;
		Maximum distance:	
			<ul style="list-style-type: none"> <li>40km distance</li> </ul>
	<b>Services</b>	Fiber type	Single 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.	
<b>HP X120 1G SFP LC LH40 1550nm Transceiver (JD062A)</b>  A small form-factor pluggable (SFP) Gigabit LH40 transceiver that provides a full-duplex Gigabit solution up to 40 km on a single mode fiber.	<b>Ports</b>	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics)	
	<b>Connectivity</b>	Connector type	LC
		Wavelength	1550 nm
	<b>Physical characteristics</b>	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
	<b>Electrical characteristics</b>	Full configuration weight	0.04 lb. (0.02 kg)
		Power consumption typical	0.8 W
		Power consumption maximum	1.0 W
	<b>Cabling</b>	Cable type:	Single-mode fiber optic, complying with ITU-T G.652;
		Maximum distance:	
			<ul style="list-style-type: none"> <li>40km distance</li> </ul>
	<b>Services</b>	Fiber type	Single 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.	
<b>HP X125 1G SFP LC LH70</b>	<b>Ports</b>	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics)	
	<b>Connectivity</b>	Connector type	LC



### Accessory Product Details

<b>Transceiver (JD063B)</b>  A small form-factor pluggable (SFP) Gigabit LH70 transceiver that provides a full-duplex Gigabit solution up to 70km on a single-mode fiber.		<b>Wavelength</b>	1550 nm
	<b>Physical characteristics</b>	<b>Dimensions</b>	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		<b>Full configuration weight</b>	0.04 lb. (0.02 kg)
	<b>Electrical characteristics</b>	<b>Power consumption typical</b>	0.8 W
		<b>Power consumption maximum</b>	1.0 W
	<b>Cabling</b>	Cable type: Single-mode fiber optic, complying with ITU-T G.652;	
		Maximum distance: • 70km	
	<b>Services</b>	Fiber type Single 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.	

<b>HP X120 1G SFP LC SX Transceiver (JD118B)</b>  A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550m on a Multimode fiber.	<b>Ports</b>	1 LC 1000BASE-SX port	
	<b>Connectivity</b>	<b>Connector type</b>	LC
	<b>Physical characteristics</b>	<b>Wavelength</b>	850 nm
		<b>Dimensions</b>	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		<b>Full configuration weight</b>	0.04 lb. (0.02 kg)
	<b>Electrical characteristics</b>	<b>Power consumption typical</b>	0.8 W
		<b>Power consumption maximum</b>	1.0 W
	<b>Cabling</b>	Maximum distance: • FDDI Grade distance = 220m • OM1 = 275m • OM2 = 500m • OM3 = Not Specified by standard	
		Cable length	up to 550m
		Fiber type	Multi Mode
	<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.	

<b>HP X120 1G SFP LC LX Transceiver (JD119B)</b>  A small form-factor pluggable (SFP) Gigabit LX transceiver that provides a full duplex Gigabit solution up to 550m on MMF or 10Km on	<b>Ports</b>	1 SFP 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX)	
	<b>Connectivity</b>	<b>Connector type</b>	LC
	<b>Physical characteristics</b>	<b>Wavelength</b>	1300 nm
		<b>Dimensions</b>	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		<b>Full configuration weight</b>	0.04 lb. (0.02 kg)
	<b>Electrical characteristics</b>	<b>Power consumption typical</b>	0.8 W

