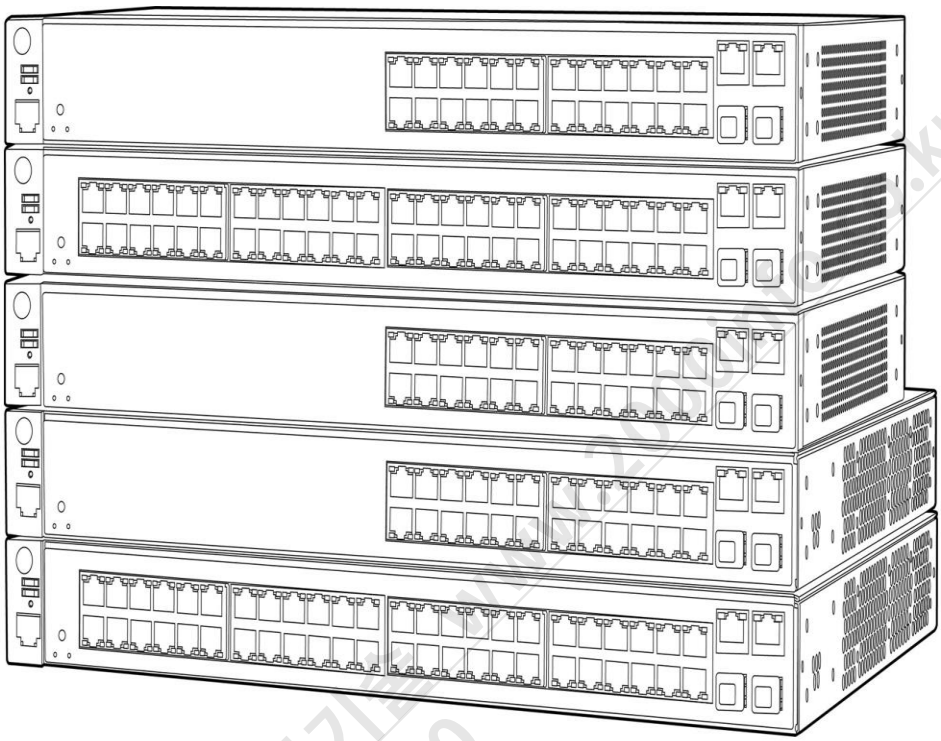
Overview

HP 2620 Switch Series



HP 2620 Switch Series Family

Models

HP 2620-24 Switch	J9623A
HP 2620-24-PPoE+ Switch	J9624A
HP 2620-24-PoE+ Switch	J9625A
HP 2620-48 Switch	J9626A
HP 2620-48-PoE+ Switch	J9627A

Key features

- Cost-effective access layer switches
- Lite L3 IPv4/IPv6 static and RIP routing
- 30 W PoE+ support on PoE models
- Gigabit fiber uplinks
- Enterprise-class features

Product overview

The HP 2620 Switch Series consists of five switches with 10/100 connectivity. The HP 2620-24 Switch has a fan-less design for quiet operation, making it suitable for deployments in open spaces. The models 2620-24-PPoE+, 2620-24-PoE+ models, and 2620-48-PoE+ are IEEE 802.3af- and IEEE 802.3at-compliant switches that provide up to 30 W per powered port. The 2620–48 model has variable-speed fans for quiet operation.

Overview

All 2620 switches include two 10/100/1000BASE-T ports and two SFP slots for Gigabit Ethernet uplink connectivity. An optional redundant external power supply is also available to provide redundancy in the event of a power supply failure.

With IPv4/IPv6 static and RIP routing, robust security and management features, as well as Limited Lifetime Warranty 2.0 and included software updates, the 2620 Switch Series is a cost-effective solution for those building converged enterprise-edge networks.

Features and benefits

Quality of Service (QoS)

- **Layer 4 prioritization**
  enables prioritization based on TCP/UDP port numbers
- **Traffic prioritization (IEEE 802.1p)**
  allows real-time traffic classification into eight priority levels mapped to eight queues
- **Class of Service (CoS)**
  sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ
- **Rate limiting**
  sets per-port ingress enforced maximums and per-port, per-queue minimums

Connectivity

- **Auto-MDIX**
  provides automatic adjustments for straight-through or crossover cables on all 10/100 and 10/100/1000 ports
- **IPv6**
  - **IPv6 host**
    allows the switches to be managed and deployed at the edge of an IPv6 network
  - **Dual stack (IPv4/IPv6)**
    provides a transition mechanism from IPv4 to IPv6; supports connectivity for both protocols
  - **MLD snooping**
    forwards IPv6 multicast traffic to the appropriate interface; prevents IPv6 multicast traffic from flooding the network
- **IEEE 802.3af Power over Ethernet (PoE)**
  provides up to 15.4 W per port to IEEE 802.3af-compliant PoE-powered devices such as IP phones, wireless access points, and security cameras
- **IEEE 802.3at Power Over Ethernet Plus**
  provides up to 30 W per port to IEEE 802.3 for PoE-/PoE+-powered devices such as video IP phones, IEEE 802.11n wireless access points, and advanced pan/tilt/zoom security cameras
- **Pre-standard PoE support**
  detects and provides power to pre-standard PoE devices; see list of supported devices in the product FAQ at www.hp.com/networking/support
- **Single IP address management**
  provides single IP address management for a virtual stack of up to 16 switches

Resiliency and high availability

- **External redundant power supply**
  provides high reliability
- **IEEE 802.3ad Link Aggregation Protocol (LACP) and HP port trunking**
  support up to 24 trunks, each with up to 8 links (ports) per trunk
- **IEEE 802.1s Multiple Spanning Tree**
  provides high link availability in multiple VLAN environments by allowing multiple spanning trees
- **NEW SmartLink**

Overview

provides easy-to-configure link redundancy of active and standby links

Manageability

- **Dual flash images**
  provides independent primary and secondary operating system files for backup while upgrading
- **Friendly port names**
  allows assignment of descriptive names to ports
- **Multiple configuration files**
  stores easily to the flash image
- **Port mirroring**
  enables traffic on a port to be simultaneously sent to a network analyzer for monitoring
- **sFlow (RFC 3176)**
  delivers wire-speed traffic accounting and monitoring configured by SNMP and CLI with three terminal encrypted receivers
- **RMON (remote monitoring)**
  provides advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- **Find-Fix-and-Inform**
  finds and fixes common network problems automatically, then informs the administrator
- **NEW Comware CLI**
- **Comware-compatible CLI**
  bridges the experience of HP Comware CLI users who are using the HP ProVision software CLI
- **Display and fundamental Comware CLI commands**
  are embedded in the switch CLI as native commands; display output is formatted as on Comware-based switches, and fundamental commands provide a Comware-familiar initial switch setup
- **Configuration Comware CLI commands**
  when Comware commands are entered, CLI help is elicited to formulate the correct ProVision software CLI command

