Overview

Models

HP 3600-24 v2 SI Switch	JG304A
HP 3600-48 v2 SI Switch	JG305A
HP 3600-24-PoE+ v2 SI Switch	JG306B
HP 3600-48-PoE+ v2 SI Switch	JG307B

Key features

- Robust switching at the enterprise network edge
- Static and RIP Layer 3 routing
- Automatic stacking with IRF
- Integrated and distributed security enforcement
- Enterprise-level nonblocking performance

Product overview

The HP 3600 SI Switch Series delivers intelligent, resilient performance, security, and reliability for robust switching at the enterprise network edge. The series consists of Fast Ethernet and PoE/PoE+ switches, with features that can accommodate large enterprise and SMB applications. Secure, resilient connectivity, as well as the latest traffic-prioritization technologies, enhance converged networks. The switches are designed for improved flexibility and scalability.

Features and benefits

Quality of Service (QoS)

- **Broadcast control**
  allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic
- **Advanced classifier-based QoS**
  classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a per-port or per-VLAN basis
- **Powerful QoS feature**
  supports the following congestion actions: strict priority (SP) queuing, weighted round robin (WRR), weighted fair queuing (WFQ), and WRED
- **Traffic policing**
  supports Committed Access Rate (CAR) and line rate

Management

- **Friendly port names**
  allows assignment of descriptive names to ports
- **Remote configuration and management**
  enables configuration and management through a secure Web browser or a CLI located on a remote device
- **Manager and operator privilege levels**
  provides read-only (operator) and read/write (manager) access on CLI and Web browser management interfaces
- **Command authorization**
  leverages HWTACACS to link a custom list of CLI commands to an individual network administrator's login; also provides an audit trail

Overview

- **Secure Web GUI**
  provides a secure, easy-to-use graphical interface for configuring the module via HTTPS
- **Multiple configuration files**
  stores easily to the flash image
- **Complete session logging**
  provides detailed information for problem identification and resolution
- **SNMPv1, v2c, and v3**
  facilitate centralized discovery, monitoring, and secure management of networking devices
- **Remote monitoring (RMON)**
  uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group
- **Local and remote intelligent mirroring**
  mirrors traffic from a switch port to a remote switch port anywhere on the network, or mirror ACL-selected traffic to a local switch port
- **Management VLAN**
  segments traffic to and from management interfaces, including CLI/telnet, a Web browser interface, and SNMP
- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP)**
  advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications
- **Device Link Detection Protocol (DLDP)**
  monitors a cable between two switches and shuts down the ports on both ends if the cable is broken, preventing network problems such as loops
- **sFlow (RFC 3176)**
  provides scalable ASIC-based wirespeed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes
- **IPv6 management**
  future-proofs networking, as the switch is capable of being managed whether the attached network is running IPv4 or IPv6; supports pingv6, tracertv6, Telnetv6, TFTPv6, DNSv6, syslogv6, FTPv6, SNMPv6, DHCPv6, and RADIUS for IPv6
- **Troubleshooting**
  ingress and egress port monitoring enable network problem solving; virtual cable tests provide visibility into cable problems

Connectivity

- **IPv6**
  - **Telnet**
    for allowing CLI access via IPv6
  - **SNMP**
    for IPv6 switch management
  - **DNS**
    for IPv6 host management
  - **DHCP**
    for auto IPv6 address configuration of a switch
- **Auto-MDIX**
  provides automatic adjustments for straight-through or crossover cables on all 10/100 and 10/100/1000 ports
- **Jumbo packet support**
  supports up to 9216-byte frame size to improve the performance of large data transfers
- **Gigabit Ethernet uplinks**
  are dual-personality ports for either 10/100/1000 or mini-GBIC SFP connectivity for increased connectivity flexibility
- **High-density access**

Overview

provides up to 48 fixed 10/100BASE-T PoE or non-PoE ports in a Layer 2 or Layer 3 switch

- **Ethernet operations, administration and maintenance (OAM)**
  detects data link layer problems that occurred in the "last mile" using the IEEE 802.3ah OAM standard; monitors the status of the link between two devices
- **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+)**
  provides up to 30 W per port that allows support of the latest PoE+-capable devices such as IP phones, wireless access points, and security cameras, as well as any IEEE 802.3af-compliant end device; eliminates the cost of additional electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments

Performance

- **Nonblocking performance**
  up to 17.6 Gbps nonblocking switching fabric provides wire-speed switching with up to 13.1 million pps throughput
- **Gigabit Ethernet interface**
  provides a connection to the network that eliminates the network as a bottleneck
- **Hardware-based wirespeed access control lists**
  feature-rich ACL implementation helps ensure high levels of security and ease of administration without impacting network performance