### Accessory Product Details

SMF			<b>Power consumption maximum</b>	1.0 W
	<b>Cabling</b>		Cable type: Either single mode or multimode;	
			Maximum distance: • 550m for Multimode • 10km for Singlemode	
	<b>Services</b>		Fiber type	Both
			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 X125 1G SFP RJ45 T Transceiver</b> (JD089B)	<b>Ports</b>	1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T)		
	<b>Connectivity</b>	<b>Connector type</b>	RJ-45	
	<b>Physical characteristics</b>	<b>Dimensions</b>	2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm)	
		<b>Full configuration weight</b>	0.07 lb. (0.03 kg)	
	<b>Electrical characteristics</b>	<b>Power consumption typical</b>	0.8 W	
		<b>Power consumption maximum</b>	1.0 W	
A small form factor pluggable (SFP) Gigabit 1000Base-T transceiver that provides a full duplex Gigabit solution up to 100m on a Cat-5+ cable.	<b>Cabling</b>	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 � differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;		
		Maximum distance: • 100m		
	<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.		
<b>HP X120 1G SFP LC BX 10-U Transceiver</b> (JD098B)	<b>Ports</b>	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-U); Duplex: full only		
	<b>Connectivity</b>	<b>Connector type</b>	LC	
	<b>Physical characteristics</b>	<b>Dimensions</b>	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)	
		<b>Full configuration weight</b>	0.04 lb. (0.02 kg)	
	<b>Electrical characteristics</b>	<b>Power consumption typical</b>	0.8 W	
		<b>Power consumption maximum</b>	1.0 W	
	<b>Cabling</b>	Maximum distance: • 10km		
		Fiber type	Single Mode	
	<b>Notes</b>	TX 1310nm RX 1490nm		
	<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

#### HP X120 1G SFP LC BX10-D Transceiver (JD099B)

A small form-factor pluggable (SFP) Gigabit LX-BX10-D transceiver that provides a full duplex Gigabit solution up to 10km on a single mode cable.

#### Connectivity

#### Physical characteristics

#### Electrical characteristics

#### Cabling

#### Notes

#### Services

1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-D); Duplex: full only

#### Connector type

LC

#### Dimensions

2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)

#### Full configuration weight

0.04 lb. (0.02 kg)

#### Power consumption typical

0.8 W

#### Power consumption maximum

1.0 W

Maximum distance:

- Up to 10km

Fiber type

Single Mode

TX 1490nm RX 1310nm

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 Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable (QK732A)

#### Notes

#### Services

Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.

- Core Diameter: 50um  $\pm$ 3um, Cladding diameter: 125um  $\pm$ 2um; Coating diameter: 245  $\pm$  10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

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 Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable (QK733A)

#### Notes

Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.

- Core diameter: 50um  $\pm$ 3um, Cladding diameter: 125um  $\pm$ 2um; Coating diameter: 245  $\pm$  10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic

### Accessory Product Details

		<ul style="list-style-type: none"> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul>
	<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.
<b>HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable (QK734A)</b>	<b>Notes</b>	<p>Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.</p> <ul style="list-style-type: none"> <li>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>• Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>• Jacket Color: Blue</li> <li>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul>
	<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.
<b>HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable (QK735A)</b>	<b>Notes</b>	<p>Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.</p> <ul style="list-style-type: none"> <li>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>• Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>• Jacket Color: Blue</li> <li>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul>

### Accessory Product Details

	<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.
<b>HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable (QK736A)</b>	<b>Notes</b>	<p>Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.</p> <ul style="list-style-type: none"> <li>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>• Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>• Jacket Color: Blue</li> <li>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul>
	<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.
<b>HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable (QK737A)</b>	<b>Notes</b>	<p>Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.</p> <ul style="list-style-type: none"> <li>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>• Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>• Jacket Color: Blue</li> <li>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul>
	<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.
<b>HP RPS1600 Redundant Power System (JG136A)</b>	<b>Ports</b>	8 redundant power supply ports
	<b>Physical characteristics</b>	Restrictions: two -56V/25A DC(PoE); six -56V/8A DC(non-PoE)
	<b>Dimensions</b>	15.63(d) x 17.32(w) x 1.74(h) in. (39.7 x 44 x