Layer 2 switching

- **VLANs**
  provide support for 512 VLANs and 4,094 VLAN IDs
- **Jumbo packet support**
  improves the performance of large data transfers; supports frame size of up to 9220 bytes
- **IEEE 802.1v protocol VLANs**
  isolate select non-IPv4 protocols automatically into their own VLANs
- **NEW Per-VLAN Spanning Tree Plus (PVST+)**
  allows each VLAN to build a separate spanning tree to improve link bandwidth usage in network environments with multiple V

Layer 3 routing

- **Static IP routing**
  provides manually configured routing; includes ECMP capability
- **Routing Information Protocol (RIP)**
  provides RIPv1 and RIPv2 routing

Security

- **Access control lists (ACLs)**
  provide IP Layer 3 filtering based on source/destination IP address/subnet and source/destination TCP/UDP port number
- **Source-port filtering**
  allows only specified ports to communicate with each other

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- **RADIUS/TACACS+**
  eases switch management security administration by using a password authentication server
- **Secure shell**
  encrypts all transmitted data for secure remote CLI access over IP networks
- **Secure Sockets Layer (SSL)**
  encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- **Port security**
  allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **MAC address lockout**
  prevents particular configured MAC addresses from connecting to the network
- **Secure FTP**
  allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **Custom banner**
  displays security policy when users log in to the switch
- **Identity-driven ACL**
  enables implementation of a highly granular and flexible access security policy and VLAN assignment specific to each authenticated network user
- **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
- **Multiple user authentication methods**
  - **IEEE 802.1X**
    uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards
  - **Web-based authentication**
    provides a browser-based environment, similar to IEEE 802.1X, to authenticate clients that do not support the IEEE 802.1X supplicant
  - **MAC-based authentication**
    authenticates the client with the RADIUS server based on the client's MAC address
- **Authentication flexibility**
  - **Multiple IEEE 802.1X users per port**
    provides authentication of multiple IEEE 802.1X users per port; prevents a user from "piggybacking" on another user's IEEE 802.1X authentication
  - **Concurrent IEEE 802.1X, Web, and MAC authentication schemes per port**
    switch port will accept up to 32 sessions of IEEE 802.1X, Web, and MAC authentications
- **Port mirroring for network threats**
  provides sampled port traffic using sFlow technology to the HP Network Immunity Manager (NIM) application for Network Behavior Anomaly Detection (NBAD) analysis to detect threats and mitigate threats at the port where the threat originated
- **Per-port broadcast throttling**
  selectively configures broadcast control on heavy traffic port uplinks

Convergence

- **IP multicast snooping and data-driven IGMP**
  automatically prevent flooding of IP multicast traffic
- **LLDP-MED (Media Endpoint Discovery)**
  defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure

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network devices such as IP phones

- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP)**
  facilitates easy mapping using network management applications with LLDP automated device discovery protocol
- **PoE and PoE+ allocations**
  support multiple methods (automatic, IEEE 802.3at dynamic, LLDP-MED fine grain, IEEE 802.3af device class, or user specified) to allocate and manage PoE/PoE+ power for more efficient energy savings
- **LLDP-CDP compatibility**
  receives and recognizes CDP packets from Cisco's IP phones for seamless interoperation
- **Local MAC Authentication**
  assigns attributes such as VLAN and QoS using locally configured profile that can be a list of MAC prefixes

Unified Wired and Wireless

- **HTTP redirect function**
  supports HP Intelligent Management Center (IMC) bring your own device (BYOD) solution

Monitor and diagnostics

- **Port mirroring**
  enables traffic on a port to be simultaneously sent to a network analyzer for monitoring
- **Software updates**
  free downloads from the Web

Flexibility

- **Quiet operation**
  - **Fanless design (2620-24 switch)**
    enables quiet operation for deployment in open spaces
  - **Variable-speed fans (2620-24-PPoE+, 2620-24-PoE+, 2620-48, and 2620-48-PoE+ switches)**
    improve fan speed for the operating environment while keeping noise and energy consumption levels to a minimum
- **Flexible mounting**
  - **Rackable**
    can be mounted in a standard 19-inch rack using included hardware
  - **Surface mountable**
    can be mounted above or below a surface (such as on a desk or table) using included hardware

Warranty and support

- **Limited Lifetime Warranty v2.0**
  advance hardware replacement with next-business-day delivery (available in most countries). See www.hp.com/networking/warrantysummary for duration details.
- **Electronic and telephone support (for Limited 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

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 2620-24 Switch — J9623A
- 2 autosensing 10/100/1000 port(RJ-45)
- 24 autosensing 10/100 ports (RJ-45)
- 2 open mini-GBIC (SFP) slots
- min=0 \ max=2 SFP Transceivers
- 1U - Height

See Configuration Note:1, 2

PDU CABLE NA/MEX/TW/JP — J9623A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU CABLE ROW — J9623A#B2C
- C15 PDU Jumper Cord (ROW)

HP 2620-24 PPoe+ Switch — J9624A
- 2 autosensing 10/100/1000 port(RJ-45)
- 12 RJ-45 autosensing 10/100 ports
- 12 RJ-45 autosensing 10/100 PoE+ ports
- 2 open mini-GBIC (SFP) slots
- min=0 \ max=2 SFP Transceivers
- 1U - Height

See Configuration Note:1, 2

PDU CABLE NA/MEX/TW/JP — J9624A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU CABLE ROW — J9624A#B2C
- C15 PDU Jumper Cord (ROW)

HP 2620-24-PoE+ Switch — J9625A
- 2 autosensing 10/100/1000 port(RJ-45)
- 24 RJ-45 autosensing 10/100 PoE+ ports
- 2 open mini-GBIC (SFP) slots
- min=0 \ max=2 SFP Transceivers
- 1U - Height

See Configuration Note:1, 2

PDU CABLE NA/MEX/TW/JP — J9625A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

Configuration

PDU CABLE ROW — J9625A#B2C
- C15 PDU Jumper Cord (ROW)

HP 2620-48 Switch — J9626A — See Configuration Note:1, 2
- 2 RJ-45 autosensing 10/100/1000 port (RJ-45)
- 48 RJ-45 autosensing 10/100 ports (RJ-45)
- 2 open mini-GBIC (SFP) slots
- min=0 \ max=2 SFP Transceivers
- 1U - Height

PDU CABLE NA/MEX/TW/JP — J9626A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU CABLE ROW — J9626A#B2C
- C15 PDU Jumper Cord (ROW)