Resiliency and high availability

- **Separate data and control paths**
  separates control from services and keeps service processing isolated; increases security and performance
- **External redundant power supply**
  provides high reliability
- **Smart link**
  allows 50 ms failover between links
- **Spanning Tree/MSTP, RSTP**
  provides redundant links while preventing network loops
- **Intelligent Resilient Framework (IRF)**
  creates virtual resilient switching fabrics, where two or more switches perform as a single L2 switch and L3 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; can eliminate the need for complex protocols like Spanning Tree Protocol, Equal-Cost Multipath (ECMP), or VRRP, thereby simplifying network operation
- **IEEE 802.3ad Link Aggregation Control Protocol (LACP)**
  supports up to 26 trunks, each with 8 links per trunk; supports static or dynamic groups
- **Virtual Router Redundancy Protocol (VRRP)**
  allows groups of two routers to dynamically back each other up to create highly available routed environments in IPv4 and IPv6 networks
- **IRF capability**
  provides single IP address management for a resilient virtual switching fabric of up to nine switches
- **Ring Resiliency Protection Protocol (RRPP)**
  provides standard sub 50 ms recovery for ring Ethernet-based topology

Manageability

- **RMON (remote monitoring)**
  provides advanced monitoring and reporting capabilities for statistics, history, alarms, and events

Overview

Layer 2 switching

- **16/32K MAC address table**
  provides access to many Layer 2 devices
- **VLAN support and tagging**
  supports IEEE 802.1Q with 4,094 simultaneous VLAN IDs
- **GARP VLAN Registration Protocol**
  allows automatic learning and dynamic assignment of VLANs
- **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
- **Internet Group Management Protocol (IGMP) and Multicast**
  Listener Discovery (MLD) protocol snooping controls and manages the flooding of multicast packets in a Layer 2 network

Layer 3 services

- **Address Resolution Protocol (ARP)**
  determines the MAC address of another IP host in the same subnet
- **Dynamic Host Configuration Protocol (DHCP)**
  simplifies the management of large IP networks and supports client and server; DHCP Relay enables DHCP operation across subnets
- **Loopback interface address**
  defines an address in Routing Information Protocol (RIP) and Open Standard Path First (OSPF), improving diagnostic capability
- **User Datagram Protocol (UDP) helper function**
  allows UDP broadcasts to be directed across router interfaces to specific IP unicast or subnet broadcast addresses and prevents server spoofing for UDP services such as DHCP
- **Route maps**
  provide more control during route redistribution; allow filtering and altering of route metrics

Layer 3 routing

- **IPv4 routing protocols**
  support static routes and RIP
- **IPv6 routing protocols**
  provide routing of IPv6 at wire speed; support static routes and RIPng
- **IPv6 tunneling**
  allows a smooth transition from IPv4 to IPv6 by encapsulating IPv6 traffic over an existing IPv4 infrastructure
- **Equal-Cost Multipath (ECMP)**
  enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth
- **Bidirectional Forwarding Detection (BFD)**
  enables link connectivity monitoring and reduces network convergence time for VRRP, static routing, and IRF

Security

- **Access control lists (ACLs)**
  provides IP Layer 2 to Layer 4 traffic filtering; supports VLAN ACL and port ACL
- **Multiple user authentication methods**

Overview

  - **IEEE 802.1X**
    uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards
  - **Web-based authentication**
    provides a browser-based environment, similar to IEEE 802.1X, to authenticate clients that do not support the IEEE 802.1X supplicant
  - **MAC-based authentication**
    authenticates the client with the RADIUS server based on the client's MAC address
- **Identity-driven security and access control**
  - **Per-user ACLs**
    permits or denies user access to specific network resources based on user identity and time of day, allowing multiple types of users on the same network to access specific network services without risking network security or allowing unauthorized access to sensitive data
  - **Automatic VLAN assignment**
    automatically assigns users to the appropriate VLAN based on their identities
- **Secure management access**
  delivers secure encryption of all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3
- **Secure FTP**
  allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **Guest VLAN**
  provides a browser-based environment to authenticated clients that is similar to IEEE 802.1X
- **Endpoint Admission Defense (EAD)**
  provides security policies to users accessing a network
- **Port security**
  allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **Port isolation**
  secures and adds privacy, and prevents malicious attackers from obtaining user information
- **STP BPDU port protection**
  blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- **STP root guard**
  protects the root bridge from malicious attacks or configuration mistakes
- **DHCP protection**
  blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- **Dynamic ARP protection**
  blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- **IP Source Guard**
  filters packets on a per-port basis, which prevents illegal packets from being forwarded
- **RADIUS/HWTACACS**
  eases switch management security administration by using a password authentication server
- **Multiple Customer Edge (MCE)**
  facilitates MPLS VPN network integration with support for up to 63 VPNs