### Accessory Product Details

<b>Environment</b>	<b>Weight</b>	4.42 cm)
	<b>Full configuration weight</b>	14.11 lb. (6.4 kg)
	<b>Operating temperature</b>	16.75 lb. (7.6 kg)
	<b>Operating relative humidity</b>	14°F to 122°F (-10°C to 50°C)
	<b>Nonoperating/Storage temperature</b>	5% to 95%
	<b>Nonoperating/Storage relative humidity</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Altitude</b>	5% to 95%
	<b>Acoustic</b>	up to 13,123 ft. (4 km)
	<b>Voltage</b>	Pressure: 53 dB; ISO 7779, ISO 9296
	<b>Current</b>	100-120/200-240 VAC
<b>Electrical characteristics</b>	<b>Idle power</b>	30/60 A
	<b>Maximum power rating</b>	38 W
	<b>RPS power</b>	3550 W
	<b>PoE power</b>	3200 W
	<b>RPS</b>	2800 W
	<b>PoE</b>	-55 V
	<b>Frequency</b>	-55 V
	<b>Notes</b>	50/60 Hz
		Idle power is the actual power consumption of the device with no ports connected.
		Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
<b>Safety</b>		With one RPS1600 Power Supply, the PRS1600 Redundant Power System can provide 1600W power output; With two PRS1600 Power Supplies, the output power is 3200W.
<b>Services</b>		CE Labeled; UL 60950-1; IEC 60950-1; ICES-003; FCC Part 15, Subpart B; EU RoHS Compliant; EN 60950-1/A11; C-Tick; VCCI Class A; ROHS Compliance; EN 300386
		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 RPS1600 1600W AC Power Supply (JG137A)</b>	<b>Physical characteristics</b>	<b>Dimensions</b>	8.19(d) x 4.96(w) x 1.63(h) in. (20.8 x 12.6 x 4.15 cm)
		<b>Weight</b>	3.02 lb. (1.37 kg)
	<b>Environment</b>	<b>Operating temperature</b>	14°F to 122°F (-10°C to 50°C)
		<b>Operating relative humidity</b>	5% to 95%
		<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)

### Accessory Product Details

<b>Electrical characteristics</b>	<b>Nonoperating/Storage relative humidity</b>	5% to 95%
	<b>Voltage</b>	100-120/200-240 VAC
	<b>Current</b>	15/30 A
	<b>Maximum power rating</b>	1600 W
	<b>Frequency</b>	50/60 Hz
	<b>Notes</b>	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
<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 A5820 VPN Firewall Module (JD255A)

<b>Ports</b>	2 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T) 2 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP 1 RJ-45 serial console port 1 Compact Flash port	
<b>Physical characteristics</b>	<b>Dimensions</b>	9.84(d) x 9.84(w) x 14.45(h) in. (25 x 25 x 36.7 cm)
	<b>Weight</b>	7.72 lb. (3.5 kg)
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	10% to 95%, noncondensing
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager; Telnet; HTTPS; RMON1; FTP	
<b>Features</b>	Performance - 6.5Gbps Firewall Throughput - 1.8M Concurrent connection - 50K New connection per second - Max 20480 security policies - 2Gbps 3DES/AES VPN Throughput - 5000 IPSec tunnel - 4K VLAN Firewall operation mode - Routing mode - Transparent mode - Hybrid mode AAA service - Local Authentication - Standard Radius - HWTACACS+ - RADIUS domain Authentication ASPF - General TCP / UDP application - FTP/SMTP/HTTP/RTSP/H323 Protocol State Detection - SIP/MGCP/QQ/MSN Protocol State Detection	

### Accessory Product Details

- Java/ActiveX Blocking and Detection
- Port mapping
- Support for the fragmented packets
- Virtualization
  - 256 Virtual Firewall
  - 4 default Security Zone
  - Max 256 Security Zone
- NAT
  - NAT
  - NATPT
  - PAT
  - NAT Server
  - Port mapping
  - Bidirectional NAT
  - Static NAT
- Network Security
  - Add blacklist by hand or automatically
  - IP+MAC Binding
  - ARP Reverse Query
  - ARP Cheat Check
  - Management ports closed by default
- DDOS
  - DNS Query Flood
  - SYN Flood
  - Auto start TCP Proxy when Detect SYN Flood
  - ICMP Flood
  - UDP Flood
  - IP Spoofing
  - SQL injection filter
- L2TP VPN
  - LNS,LAC
  - L2TP Multi-instance
- GRE
  - GRE tunneling protocol
- IPSec
  - AH/ESP
  - ESP
  - Transport/tunnel
  - NAT traversal
  - Strategy template
- IKE
  - DH
  - Pre-share Key authentication-method
  - Support aggressive mode and main exchange mode
  - IKE DPD, PKI / CA
- Network Feature
  - 802.1q VLAN
  - 4K sub-interface
  - Static and dynamic ARP
  - Multicast, PIM
  - IGMP v1/v2/v3
- Routing
  - RIP
  - OSPF
  - BGP
  - Static Route
  - policy Route