HP 2620-48-PoE+ Switch — J9627A — See Configuration Note:1, 2
- 48 RJ-45 autosensing 10/100 PoE+ ports
- 2 autosensing 10/100/1000 port (RJ-45)
- 2 open mini-GBIC (SFP) slots
- min=0 \ max=2 SFP Transceivers
- 1U - Height

PDU CABLE NA/MEX/TW/JP — J9627A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU CABLE ROW — J9627A#B2C
- C15 PDU Jumper Cord (ROW)

Configuration Rules:

Note 1 The following Transceivers install into this Switch:
J9054C - HP X111 100M SFP LC FX Transceiver
J9099B - HP X112 100M SFP LC BX-D Transceiver
J9100B - HP X112 100M SFP LC BX-U Transceiver
J4860C - HP X121 1G SFP LC LH Transceiver
J4859C - HP X121 1G SFP LC LX Transceiver
J4858C - HP X121 1G SFP LC SX Transceiver
J9142B - HP X122 1G SFP LC BX-D Transceiver
J9143B - HP X122 1G SFP LC BX-U Transceiver
J8177C - HP X121 1G SFP RJ45 T Transceiver

Configuration

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

Configuration Information - Factory Integrated Models - Box Level CTO

HP 2620-24 Switch — J9623A
- 2 autosensing 10/100/1000 port (RJ-45)
- 24 autosensing 10/100 ports (RJ-45)
- 2 open mini-GBIC (SFP) slots
- min=0 \ max=2 SFP Transceivers
- 1U - Height

See Configuration Note:1, 2, 3

PDU CABLE NA/MEX/TW/JP — J9623A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU CABLE ROW — J9623A#B2C
- C15 PDU Jumper Cord (ROW)

HP 2620-24 PPoe+ Switch — J9624A
- 2 autosensing 10/100/1000 port (RJ-45)
- 12 RJ-45 autosensing 10/100 ports
- 12 RJ-45 autosensing 10/100 PoE+ ports
- 2 open mini-GBIC (SFP) slots
- min=0 \ max=2 SFP Transceivers
- 1U - Height

See Configuration Note:1, 2, 3

PDU CABLE NA/MEX/TW/JP — J9624A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU CABLE ROW — J9624A#B2C
- C15 PDU Jumper Cord (ROW)

HP 2620-24-PoE+ Switch — J9625A
- 24 RJ-45 autosensing 10/100 PoE+ ports
- 2 autosensing 10/100/1000 port(RJ-45)
- 2 open mini-GBIC (SFP) slots
- min=0 \ max=2 SFP Transceivers
- 1U - Height

See Configuration Note:1, 2, 3

PDU CABLE NA/MEX/TW/JP — J9625A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

Configuration

PDU CABLE ROW — J9625A#B2C
- C15 PDU Jumper Cord (ROW)

HP 2620-48 Switch — J9626A — See Configuration Note:1, 2, 3
- 48 autosensing 10/100 ports (RJ-45)
- 2 autosensing 10/100/1000 port(RJ-45)
- 2 open mini-GBIC (SFP) slots
- min=0 \ max=2 SFP Transceivers
- 1U - Height

PDU CABLE NA/MEX/TW/JP — J9626A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU CABLE ROW — J9626A#B2C
- C15 PDU Jumper Cord (ROW)

HP 2620-48-PoE+ Switch — J9627A — See Configuration Note:1, 2, 3
- 48 RJ-45 autosensing 10/100 PoE+ ports
- 2 autosensing 10/100/1000 port (RJ-45)
- 2 open mini-GBIC (SFP) slots
- min=0 \ max=2 SFP Transceivers
- 1U - Height

PDU CABLE NA/MEX/TW/JP — J9627A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU CABLE ROW — J9627A#B2C
- C15 PDU Jumper Cord (ROW)

Configuration Rules:

Note 1 The following Transceivers install into this Switch:

HP X111 100M SFP LC FX Transceiver	J9054C
HP X112 100M SFP LC BX-D Transceiver	J9099B
HP X112 100M SFP LC BX-U Transceiver	J9100B
HP X121 1G SFP LC LH Transceiver	J4860C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X121 1G SFP LC SX Transceiver	J4858C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HP X121 1G SFP RJ45 T Transceiver	J8177C

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

Configuration

Note 3 If this switch is factory installed in HP Universal Racks, Then the J9583A#0D1 is required.

Remarks:

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

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

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

Internal Power Supplies

- Power supplies included in base model.

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

Transceivers

SFP Transceivers	HP X111 100M SFP LC FX Transceiver	J9054C
	HP X112 100M SFP LC BX-D Transceiver	J9099B
	HP X112 100M SFP LC BX-U Transceiver	J9100B
	HP X121 1G SFP LC LH Transceiver	J4860C
	HP X121 1G SFP LC SX Transceiver	J4858C
	HP X121 1G SFP LC LX Transceiver	J4859C
	HP X122 1G SFP LC BX-D Transceiver	J9142B
	HP X122 1G SFP LC BX-U Transceiver	J9143B
	HP X121 1G SFP RJ45 T Transceiver	J8177C

Cables

Multi-Mode Cables	HP .5m Multi-mode OM3 LC/LC FC Cable	AJ833A
	HP 1m Multi-mode OM3 LC/LC FC Cable	AJ834A
	HP 2 m Multimode OM3 LC/LC FC Cable	AJ835A

Configuration

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

Switch Enclosure Options

Rack Mount Kit	System (std 0 // max 1) User Selection (min 1 // max 1) per switch enclosure	
	HP X410 1U Univ 4-post Rack Mnt Kit	J9583A See Configuration Note:1
Note 1	Default with switch.	
External Redundant Power supplies	HP 630 Red and/or External Power Supply Height = 1U	J9443A See Configuration Note:1, 2, 4
	HP 600 Redundant and Extrnl Power Supply Height = 1U	J8168A See Configuration Note:1, 3, 4
	Rules:	
Note 1	See BCS/HPN Rack Menu for integration details.	
Note 2	Supported on J9625A, J9627A only.	
Note 3	Supported on J9623A, J9624A, J9626A only.	
Note 4	Localization required	