Convergence

- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP)**
  facilitates easy mapping using network management applications with LLDP automated device discovery protocol
- **LLDP-MED**
  is a standard extension that automatically configures network devices, including LLDP-capable IP phones
- **LLDP-CDP compatibility**

Overview

receives and recognizes CDP packets from Cisco's IP phones for seamless interoperation

- **PoE allocations**
  supports multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user-specified) to allocate PoE power for more efficient energy savings
- **Voice VLAN**
  automatically assigns VLAN and priority for IP phones, simplifying network configuration and maintenance
- **IP multicast snooping and data-driven IGMP**
  automatically prevent flooding of IP multicast traffic
- **Multicast VLAN**
  allows multiple VLANs to receive the same multicast traffic, reducing network bandwidth demand by eliminating multiple streams to each VLAN

Device support

- **Cisco prestandard PoE support**
  detects and provides power to Cisco's prestandard PoE devices such as wireless LAN access points and IP phones

Additional information

- **Green initiative support**
  provides support for RoHS and WEEE regulations
- **Green IT and power**
  uses the latest advances in silicon development and shuts off unused ports to improve power efficiency

Warranty and support

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

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

Configuration

Build To Order:

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

HP 3600-24-PoE+ v2 SI Switch — JG306B
- 24 RJ-45 autosensing 10/100 PoE+ ports
- 2 dual-personality 10/100/1000 ports/ SFP 1000 Mbps ports
- 2 SFP 1000 Mbps ports
- min=0 \ max=4 SFP Transceivers
- 1U - Height

See Configuration Note:1, 4, 5, 6

PDU Cable NA/MEX/TW/JP — JG306B#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW — JG306B#B2C
- C15 PDU Jumper Cord (ROW)

High Volt Switch/Router to Wall Power Cord — JG306B#B2E
- NEMA L6-20P Cord (NA/MEX/JP/TW)

HP 3600-24 v2 SI Switch — JG304A
- 24 RJ-45 autosensing 10/100 ports
- 2 dual-personality 10/100/1000 ports/ SFP 1000 Mbps ports
- 4 SFP 1000 Mbps ports
- min=0 \ max=6 SFP Transceivers
- 1U - Height

See Configuration Note:1, 2

HP 3600-48 v2 SI Switch — JG305A
- 48 RJ-45 autosensing 10/100 ports
- 2 dual-personality 10/100/1000 ports/ SFP 1000 Mbps ports
- 4 SFP 1000 Mbps ports
- min=0 \ max=6 SFP Transceivers
- 1U - Height

See Configuration Note:1, 2

HP 3600-48-PoE+ v2 SI Switch — JG307A
- 48 RJ-45 autosensing 10/100 ports
- 2 dual-personality 10/100/1000 ports/ SFP 1000 Mbps ports
- 4 SFP 1000 Mbps ports
- min=0 \ max=6 SFP Transceivers
- 1U - Height

See Configuration Note:1, 2

HP 3600-48-PoE+ v2 SI Switch — JG307B
- 48 RJ-45 autosensing 10/100 PoE+ ports
- 2 dual-personality 10/100/1000 ports/ SFP 1000 Mbps ports
- 2 SFP 1000 Mbps ports
- min=0 \ max=4 SFP 1000 Transceivers
- 1U - Height

See Configuration Note:1, 4, 5, 6

Configuration

PDU Cable NA/MEX/TW/JP JG307B#B2B

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

PDU Cable ROW JG307B#B2C

- C15 PDU Jumper Cord (ROW)

High Volt Switch/Router to Wall Power Cord JG307B#B2E

- NEMA L6-20P Cord (NA/MEX/JP/TW)

Configuration Rules:

Note 1 The following Transceivers install into this switch:

HP X125 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X125 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-D Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X124 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A

Note 2 Localization required. (See Localization Menu for list.)

Note 4 When Switches are Not Factory Racked, Then Switch to Wall Power Cord should be the Defaulted Power Cable option on the Switches.

Note 5 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) or #B2E. (See Localization Menu)

Note 6 #B2E is Offered only in NA, Mexico, Taiwan and Japan.