### Accessory Product Details

- High Availability
  - Active/Active mode
  - Active/Passive mode
  - Session Synchronization for Firewall
- System management
  - Web Management support IE/Firefox
  - Command line interface (Console/Telnet/SSH)
  - Classification Manager
  - Unified management through iMC
  - SNMPv1/v2c/v3
- Administration
  - Software Upgrades
  - Configuration Backup and Restore
- Logging/Monitoring
  - Syslog
  - Mini RMON
  - NTP
  - NAT/ASPF/firewall log stream(Binary log)
- IPv6 Routing & Multicast
  - RIPng
  - OSPFv3
  - BGP4+
  - Static Route
  - Policy Route
  - PIM-SM/DM
- IPv6 Security
  - NAT-PT
  - Manual tunnel
  - IPV6 OVER ipv4 GRE tunnel
  - 6to4 tunnel (RFC3056)
  - ISATAP Tunnel
  - IPv6 Packet Filter
  - Radius
  - NAT64

### Services

- 3-year, parts only, global next-day advance exchange (UZ914E)
- 3-year, 4-hour onsite, 13x5 coverage for hardware (UZ915 )
- 3-year, 4-hour onsite, 24x7 coverage for hardware (UZ918E)
- 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UZ922E)
- 3-year, 24x7 SW phone support, software updates (UZ925E)
- 4-year, 4-hour onsite, 13x5 coverage for hardware (UZ916E)
- 4-year, 4-hour onsite, 24x7 coverage for hardware (UZ919E)
- 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UZ923E)
- 4-year, 24x7 SW phone support, software updates (UZ926E)
- 5-year, 4-hour onsite, 13x5 coverage for hardware (UZ917E)
- 5-year, 4-hour onsite, 24x7 coverage for hardware (UZ920E)
- 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UZ924E)
- 5-year, 24x7 SW phone support, software updates (UZ927E)
- 3 Yr 6 hr Call-to-Repair Onsite (UZ928E)
- 4 Yr 6 hr Call-to-Repair Onsite (UZ929E)
- 5 Yr 6 hr Call-to-Repair Onsite (UZ930E)

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 IPv6

RFC 2405 The ESP DES-CBC Cipher Algorithm With

## Accessory Product Details

RFC 1981 IPv6 Path MTU Discovery  
RFC 2460 IPv6 Specification  
RFC 2465 Management Information Base for IP Version 6: Textual Conventions and General Group (partially support, only "IPv6 Interface Statistics table")  
RFC 3484 Default Address Selection for IPv6  
RFC 3513 IPv6 Addressing Architecture  
RFC 3587 IPv6 Global Unicast Address Format  
RFC 4007 IPv6 Scoped Address Architecture  
RFC 4862 IPv6 Stateless Address Auto-configuration

### **Security**

RFC 1321 The MD5 Message-Digest Algorithm  
RFC 1334 PPP Authentication Protocols (PAP)  
RFC 1994 PPP Challenge Handshake Authentication Protocol (CHAP)  
RFC 2104 Keyed-Hashing for Message Authentication  
RFC 2138 RADIUS Authentication  
RFC 2618 RADIUS Authentication Client MIB  
RFC 2620 RADIUS Accounting Client MIB  
RFC 2716 PPP EAP TLS Authentication Protocol  
RFC 2865 RADIUS Authentication  
RFC 2866 RADIUS Accounting  
RFC 2867 RADIUS Accounting Modifications for Tunnel Protocol Support  
RFC 2868 RADIUS Attributes for Tunnel Protocol Support  
RFC 2869 RADIUS Extensions  
draft-grant-tacacs-02 (TACACS)

### **VPN**

RFC 1701 Generic Routing Encapsulation (GRE)  
RFC 1702 Generic Routing Encapsulation over IPv4 networks.  
RFC 1828 IP Authentication using Keyed MD5  
RFC 1829 The ESP DES-CBC Transform  
RFC 1853 IP in IP Tunneling  
RFC 2085 HMAC-MD5 IP Authentication with Replay Prevention  
RFC 2401 Security Architecture for the Internet Protocol  
RFC 2402 IP Authentication Header  
RFC 2403 The Use of HMAC-MD5-96 within ESP and AH  
RFC 2404 The Use of HMAC-SHA-1-96 within ESP and AH