Technical Specifications

HP 2620-24 Switch (J9623A)	**I/O ports and slots**	24 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Media Type: Auto-MDIX; Duplex: half or full	
		2 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 open mini-GBIC (SFP) slots	
	Additional ports and slots	1 RJ-45 serial console port	
	Physical characteristics	**Dimensions**	17.44(w) x 10(d) x 1.73(h) in (44.3 x 25.4 x 4.39 cm) (1U height)
		Weight	5.71 lb (2.59 kg) shipping weight
	Memory and processor	**Processor**	PowerPC FreeScale 8313 @ 400 MHz, 512 MB flash, 512 MB SDRAM, 4 MB flash ROM; packet buffer size: 1 MB
	Mounting and enclosure	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only	
	Performance	**IPv6 Ready Certified**	
		100 Mb Latency	< 8.3 µs (LIFO 64-byte packets)
		1000 Mb Latency	< 2.9 µs (LIFO 64-byte packets)
		Throughput	up to 9.5 Mpps
		Routing/Switching capacity	12.8 Gbps
		MAC address table size	16000 entries
	Environment	**Operating temperature**	32°F to 131°F (0°C to 55°C)
		Operating relative humidity	15% to 95%, noncondensing
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 90% @ 149°F (65°C), noncondensing
		Altitude	up to 10,000 ft (3 km)
		Acoustic	Power: 0 dB, Pressure: 0 dB No Fan
	Electrical characteristics	**Achieved Miercom Certified Green Award**	
		Frequency	50/60 Hz
		Maximum heat dissipation	95 BTU/hr (100.23 kJ/hr)
		AC voltage	100-127/200-240 VAC
		Current	0.4/0.3 A
		Maximum power rating	28 W
		Idle power	13.3 W
		PoE power	0 W
		Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if

			equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS).
	Safety	EN 60950/IEC 60950; CAN/CSA 22.2 No. 60950; EN 60825; UL 60950	
	Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	
	Immunity	**EN**	EN 55024, CISPR 24
		ESD	IEC 61000-4-2
		Radiated	IEC 61000-4-3
		EFT/Burst	IEC 61000-4-4
		Surge	IEC 61000-4-5
		Conducted	IEC 61000-4-6
		Power frequency magnetic field	IEC 61000-4-8
		Voltage dips and interruptions	IEC 61000-4-11
		Harmonics	EN 61000-3-2, IEC 61000-3-2
		Flicker	EN 61000-3-3, IEC 61000-3-3
	Management	command-line interface; Web browser	
	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 2620-24-PPoE+ Switch (J9624A)	**I/O ports and slots**	12 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Media Type: Auto-MDIX; Duplex: half or full 12 RJ-45 autosensing 10/100 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3at PoE+); Duplex: half or full 2 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 open mini-GBIC (SFP) slots	
	Additional ports and slots	1 RJ-45 serial console port	
	Physical characteristics	**Dimensions**	17.44(w) x 10(d) x 1.73(h) in (44.3 x 25.4 x 4.39 cm) (1U height)
		Weight	7.03 lb (3.19 kg)
	Memory and processor	**Processor**	PowerPC FreeScale 8313 @ 400 MHz, 512 MB flash, 512 MB SDRAM, 4 MB flash ROM; packet buffer size: 1 MB
	Mounting and enclosure	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only	
	Performance	**IPv6 Ready Certified**	
		100 Mb Latency	< 8.3 µs (LIFO 64-byte packets)
		1000 Mb Latency	< 2.9 µs (LIFO 64-byte packets)
		Throughput	up to 9.5 Mpps

Technical Specifications

	Routing/Switching capacity	12.8 Gbps
	MAC address table size	16000 entries
Environment	**Operating temperature**	32°F to 131°F (0°C to 55°C)
	Operating relative humidity	15% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 90%, noncondensing
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 37.1 dB, Pressure: 25.9 dB
Electrical characteristics	**Achieved Miercom Certified Green Award**	
	Frequency	50/60 Hz
	Maximum heat dissipation	177 BTU/hr (186.74 kJ/hr), (switch only: 177 BTU/hr; combined switch + max. PoE devices: 679 BTU/hr)
	AC voltage	100-127/200-240 VAC
	Current	1.8/1.0 A
	Maximum power rating	38.5 W
	Idle power	22.0 W
	PoE power	128 W
	Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS).
Safety	EN 60950/IEC 60950; CAN/CSA 22.2 No. 60950; EN 60825; UL 60950	
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	
Immunity	**EN**	EN 55024, CISPR 24
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3
	EFT/Burst	IEC 61000-4-4
	Surge	IEC 61000-4-5
	Conducted	IEC 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	IEC 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2

Technical Specifications

		Flicker	EN 61000-3-3, IEC 61000-3-3
	Management		command-line interface; Web browser
	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 2620-24-PoE+ Switch (J9625A)	**I/O ports and slots**		24 RJ-45 autosensing 10/100 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3at PoE+); Media Type: Auto-MDIX; Duplex: half or full 2 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 open mini-GBIC (SFP) slots
	Additional ports and slots		1 RJ-45 serial console port
	Physical characteristics	**Dimensions**	17.44(w) x 14.5(d) x 1.73(h) in (44.3 x 36.83 x 4.39 cm) (1U height)
		Weight	10.67 lb (4.84 kg) shipping weight
	Memory and processor	**Processor**	PowerPC FreeScale 8313 @ 400 MHz, 512 MB flash, 512 MB SDRAM, 4 MB flash ROM; packet buffer size: 1 MB
	Mounting and enclosure		Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only
	Performance	**IPv6 Ready Certified**	
		100 Mb Latency	< 8.3 µs (LIFO)
		1000 Mb Latency	< 2.9 µs (LIFO)
		Throughput	up to 9.5 Mpps
		Routing/Switching capacity	12.8 Gbps
		MAC address table size	16000 entries
	Environment	**Operating temperature**	32°F to 131°F (0°C to 55°C)
		Operating relative humidity	15% to 95%, noncondensing
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 90%, noncondensing
		Altitude	up to 10,000 ft (3 km)
		Acoustic	Power: 34.0 dB, Pressure: 29.7 dB
	Electrical characteristics	**Achieved Miercom Certified Green Award**	
		Frequency	50/60 Hz
		Maximum heat dissipation	270 BTU/hr (284.85 kJ/hr), (switch only: 270 BTU/hr; combined switch + max. PoE devices: 1751 BTU/hr)
		AC voltage	100-127/200-240 VAC
		Current	4.9/2.5 A
		Maximum power rating	39.5 W

Technical Specifications

		Idle power	22.8 W
		PoE power	382 W
		Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS).
	Safety	EN 60950/IEC 60950; CAN/CSA 22.2 No. 60950; EN 60825; UL 60950	
	Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	
	Immunity	**EN**	EN 55024, CISPR 24
		ESD	IEC 61000-4-2
		Radiated	IEC 61000-4-3
		EFT/Burst	IEC 61000-4-4
		Surge	IEC 61000-4-5
		Conducted	IEC 61000-4-6
		Power frequency magnetic field	IEC 61000-4-8
		Voltage dips and interruptions	IEC 61000-4-11
		Harmonics	EN 61000-3-2, IEC 61000-3-2
		Flicker	EN 61000-3-3, IEC 61000-3-3
	Management	command-line interface; Web browser	
	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 2620-48 Switch (J9626A)	**I/O ports and slots**	48 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Media Type: Auto-MDIX; Duplex: half or full 2 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 open mini-GBIC (SFP) slots	
	Additional ports and slots	1 RJ-45 serial console port	
	Physical characteristics	**Dimensions**	17.44(w) x 10(d) x 1.73(h) in (44.3 x 25.4 x 4.39 cm) (1U height)
		Weight	6.48 lb (2.94 kg) shipping weight
	Memory and processor	**Processor**	Power PC FreeScale 8313 @ 400 MHz, 512 MB flash, 512 MB SDRAM, 4 MB flash ROM; packet buffer size: 2 MB
	Mounting and enclosure	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware	