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)
High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)

Rack Level Integration CTO Models

Switch Chassis

HP 3600-24-PoE+ v2 SI Switch JG306B

Configuration

- 24 RJ-45 autosensing 10/100 PoE+ ports
- 2 dual-personality 10/100/1000 ports/ SFP 1000 Mbps ports
- 2 SFP 1000 Mbps ports
- min=0 \ max=4 SFP 1000 Transceivers
- 1U - Height

See Configuration Note:1, 3, 4, 5

PDU Cable NA/MEX/TW/JP — JG306B#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW — JG306B#B2C
- C15 PDU Jumper Cord (ROW)

HP 3600-48-PoE+ v2 SI Switch — JG307B
- 48 RJ-45 autosensing 10/100 PoE+ ports
- 2 dual-personality 10/100/1000 ports/ SFP 1000 Mbps ports
- 2 SFP 1000 Mbps ports
- min=0 \ max=4 SFP 1000 Transceivers
- 1U - Height

See Configuration Note:1, 3, 4, 5

PDU Cable NA/MEX/TW/JP — JG307B#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW — JG307B#B2C
- C15 PDU Jumper Cord (ROW)

Configuration Rules:

Note 1 — The following Transceivers install into this switch:

HP X125 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X125 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-D Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X124 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A

Note 3 — When Switches are Factory Racked, Then #B2B, or #B2C should be the Defaulted Power Cable option on the Switches.

Note 4 — Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord). (See Localization Menu)

Note 5 — If the CTO Switch Chassis needs to be racked, Then the CTO Base Model needs to integrate (with #0D1) to the HP Network Rack.

Configuration

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)

Transceivers

SFP Transceivers

HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
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 X120 1G SFP LC LH40 1550nm XCVR	JD062A
HP X125 1G SFP LC LH70 Transceiver	JD063B
HP X120 1G SFP RJ45 T Transceiver	JD089B

Internal Power Supplies

Power Supplies included

Switch Enclosure Options

Stacking Cable kit

HP 3600 Switch SFP Stacking Kit	JD324B

External Redundant Power Supplies

HP RPS 800 Redundant Power Supply • Height = 1U • includes 1 x c13, 800w	JD183A See Configuration Note:2
HP RPS1600 Redundant Power System • Height = 1U • includes 1 x c13, 1600w and Power Supply port	JG136A See Configuration Note:2
HP RPS1600 1600W AC Power Supply • Installs into JG136A only	JG137A See Configuration Note:1

Configuration

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.

External Redundant Power Cables

HP X290 1000 A JD5 2m RPS Cable	JD187A

Technical Specifications

HP 3600-24 v2 SI Switch (JG304A)

Ports	24 RJ-45 autosensing 10/100 ports; Media Type: Auto-MDIX; Duplex: half or full (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX) 4 SFP 1000 Mbps ports 2 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T) 1 RJ-45 serial console port	
Physical characteristics	**Dimensions**	17.32(w) x 10.24(d) x 1.72(h) in (43.99 x 26.01 x 4.37 cm) (1U height)
	Weight	11.02 lb (5 kg)
Memory and processor	256 MB SDRAM, 128 MB flash; packet buffer size: 2 MB	
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)	
Performance	**100 Mb Latency**	< 6 µs
	1000 Mb Latency	< 5 µs
	Throughput	9.5 million pps
	Routing/Switching capacity	12.8 Gb/s
	Routing table size	2048 entries (IPv4)
Environment	**Operating temperature**	32°F to 122°F (0°C to 50°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Acoustic	Low-speed fan: 39.5 dB, High-speed fan: 48.4 dB
Electrical characteristics	**Frequency**	50/60 Hz
	Maximum heat dissipation	89 BTU/hr (93.9 kJ/hr)
	AC Voltage	100-240 VAC
	Maximum power rating	26 W
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance	
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UV822E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV825E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV828E) 3-year, 24x7 SW phone support, software updates (UV831E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR589E)	

1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR590E)
1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR591E)
4-year, 4-hour onsite, 13x5 coverage for hardware (UV823E)
4-year, 4-hour onsite, 24x7 coverage for hardware UV826E)
4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV829E)
4-year, 24x7 SW phone support, software updates (UV832E)
5-year, 4-hour onsite, 13x5 coverage for hardware (UV824E)
5-year, 4-hour onsite, 24x7 coverage for hardware (UV827E)
5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV830E)
5-year, 24x7 SW phone support, software updates (UV833E)
3 Yr 6 hr Call-to-Repair Onsite (UW431E)
4 Yr 6 hr Call-to-Repair Onsite (UW432E)
5 Yr 6 hr Call-to-Repair Onsite (UW433E)
1-year, 6 hour Call-To-Repair Onsite for hardware (HR593E)
1-year, 24x7 software phone support, software updates (HR592E)
1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS690E)
1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS691E)
3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS692E)
3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS693E)
4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS694E)
4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS695E)
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS696E)
5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS697E)