Explicit IV  
RFC 2406 IP Encapsulating Security Payload (ESP)  
RFC 2410 The NULL Encryption Algorithm and Its Use With IPsec  
RFC 2411 IP Security Document Roadmap  
RFC 2451 The ESP CBC-Mode Cipher Algorithms  
RFC 2473 Generic Packet Tunneling in IPv6 Specification  
RFC 2529 Transmission of IPv6 over IPv4 Domains without Explicit Tunnels  
RFC 2661 Layer Two Tunneling Protocol "L2TP"  
RFC 2784 Generic Routing Encapsulation (GRE)  
RFC 2868 RADIUS Attributes for Tunnel Protocol Support  
RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers  
RFC 3602 The AES-CBC Cipher Algorithm and Its Use with IPsec  
RFC 4214 Intra-Site Automatic Tunnel Addressing Protocol (ISATAP)

### **IKEv1**

RFC 2407 The Internet IP Security Domain of Interpretation for ISAKMP  
RFC 2408 Internet Security Association and Key Management Protocol (ISAKMP).  
RFC 2409 The Internet Key Exchange (IKE)  
RFC 2412 The OAKLEY Key Determination Protocol  
RFC 3526 More Modular Exponential (MODP) Diffie-Hellman groups for Internet Key Exchange (IKE)  
RFC 3706 A Traffic-Based Method of Detecting Dead Internet Key Exchange (IKE) Peers

### **PKI**

RFC 2510 Internet X.509 Public Key Infrastructure Certificate Management Protocols  
RFC 2511 Internet X.509 Certificate Request Message Format  
RFC 3279 Algorithms and Identifiers for the Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile  
RFC 3280 Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile  
draft-nourse-scep-06:  
PKCS#1  
PKCS#10  
PKCS#12  
PKCS#7

### Summary of Changes

Date	Version History	Action	Description of Change:
01-Dec-2014	From Version 27 to 28	Changed	Warranty and support updated
10-Jun-2014	From Version 26 to 27	Changed	Switch Options were revised in Configuration.
15-Apr-2014	From Version 25 to 26	Changed	Notes section for Box Level Integration CTO Models were revised in Configuration.
19-Mar-2014	From Version 24 to 25	Changed	Transceivers and Modules were revised.
16-Jan-2014	From Version 23 to 24	Removed	HP X240 10G SFP+ 7m DAC Cable was removed from Configuration.
17-Dec-2013	From Version 21 to 23	Changed	Configuration was revised and Configuration - AF Models was removed
11-Nov-2013	From Version 19 to 21	Changed	Configuration - AF Models notes and transceivers were revised.
15-Oct-2013	From Version 18 to 19	Changed	Configuration was revised.
19-Aug-2013	From Version 17 to 18	Changed	Configuration was revised.
05-Jul-2013	From Version 16 to 17	Added	Accessories: Added two options.
27-Jun-2013	From Version 15 to 16	Changed	Features and benefits and Standards and protocols were revised  HP 5800 Access Controller Modules for 64-256 and 32-64 Access Points were removed
10-Jun-2013	From Version 14 to 15	Changed	Configuration Rules was revised throughout Configuration and Configuration - AF Models was added.
24-Apr-2013	From Version 13 to 14	Added	Overview: Added Images.
10-Apr-2013	From Version 12 to 13	Changed	Updated the Configuration section.
25-Mar-2013	From Version 11 to 12	Added	Overview: Added Build to Order section to the Features and benefits section.
24-Aug-2012	From Version 10 to 11	Changed	Updated the Features and Benefits, Introduction and Accessories sections.
20-Aug-2012	gust 20, 2012- From Version 9 to 10	Changed	Updated Accessories and Features and Benefits.
14-May-2012	From Version 8 to 9	Changed	Features and Benefits, Accessories, and the weight and dimensions for each spec were revised.
20-Apr-2012	From Version 7 to 8	Changed	Features and Benefits and Accessories were revised.
16-Nov-2011	From Version 6 to 7	Changed	Updated the Connectivity section of Features and Benefits.
26-Sep-2011	From Version 4 to 6	Added	New models were added.
24-May-2011	From Version 3 to 4	Changed	Accessories were revised.
17-Mar-2011	From Version 2 to 3	Changed	Monitors and Diagnostics was revised.
01-Feb-2011	From Version 1 to 2	Changed	Models and Accessories were revised.

### Summary of Changes

To learn more, visit: [www.hp.com/networking](http://www.hp.com/networking)

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