Technical Specifications

	included); horizontal surface mounting only	
Performance	**IPv6 Ready Certified**	
	100 Mb Latency	< 8.3 µs (LIFO)
	1000 Mb Latency	< 2.9 µs (LIFO)
	Throughput	up to 13.0 Mpps
	Routing/Switching capacity	17.6 Gbps
	MAC address table size	16000 entries
Environment	**Operating temperature**	32°F to 131°F (0°C to 55°C)
	Operating relative humidity	15% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 95%, noncondensing
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 36.5 dB, Pressure: 24.5 dB
Electrical characteristics	**Achieved Miercom Certified Green Award***	
	Frequency	50/60 Hz
	Maximum heat dissipation	148 BTU/hr (156.14 kJ/hr)
	AC voltage	100-127/200-240 VAC
	Current	0.7/0.4 A
	Maximum power rating	43.5 W
	Idle power	19.4 W
	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.
Safety	EN 60950/IEC 60950; CAN/CSA 22.2 No. 60950; EN 60825; UL 60950	
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	
Immunity	**EN**	EN 55024, CISPR 24
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3
	EFT/Burst	IEC 61000-4-4
	Surge	IEC 61000-4-5
	Conducted	IEC 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	IEC 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3

Technical Specifications

	Management		command-line interface; Web browser
	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 2620-48-PoE+ Switch (J9627A)	**I/O ports and slots**		48 RJ-45 autosensing 10/100 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3at PoE+); Media Type: Auto-MDIX; Duplex: half or full 2 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 open mini-GBIC (SFP) slots
	Additional ports and slots		1 RJ-45 serial console port
	Physical characteristics	**Dimensions**	17.44(w) x 14.5(d) x 1.73(h) in (44.3 x 36.83 x 4.39 cm) (1U height)
		Weight	11.53 lb (5.23 kg) shipping weight
	Memory and processor	**Processor**	Power PC FreeScale 8313 @ 400 MHz, 512 MB flash, 512 MB SDRAM, 4 MB flash ROM; packet buffer size: 2 MB
	Mounting and enclosure		Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only
	Performance	**IPv6 Ready Certified**	
		100 Mb Latency	< 8.3 µs (LIFO)
		1000 Mb Latency	< 2.9 µs (LIFO)
		Throughput	up to 13.0 Mpps
		Routing/Switching capacity	17.6 Gbps
		MAC address table size	16000 entries
	Environment	**Operating temperature**	32°F to 131°F (0°C to 55°C)
		Operating relative humidity	15% to 95%, noncondensing
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 95%, noncondensing
		Altitude	up to 10,000 ft (3 km)
		Acoustic	Power: 34.0 dB, Pressure: 25.3 dB
	Electrical characteristics	**Achieved Miercom Certified Green Award**	
		Frequency	50/60 Hz
		Maximum heat dissipation	325 BTU/hr (342.88 kJ/hr), (switch only: 325 BTU/hr; combined switch + max. PoE devices: 1833 BTU/hr)
		AC voltage	100-127/200-240 VAC
		Current	5.6/2.8 A
		Maximum power rating	54.9 W
		Idle power	29.6 W

Technical Specifications

	PoE power	382 W
	Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. it is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS).
Safety	EN 60950/IEC 60950; CAN/CSA 22.2 No. 60950; EN 60825; UL 60950	
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	
Immunity	**EN**	EN 55024, CISPR 24
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3
	EFT/Burst	IEC 61000-4-4
	Surge	IEC 61000-4-5
	Conducted	IEC 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	IEC 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	command-line interface; Web browser	
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 1591 DNS (client) HTML and telnet management **General protocols** IEEE 802.1D MAC Bridges IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1s Multiple Spanning Trees IEEE 802.1v VLAN classification by Protocol and Port IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3x Flow Control RFC 768 UDP RFC 783 TFTP Protocol (revision 2) RFC 792 ICMP RFC 793 TCP RFC 826 ARP	

RFC 854 TELNET
RFC 868 Time Protocol
RFC 951 BOOTP
RFC 1058 RIPv1
RFC 1350 TFTP Protocol (revision 2)
RFC 1542 BOOTP Extensions
RFC 1918 Address Allocation for Private Internet
RFC 2030 Simple Network Time Protocol (SNTP) v4
RFC 2131 DHCP
RFC 2453 RIPv2
RFC 3046 DHCP Relay Agent Information Option

IP multicast
RFC 3376 IGMPv3 (host joins only)

IPv6
RFC 1981 IPv6 Path MTU Discovery
RFC 2460 IPv6 Specification
RFC 2464 Transmission of IPv6 over Ethernet Networks
RFC 2710 Multicast Listener Discovery (MLD) for IPv6
RFC 2925 Remote Operations MIB (Ping only)
RFC 3019 MLDv1 MIB
RFC 3315 DHCPv6 (client only)
RFC 3484 Default Address Selection for IPv6
RFC 3513 IPv6 Addressing Architecture
RFC 3596 DNS Extension for IPv6
RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6
RFC 4022 MIB for TCP
RFC 4113 MIB for UDP
RFC 4251 SSHv6 Architecture
RFC 4252 SSHv6 Authentication
RFC 4253 SSHv6 Transport Layer
RFC 4254 SSHv6 Connection
RFC 4291 IP Version 6 Addressing Architecture
RFC 4293 MIB for IP
RFC 4419 Key Exchange for SSH
RFC 4443 ICMPv6
RFC 4541 IGMP & MLD Snooping Switch
RFC 4861 IPv6 Neighbor Discovery
RFC 4862 IPv6 Stateless Address Auto-configuration

MIBs
RFC 1155 Structure & ID of Mgmt Info for TCP/IP Internets
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 1724 RIPv2 MIB
RFC 2021 RMONv2 MIB
RFC 2096 IP Forwarding Table MIB
RFC 2578 Structure of Management Information Version 2 (SMIv2)
RFC 2613 SMON MIB
RFC 2618 RADIUS Client MIB
RFC 2620 RADIUS Accounting MIB
RFC 2665 Ethernet-Like-MIB
RFC 2668 802.3 MAU MIB
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
RFC 2737 Entity MIB (Version 2)