Refer to the HP website at: **www.hp.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 3600-48 v2 SI Switch (JG305A)

Ports	48 RJ-45 autosensing 10/100 ports; Media Type: Auto-MDIX; Duplex: half or full (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX)	
	4 SFP 1000 Mbps ports	
	2 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)	
	1 RJ-45 serial console port	
Physical characteristics	**Dimensions**	17.32(w) x 10.24(d) x 1.72(h) in (43.99 x 26.01 x 4.37 cm) (1U height)
	Weight	8.82 lb (4 kg)
Memory and processor	256 MB SDRAM, 128 MB flash; packet buffer size: 4 MB	
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)	
Performance	**100 Mb Latency**	< 6 µs
	1000 Mb Latency	< 5 µs
	Throughput	13.1 million pps (64-byte packets)

Technical Specifications

	Routing/Switching capacity	17.6 Gb/s
	Routing table size	2048 entries (IPv4)
Environment	**Operating temperature**	32°F to 122°F (0°C to 50°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Acoustic	Low-speed fan: 43.2 dB, High-speed fan: 50 dB
Electrical characteristics	**Frequency**	50/60 Hz
	Maximum heat dissipation	140 BTU/hr (147.7 kJ/hr)
	AC Voltage	100-240 VAC
	Maximum power rating	41 W
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance	
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UV822E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV825E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV828E) 3-year, 24x7 SW phone support, software updates (UV831E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR589E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR590E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR591E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV823E) 4-year, 4-hour onsite, 24x7 coverage for hardware UV826E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV829E) 4-year, 24x7 SW phone support, software updates (UV832E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV824E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV827E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV830E) 5-year, 24x7 SW phone support, software updates (UV833E) 3 Yr 6 hr Call-to-Repair Onsite (UW431E) 4 Yr 6 hr Call-to-Repair Onsite (UW432E) 5 Yr 6 hr Call-to-Repair Onsite (UW433E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR593E) 1-year, 24x7 software phone support, software updates (HR592E) 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS690E)	

1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS691E)
3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS692E)
3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS693E)
4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS694E)
4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS695E)
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS696E)
5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS697E)

Refer to the HP website at: **www.hp.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 3600-24-PoE+ v2 SI Switch (JG306B)

Ports	24 RJ-45 autosensing 10/100 PoE+ ports; Media Type: Auto-MDIX; Duplex: half or full (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3at PoE+)	
	4 SFP 1000 Mbps ports	
	2 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)	
	1 RJ-45 serial console port	
Physical characteristics	**Dimensions**	17.32(w) x 16.54(d) x 1.72(h) in (44.0 x 42.0 x 4.36 cm) (1U height)
	Weight	22.05 lb (10 kg)
Memory and processor	256 MB SDRAM, 128 MB flash; packet buffer size: 2 MB	
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)	
Performance	**100 Mb Latency**	< 6 µs
	1000 Mb Latency	< 5 µs
	Throughput	9.5 million pps (64-byte packets)
	Routing/Switching capacity	12.8 Gb/s
	Routing table size	2048 entries (IPv4)
Environment	**Operating temperature**	32°F to 122°F (0°C to 50°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Acoustic	Low-speed fan: 44.7 dB, High-speed fan: 53.8 dB
Electrical characteristics	**Frequency**	50/60 Hz
	Maximum heat dissipation	143 BTU/hr (150.86 kJ/hr)

Technical Specifications

	AC Voltage	100-240 VAC
	Maximum power rating	795 W
	PoE power	720 W
Safety		UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance
Emissions		FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A
Management		IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager
Services		Refer to the HP website at **www.hp.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 3600-48-PoE+ v2 SI Switch (JG307B)

Ports		48 RJ-45 autosensing 10/100 PoE+ ports; Duplex: half or full (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3at PoE+) 4 SFP 1000 Mbps ports 2 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T) 1 RJ-45 serial console port
Physical characteristics	**Dimensions**	17.32(w) x 16.54(d) x 1.72(h) in (43.99 x 42.01 x 4.37 cm) (1U height)
	Weight	22.05 lb (10 kg)
Memory and processor		256 MB SDRAM, 128 MB flash; packet buffer size: 4 MB
Mounting		Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
Performance	**100 Mb Latency**	< 6 µs
	1000 Mb Latency	< 5 µs
	Throughput	13.1 million pps (64-byte packets)
	Routing/Switching capacity	17.6 Gb/s
	Routing table size	2048 entries (IPv4)
Environment	**Operating temperature**	32°F to 122°F (0°C to 50°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Acoustic	Low-speed fan: 43.5 dB, High-speed fan: 55 dB
Electrical characteristics	**Frequency**	50/60 Hz
	Maximum heat dissipation	198 BTU/hr (208.89 kJ/hr)