RFC 2863 The Interfaces Group MIB
RFC 2925 Ping MIB
RFC 4836 Managed Objects for 802.3 Medium Attachment Units (MAU)

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
RFC 5424 Syslog Protocol
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3
XRMON

QoS/CoS
RFC 2474 DiffServ Precedence, including 8 queues/port
RFC 2597 DiffServ Assured Forwarding (AF)
RFC 2598 DiffServ Expedited Forwarding (EF)
Ingress Rate Limiting

Security
IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
RFC 2138 RADIUS Authentication
RFC 2866 RADIUS Accounting
Secure Sockets Layer (SSL)

Accessories

HP 2620 Switch Series accessories

Transceivers	HP X121 1G SFP LC SX Transceiver	J4858C
	HP X121 1G SFP LC LX Transceiver	J4859C
	HP X121 1G SFP LC LH Transceiver	J4860C
	HP X121 1G SFP RJ45 T Transceiver	J8177C
	HP X111 100M SFP LC FX Transceiver	J9054C
	HP X112 100M SFP LC BX-D Transceiver	J9099B
	HP X112 100M SFP LC BX-U Transceiver	J9100B
	HP X122 1G SFP LC BX-D Transceiver	J9142B
	HP X122 1G SFP LC BX-U Transceiver	J9143B
Cables	HP 0.5 m Multimode OM3 LC/LC Optical Cable	AJ833A
	HP 1 m Multimode OM3 LC/LC Optical Cable	AJ834A
	HP 2 m Multimode OM3 LC/LC Optical Cable	AJ835A
	HP 5 m Multimode OM3 LC/LC Optical Cable	AJ836A
	HP 15 m Multimode OM3 LC/LC Optical Cable	AJ837A
	HP 30 m Multimode OM3 LC/LC Optical Cable	AJ838A
	HP 50 m Multimode OM3 LC/LC Optical Cable	AJ839A
	NEW HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
	NEW HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
	NEW HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
	NEW HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
	NEW HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
	NEW HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK737A
Mounting Kit	HP X410 1U Universal 4-post Rack Mounting Kit	J9583A
HP 2620-24 Switch (J9623A)	HP 600 Redundant and External Power Supply	J8168A
HP 2620-24-PPoE+ Switch (J9624A)	HP 600 Redundant and External Power Supply	J8168A
HP 2620-24-PoE+ Switch (J9625A)	HP 630 Redundant and/or External Power Supply	J9443A
	HP 620 Redundant/External Power Supply	J8696A
HP 2620-48 Switch (J9626A)	HP 600 Redundant and External Power Supply	J8168A
HP 2620-48-PoE+ Switch (J9627A)	HP 630 Redundant and/or External Power Supply	J9443A
	HP 620 Redundant/External Power Supply	J8696A

Accessory Product Details

HP X121 1G SFP LC SX Transceiver (J4858C) A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550 m on multimode fiber.	**Ports**	1 LC 1000BASE-SX port; Duplex: full only
	Physical characteristics	Dimensions: 2.24(d) x 0.54(w) x 0.48(h) in. (5.69 x 1.37 x 1.22 cm) Weight: 0.04 lb. (0.02 kg) Transceiver form factor: SFP
	Environment	Operating temperature: 32°F to 158°F (0°C to 70°C) Operating relative humidity: 5% to 85%, noncondensing Nonoperating/Storage temperature: -40°F to 203°F (-40°C to 85°C) Altitude: up to 10,000 ft. (3 km)
	Electrical characteristics	Power consumption typical: 0.4 W Power consumption maximum: 0.7 W
	Cabling	Type: • 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively; Maximum distance: • 2-220 m (62.5 µm core diameter, 160 MHz*km bandwidth • 2-275 m (62.5 µm core diameter, 200 MHz*km bandwidth • 2-500 m (50 µm core diameter, 400 MHz*km bandwidth) • 2-550 m (50 µm core diameter, 500 MHz*km bandwidth) Cable length: 2-550m 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 X121 1G SFP LC LX Transceiver (J4859C) HP X121 1G SFP LC LX Transceiver: An SFP format gigabit transceiver with LC connectors using LX technology.	**Ports**	1 LC 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX); Duplex: full only
	Physical characteristics	Dimensions: 2.24(d) x 0.54(w) x 0.486(h) in. (5.69 x 1.37 x 1.23 cm) Weight:0.04 lb. (0.02 kg)
	Environment	Operating temperature: 32°F to 158°F (0°C to 70°C) Operating relative humidity: 0% to 85%, noncondensing Nonoperating/Storage temperature: -40°F to 212°F (-40°C to 100°C) Altitude: up to 10,000 ft. (3 km)
	Cabling	Type: • Either single mode or multimode; 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively; Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1; Maximum distance: • 2-550 m (multimode 62.5 µm core diameter, 500 MHz*km bandwidth) • 2-550 m (multimode 50 µm core diameter, 400 MHz*km

Accessory Product Details

		bandwidth) • 2-550 m (multimode 50 µm core diameter, 500 MHz*km bandwidth) • 2-10,000 m (single-mode fiber)
	Notes	A mode conditioning patch cord may be needed in some multimode fiber installations. Wavelength: 1310nm Power Consumption: < 500mW Typical
	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 X121 1G SFP LC LH Transceiver (J4860C) A small form-factor pluggable (SFP) Gigabit LH transceiver that provides a full-duplex Gigabit solution up to 70 km on single-mode fiber.	**Ports**	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics); Duplex: full only
	Physical characteristics	Dimensions: 2.17(d) x 0.60(w) x 0.46(h) in. (5.5 x 1.53 x 1.18 cm) Weight: 0.04 lb. (0.02 kg)
	Environment	Operating temperature: -40°F to 185°F (-40°C to 85°C) Operating relative humidity: 0% to 95% @ 77°F (25°C), noncondensing Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C) Altitude: up to 10,000 ft. (3 km)
	Cabling	Cable type: • Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1; Maximum distance: • 10-70,000 m (single-mode fiber)
	Notes	Power consumption is 0.8 watts typical with 1 watt maximum at 100% utilization. For distances less than 20 km, a 10 dB attenuator must be used. For distances between 20 km and 40 km, a 5 dB attenuator must be used. Attenuators can be purchased from most cable vendors.
	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 X121 1G SFP RJ45 T Transceiver (J8177C) HP X121 1G SFP RJ45 T Transceiver: An SFP format gigabit transceiver with RJ45 connectors using 1000BaseT technology.	**Ports**	1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T); Duplex: full only
	Physical characteristics	Dimensions: 2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm) Weight: 0.06 lb. (0.03 kg)
	Environment	Operating temperature: 32°F to 158°F (0°C to 70°C); with 100 LFM airflow over the SFP module Operating relative humidity: 0% to 95% @ 75°F (25°C), noncondensing Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C) Nonoperating/Storage relative humidity: 0% to 95% @ 77°F (25°C), noncondensing Altitude: up to 10,000 ft. (3000 km)