Technical Specifications

	Voltage	100-240 VAC
	Maximum power rating	820 W
	PoE power	720 W
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance	
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	
Services	Refer to the HP website at: **www.hp.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	

Standards and Protocols
(applies to all products in series)

Device management	RFC 1157 SNMPv1/v2c RFC 1901-1907 SNMPv2c, SMIv2 and Revised MIB-II RFC 2573 (SNMPv3 Applications) RFC 2578-2580 SMIv2 RFC 2819 (RMON groups Alarm, Event, History and Statistics only) RFC 3410 (Management Framework) RFC 3416 (SNMP Protocol Operations v2) RFC 3417 (SNMP Transport Mappings) HTML and telnet management Multiple Configuration Files SNMP v3 and RMON RFC support SSHv1/SSHv2 Secure Shell
General protocols	IEEE 802.1ad Q-in-Q IEEE 802.1D MAC Bridges IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1s (MSTP) IEEE 802.1v VLAN classification by Protocol and Port IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.1X PAE IEEE 802.3 Type 10BASE-T IEEE 802.3ab 1000BASE-T IEEE 802.3ac (VLAN Tagging Extension) IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3i 10BASE-T IEEE 802.3u 100BASE-X IEEE 802.3x Flow Control IEEE 802.3z 1000BASE-X RFC 768 UDP RFC 783 TFTP Protocol (revision 2)

Technical Specifications

	RFC 791 IP RFC 792 ICMP RFC 793 TCP RFC 826 ARP RFC 1058 RIPv1 RFC 1213 Management Information Base for Network Management of TCP/IP-based internets RFC 1812 IPv4 Routing RFC 2131 DHCP RFC 2236 IGMP Snooping RFC 2338 VRRP RFC 2453 RIPv2 RFC 2644 Directed Broadcast Control RFC 2665 Definitions of Managed Objects for the Ethernet-like Interface Types RFC 2711 IPv6 Router Alert Option RFC 3410 Applicability Statements for SNMP RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3) RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP) RFC 3416 Protocol Operations for SNMP RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP) RFC 4594 Configuration Guidelines for DiffServ Service Classes
IPv6	RFC 1881 IPv6 Address Allocation Management RFC 1887 IPv6 Unicast Address Allocation Architecture RFC 1981 IPv6 Path MTU Discovery RFC 2080 RIPng for IPv6 RFC 2373 IPv6 Addressing Architecture RFC 2375 IPv6 Multicast Address Assignments RFC 2460 IPv6 Specification RFC 2461 IPv6 Neighbor Discovery RFC 2462 IPv6 Stateless Address Auto-configuration RFC 2463 ICMPv6 RFC 2464 Transmission of IPv6 over Ethernet Networks RFC 2475 IPv6 DiffServ Architecture RFC 2711 IPv6 Router Alert Option RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only) RFC 2925 Remote Operations MIB (Ping only) RFC 3056 Connection of IPv6 Domains via IPv4 Clouds RFC 3162 RADIUS and IPv6 RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses RFC 3307 IPv6 Multicast Address Allocation RFC 3315 DHCPv6 (client and relay) RFC 3484 Default Address Selection for IPv6 RFC 3493 Basic Socket Interface Extensions for IPv6 RFC 3513 IPv6 Addressing Architecture RFC 3542 Advanced Sockets API for IPv6 RFC 3587 IPv6 Global Unicast Address Format RFC 3596 DNS Extension for IPv6 RFC 4113 MIB for UDP RFC 4443 ICMPv6
MIBs	RFC 1213 MIB II