	Cabling	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ù differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T; Maximum distance: • 100 m
	Notes	Power consumption is nominally 1 watt. For supported platforms and minimum software requirements to support this product, see the document titled "Support for the J8177C 1000Base-T Mini-GBIC" on the "HP Mini-GBICs and SFPs" Manuals Web page. The J8177C Gigabit copper mini-GBIC is not supported on dual-personality ports. The J8177C is capable of 100 Mb operation. This is supported on only the HP E8200zl, E5400zl, and HP E6200-24G-mGBIC yl Switches using software version K.12.21 or later. Use the "auto-100" port setting to enable 100 Mb operation. Important: The earlier J8177B does not support 100 Mb operation. When used in the Switch gl 20-Port 10/100/1000 Module (J4908A), the J8177C mini-GBIC can be installed in either the upper or lower mini-GBIC port, but will block access to the other port.
	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 X111 100M SFP LC FX Transceiver (J9054C)	**Ports**	1 LC 100BASE-FX port (IEEE 802.3u Type 100BASE-FX); Duplex: half or full
	Physical characteristics	Dimensions: 2.7(d) x 0.54(w) x 0.48(h) in. (6.86 x 1.38 x 1.22 cm) Weight: 0.06 lb. (0.03 kg)
	Environment	Operating temperature: 32ºF to 158ºF (0ºC to 70ºC) Operating relative humidity: 5% to 95% Nonoperating/Storage temperature: -40ºF to 185ºF (-40ºC to 85ºC) Nonoperating/Storage relative humidity: 5% to 85% Altitude: up to 10,000 ft. (3 km)
	Cabling	Type: • 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively Maximum distance: • 2 km (full duplex) or 412 m (half duplex)
	Notes	Transmitter wavelength: 1310nm Power consumption is 1.1 watt maximum. For supported platforms and minimum software requirements to support

Accessory Product Details

			this product, see the document titled "Support for the J9054C 100-FX SFP-LC Transceiver" on the "HP Mini-GBICs and SFPs" Manuals Web page.
	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 X112 100M SFP LC BX-D Transceiver (J9099B) A small form-factor pluggable (SFP) 100-Megabit BX (bi-directional) "downstream" transceiver that provides 100 Mbps full-duplex connectivity up to 10 km on one strand of singlemode fiber. The J9099B connects to the J9100B "upstream" transceiver, or to any IEEE-standard 100BASE-BX10-U ("upstream") device.	**Ports**		1 LC 100BASE-BX10 port (IEEE 802.3ah Type 100BASE-BX10-D); Duplex: full only
	Physical characteristics	**Dimensions**	2.7(d) x 0.55(w) x 0.48(h) in. (6.86 x 1.39 x 1.22 cm)
		Weight	0.04 lb. (0.03 kg)
	Environment	**Operating temperature**	32ºF to 158ºF (0ºC to 70ºC)
		Operating relative humidity	0% to 95%, noncondensing
		Nonoperating/Storage temperature	-40ºF to 185ºF (-40ºC to 85ºC)
	Cabling		Type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 0.5-10,000 m (single-mode fiber)
	Notes		Transmit wavelength: 1550 nm. Receive wavelength: 1310 nm. Power consumption is 1.1 watt maximum. For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HP BX Transceivers" on the "HP Mini-GBICs and SFPs" Manuals Web page. The J9099B connects to the J9100B "upstream" transceiver, or to any IEEE-standard 100BASE-BX10-U ("upstream") device. (A 100-BX-D transceiver can only connect to a 100-BX-U product. You cannot connect two 100-BX-D transceivers together.)
	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 X112 100M SFP LC BX-U Transceiver (J9100B) A small form-factor pluggable (SFP) 100-Megabit BX (bi-directional) "upstream" transceiver that provides 100 Mbps full-duplex connectivity up to 10 km on one strand of singlemode fiber. The J9100B connects to the	**Ports**		1 LC 100BASE-BX10 port (IEEE 802.3ah Type 100BASE-BX10-U); Duplex: full only
	Physical characteristics	**Dimensions**	2.7(d) x 0.55(w) x 0.48(h) in. (6.86 x 1.39 x 1.22 cm)
		Weight	0.07 lb. (.03 kg)
	Environment	**Operating temperature**	32ºF to 158ºF (0ºC to 70ºC)
		Operating relative humidity	0% to 95%, noncondensing
		Nonoperating/Storage temperature	-40ºF to 185ºF (-40ºC to 85ºC)
	Cabling		Type:

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J9099B "downstream" transceiver, or to any IEEE-standard 100BASE-BX10-D ("downstream") device.		Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 0.5-10,000 m (single-mode fiber)
	Notes	For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HP BX Transceivers" on the "HP Mini-GBICs and SFPs" Manuals Web page. The J9100B connects to the J9099B "downstream" transceiver, or to any IEEE-standard 100BASE-BX10- D ("downstream") device. (A 100-BX-U transceiver can only connect to a 100-BX-D product. You cannot connect two 100-BX-U transceivers together.) Transmit wavelength: 1310 nm. Receive wavelength: 1550 nm. Power consumption is 1.1 watts maximum.
	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 X122 1G SFP LC BX-D Transceiver (J9142B) A small form-factor pluggable (SFP) Gigabit-BX (bi-directional) "downstream" transceiver that provides a full-duplex Gigabit solution up to 10 km on one strand of single-mode fiber. The J9142B connects to the J9143B "upstream" transceiver, or to any IEEE-standard 1000BASE-BX10-U ("upstream") device.	**Ports**	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-D); Duplex: full only
	Physical characteristics	**Dimensions** 2.19(d) x 0.54(w) x 0.46(h) in. (5.57 x 1.37 x 1.18 cm) **Weight** 0.04 lb. (0.02 kg)
	Environment	**Operating temperature** 32ºF to 158ºF (0ºC to 70ºC) **Operating relative humidity** 0% to 95%, non-condensing **Non-operating/ Storage temperature** –40ºF to 185ºF –40ºC to 85ºC)
	Cabling	Type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 0.5-10,000 m (single-mode fiber)
	Notes	Transmit wavelength: 1490 nm. Receive wavelength: 1310 nm. Power consumption is 1 watt maximum. For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HP BX Transceivers" on the "HP Mini-GBICs and SFPs" Manuals Web page. The J9142B connects to the J9143B "upstream" transceiver, or to any IEEE-standard 1000BASE-BX10-U ("upstream") device. (A 1000-BX-D transceiver can only connect to a 1000-BX-U product. You cannot connect two 1000-BX-D transceivers together.)
	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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HP X122 1G SFP LC BX-U Transceiver (J9143B) A small form-factor pluggable (SFP) Gigabit-BX (bi-directional) "upstream" transceiver that provides a full-duplex Gigabit solution up to 10 km on one strand of single-mode fiber. The J9143B connects to the J9142B "downstream" transceiver, or to any IEEE-standard 1000BASE-BX10-D ("downstream") device.	**Ports**	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-U); Duplex: full only	
	Physical characteristics	**Dimensions**	2.19(d) x 0.54(w) x 0.46(h) in. (5.57 x 1.37 x 1.18 cm)
		Weight	0.04 lb. (0.02 kg)
	Environment	**Operating temperature**	32ºF to 158ºF (0ºC to 70ºC)
		Operating relative humidity	0% to 95%, non-condensing
		Non-operating/ Storage temperature	–40ºF to 185ºF –40ºC to 85ºC)
	Cabling	Type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: • 0.5-10,000 m (single-mode fiber)	
	Notes	Transmit wavelength: 1310 nm. Receive wavelength: 1490 nm. For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HP BX Transceivers" on the "HP Mini-GBICs and SFPs" Manuals Web page. The J9143B connects to the J9142B "downstream" transceiver, or to any IEEE-standard 1000BASE-BX10-D ("downstream") device. (A 1000-BX-U transceiver can only connect to a 1000-BX-D product. You cannot connect two 1000-BX-U transceivers together.) Power consumption is 1 watt maximum.	
	Services	Refer to the HP website at www.hp.com/networking/services 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 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.
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.