Technical Specifications

	RFC 1493 Bridge MIB RFC 1724 RIPv2 MIB RFC 1757 Remote Network Monitoring MIB RFC 1907 SNMPv2 MIB RFC 2233 Interface MIB RFC 2571 SNMP Framework MIB RFC 2572 SNMP-MPD MIB RFC 2573 SNMP-Notification MIB RFC 2573 SNMP-Target MIB RFC 2574 SNMP USM MIB RFC 2618 RADIUS Authentication Client MIB RFC 2620 RADIUS Accounting Client MIB RFC 2665 Ethernet-Like-MIB RFC 2674 802.1p and IEEE 802.1Q Bridge MIB RFC 2819 RMON MIB RFC 3414 SNMP-User based-SM MIB RFC 3415 SNMP-View based-ACM MIB
Network management	IEEE 802.1AB Link Layer Discovery Protocol (LLDP) RFC 1157 SNMPv1 RFC 1757 RMON 4 groups: Stats, History, Alarms and Events RFC 1901 SNMPv2 Introduction RFC 1902 Structure of Management Information for Version 2 of the Simple Network Management Protocol (SNMPv2) RFC 1903 SNMPv2 Textual Conventions RFC 1904 SNMPv2 Conformance RFC 1905 SNMPv2 Protocol Operations RFC 1906 SNMPv2 Transport Mappings RFC 2570 SNMPv3 Overview RFC 2571 An Architecture for Describing SNMP Management Frameworks RFC 2572 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP) RFC 2573 SNMP Applications RFC 2574 SNMPv3 User-based Security Model (USM) RFC 2575 SNMPv3 View-based Access Control Model (VACM) RFC 2578 Structure of Management Information Version 2 (SMIv2) RFC 2579 Textual Conventions for SMIv2 RFC 2580 Conformance Statements for SMIv2 RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events) RFC 3410 Introduction to Version 3 of the Internet-standard Network Management Framework RFC 3414 SNMPv3 User-based Security Model (USM) RFC 3415 SNMPv3 View-based Access Control Model VACM) ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED) SNMPv1/v2c/v3
QoS/CoS	RFC 4594 Configuration Guidelines for DiffServ Service Classes

Accessories

HP 3600 SI Switch Series accessories	**Transceivers**	
	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X125 1G SFP LC LH70 Transceiver	JD063B
	HP X125 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 X170 1G SFP LC LH70 1550 Transceiver	JD109A
	HP X170 1G SFP LC LH70 1570 Transceiver	JD110A
	HP X170 1G SFP LC LH70 1590 Transceiver	JD111A
	HP X170 1G SFP LC LH70 1610 Transceiver	JD112A
	HP X170 1G SFP LC LH70 1470 Transceiver	JD113A
	HP X170 1G SFP LC LH70 1490 Transceiver	JD114A
	HP X170 1G SFP LC LH70 1510 Transceiver	JD115A
	HP X170 1G SFP LC LH70 1530 Transceiver	JD116A
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	Cables	
	HP A3600 Switch SFP Stacking Kit	JD324B
	HP 0.5 m Multimode OM3 LC/LC Optical Cable	AJ833A
	HP 1 m Multimode OM3 LC/LC Optical Cable	AJ834A
	HP 2 m Multimode OM3 LC/LC Optical Cable	AJ835A
	HP 5 m Multimode OM3 LC/LC Optical Cable	AJ836A
	HP 15 m Multimode OM3 LC/LC Optical Cable	AJ837A
	HP 30 m Multimode OM3 LC/LC Optical Cable	AJ838A
	HP 50 m Multimode OM3 LC/LC Optical Cable	AJ839A
	HP 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 RPS1600 Redundant Power System	JG136A
	HP RPS1600 1600W AC Power Supply	JG137A
	Power cords	
	HP X290 JD5 JD5 2m RPS1600 Cable	JD187A

Accessory Product Details

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

HP X124 1G SFP LC LH40 1310nm Transceiver (JD061A) A small form-factor pluggable SFP Gigabit LH40 transceiver that provides a full duplex Gigabit solution up to 40km on a single-mode fiber.	**Ports**	1 LC 1000Base-LH port (no IEEE standard exists for 1550 nm optics)	
	Connectivity	Connector type	LC
		Wavelength	1310 nm
	Physical characteristics	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)
	Electrical characteristics	Power consumption typical	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 40km distance	
		Fiber type	Single Mode
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	
HP X120 1G SFP LC LH40 1550nm Transceiver (JD062A) 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.	**Ports**	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics)	
	Connectivity	Connector type	LC
		Wavelength	1550 nm
	Physical characteristics	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)
	Electrical characteristics	Power consumption typical	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 40km distance	
		Fiber type	Single Mode
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	

Accessory Product Details

HP X125 1G SFP LC LH70 Transceiver (JD063B) A small form-factor pluggable (SFP) Gigabit LH70 transceiver that provides a full-duplex Gigabit solution up to 70km on a single-mode fiber.	**Ports**	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics)	
	Connectivity	**Connector type**	LC
		Wavelength	1550 nm
	Physical characteristics	**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)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 70km	
		Fiber type	Single Mode
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	
HP X125 1G SFP RJ45 T Transceiver (JD089B) 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.	**Ports**	1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T)	
	Connectivity	**Connector type**	RJ-45
	Physical characteristics	**Dimensions**	2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm)
		Full configuration weight	0.07 lb. (0.03 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ù differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T; Maximum distance: • 100m	
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	

Accessory Product Details

HP X120 1G SFP LC BX 10-U Transceiver (JD098B) A small form-factor pluggable (SFP) Gigabit LX-BX10-U transceiver that provides a full duplex Gigabit solution up to 10km on a single mode cable.	**Ports**	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-U); Duplex: full only	
	Connectivity	**Connector type**	LC
	Physical characteristics	**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)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • 10km	
		Fiber type	Single Mode
	Notes	TX 1310nm RX 1490nm	
	Services	Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	

HP X120 1G SFP LC BX 10-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.	**Ports**	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-D); Duplex: full only	
	Connectivity	**Connector type**	LC
	Physical characteristics	**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)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • Up to 10km	
		Fiber type	Single Mode
	Notes	TX 1490nm RX 1310nm	
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	

Accessory Product Details

HP X120 1G SFP LC SX Transceiver (JD118B) A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550m on a Multimode fiber.	**Ports**	1 LC 1000BASE-SX port	
	Connectivity	**Connector type**	LC
		Wavelength	850 nm
	Physical characteristics	**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)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • FDDI Grade distance = 220m • OM1 = 275m • OM2 = 500m • OM3 = Not Specified by standard	
		Cable length	up to 550m
		Fiber type	Multi Mode
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	
HP X120 1G SFP LC LX Transceiver (JD119B) A small form-factor pluggable (SFP) Gigabig LX transceiver that provides a full duplex Gigabit solution up to 550m on MMF or 10Km on SMF	**Ports**	1 SFP 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX)	
	Connectivity	**Connector type**	LC
		Wavelength	1300 nm
	Physical characteristics	**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)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Either single mode or multimode; Maximum distance: • 550m for Multimode • 10km for Singlemode	
		Fiber type	Both
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	

Accessory Product Details

HP 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical glass: Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical glass: Bandwidth: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber and designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Accessory Product Details

HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Accessory Product Details

HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m; **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Accessory Product Details

HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)	**Cabling**	**Cable type**: 50/125 µm core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m; **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: This specification defines the detail requirements for a tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Accessory Product Details

HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m; **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Accessory Product Details

HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m; **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Accessory Product Details

HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)	**Cabling**	**Cable type**: 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m; **Maximum distance**: 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end. ● Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um ● Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. ● Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. ● CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. ● BULK CABLE & CABLE ASSEMBLY CONFIGURATION: ● Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. ● Jacket Color: Aqua for OM3 multimode per TIA 598 ● Boot Color: White ● Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. ● Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. ● Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Accessory Product Details

HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable (QK732A)	**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 ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 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
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
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 ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 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
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Accessory Product Details

HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable (QK734A)	**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 ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 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
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable (QK735A)	**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 ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 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
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Accessory Product Details

HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable (QK736A)	**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 ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 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
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable (QK737A)	**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 ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 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
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Accessory Product Details

HP RPS1600 Redundant Power System (JG136A)	**Ports**	8 redundant power supply ports Restrictions: two -56V/25A DC(PoE); six -56V/8A DC(non-PoE)	
	Physical characteristics	**Dimensions**	15.63(d) x 17.32(w) x 1.74(h) in. (39.7 x 44 x 4.42 cm)
		Weight	14.11 lb. (6.4 kg)
		Full configuration weight	16.75 lb. (7.6 kg)
	Environment	**Operating temperature**	14°F to 122°F (-10°C to 50°C)
		Operating relative humidity	5% to 95%
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	5% to 95%
		Altitude	up to 13,123 ft. (4 km)
		Acoustic	Pressure: 53 dB; ISO 7779, ISO 9296
	Electrical characteristics	**Voltage**	100-120/200-240 VAC
		Current	30/60 A
		Idle power	38 W
		Maximum power rating	3550 W
		RPS power	3200 W
		PoE power	2800 W
		RPS	-55 V
		PoE	-55 V
		Frequency	50/60 Hz
		Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. 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.
	Safety	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	
	Services	Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	

Accessory Product Details

HP RPS1600 1600W AC Power Supply (JG137A)	**Physical characteristics**	**Dimensions**	8.19(d) x 4.96(w) x 1.63(h) in. (20.8 x 12.6 x 4.15 cm)
		Weight	3.02 lb. (1.37 kg)
	Environment	**Operating temperature**	14°F to 122°F (-10°C to 50°C)
		Operating relative humidity	5% to 95%
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	5% to 95%
	Electrical characteristics	**Voltage**	100-120/200-240 VAC
		Current	15/30 A
		Maximum power rating	1600 W
		Frequency	50/60 Hz
		Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
	Services	Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	

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