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

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2m Cable (QK733A)		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 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

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		• 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 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

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

Notes	The rack mounting kit supports the 1U, full width switches in the following switch series and the power supply: V1810 Series, E2510 Series, E2520 Series, E2610 Series, E2810 Series, E2910 Series, E3500 Series, and the E620 Power Supply This universal rack mounting kit is design to fit the following racks: HP 10K 10642, HP 10K 10842, Panduit CN, Panduit CS, Wrightline Vantage S2, APC Netshelter 600mm, and APC Netshelter 800mm. It may well fit many other brands and models too.
Services	Refer to the HP website at: www.hp.com/networking/services 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 600 Redundant and External Power Supply (J8168A)	**Ports**	6 redundant power supply ports Restrictions: Each port can provide redundant +12 V power to a connected switch; only one port can provide power at a given time 2 external power supply ports Restrictions: Provides 50 VDC external PoE to up to two switch devices; provides max. of 408 W full power to one device, and half power (204 W each) if connected to two devices	
	Physical characteristics	**Dimensions**	12.83(d) x 17.44(w) x 1.73(h) in. (32.59 x 44.3 x 4.39 cm) (1U height)
		Weight	11.78 lb. (5.34 kg), Fully loaded
	Mounting	1U rack-mountable and wall-mountable enclosure using standard mounting hardware	
	Environment	**Operating temperature**	32°F to 131°F (0°C to 55°C)
		Operating relative humidity	15% to 95% @ 104°F (40°C), noncondensing
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 95% @ 149°F (65°C), noncondensing
		Altitude	up to 15,000 ft. (4.6 km)
		Acoustic	Noise emission LwA=59.2 dB at virtual workspace, according to DIN 45635 T.19
	Electrical characteristics	**Description**	The unit automatically adjusts to any voltage between 100-240 V and either 50 or 60 Hz
		Voltage	100-240 VAC
		Current	9/5 A
		Maximum power rating	800 W
		RPS power	180 W
		PoE power	408 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.
	Safety	CSA 22.2 No. 60950; EN 60950/IEC 60950; UL 60950	
	Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	
	Immunity	**EN**	EN 55024, CISPR 24
		ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD
		Radiated	IEC 61000-4-3; 3 V/m
		EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.05 kV (signal line)
		Surge	IEC 61000-4-5; 1 kV/2 kV AC
		Conducted	IEC 61000-4-6; 3 V
		Power frequency magnetic field	IEC 61000-4-8; 1 A/m, 50 or 60 Hz
		Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
		Harmonics	EN 61000-3-2, IEC 61000-3-2
		Flicker	EN 61000-3-3, IEC 61000-3-3
	Management	Provides information via port interfaces of attached devices	
	Notes	Supported devices • HP Switch 2600-PWR Series, Switch 2610 Series, Switch 2610-PWR Series, Switch 2800 Series, Switch 2810 Series, Switch 5300xl Series, Switch 3400cl Series, Switch 6400cl Series, and Secure Router 7000dl Series	
	Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U9270E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U9271E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR854E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR855E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UR857E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UR858E) 3 Yr 6 hr Call-to-Repair Onsite (UW371E) 4 Yr 6 hr Call-to-Repair Onsite (UW372E) 5 Yr 6 hr Call-to-Repair Onsite (UW373E) 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 630 Redundant and/or External Power Supply (J9443A)	**Physical characteristics**	**Dimensions**	15(d) x 8.5(w) x 1.73(h) in. (38.1 x 21.59 x 4.39 cm) (1U height)
		Weight	7.9 lb. (3.58 kg)
	Environment	**Operating temperature**	32°F to 131°F (0°C to 55°C)
		Operating relative humidity	15% to 95% @ 104°F (40°C), noncondensing
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage	15% to 90% @ 149°F (65°C), noncondensing

Accessory Product Details

	relative humidity	
	Altitude	up to 10,000 ft. (3 km)
	Acoustic	Power: 54.2 dB; ISO 7779, ISO 9296
Electrical characteristics	**Maximum heat dissipation**	535 BTU/hr (564.42 kJ/hr), for the actual 630 power supply. PoE-powered device heat dissipation assumed to be outside the 630 power supply.
	Voltage	100-127/200-240 VAC
	Current	8/4 A
	Maximum power rating	740 W
	PoE power	398 W
	RPS power	185 W
	PoE power	398 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. PoE Power is the power supplied by the internal power supply, it is dependent on the type and quantity of power supplies and may be supplemented with the use of an External Power Supply (EPS). 200-240 V power cords shipped with the 630 power supply have a wall plug rated as close to 13 A as specific country standards allow.
Notes		The HP 630 RPS/EPS supports the HP 2910al and 3500yl-PoE+ Switches. The HP Switch 5400zl Series is not supported. The 630 RPS/EPS includes two 2-m RPS/EPS cables, which can be used to carry either RPS or PoE+ power to the switch. Minimum software versions required: 2910al PoE+ switches require W.14.35 or later and 3500yl-PoE+ switches require K.14.52 or later
Services		3-year, 4-hour onsite, 13x5 coverage for hardware (U9270E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U9271E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR854E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR855E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UR857E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UR858E) 3 Yr 6 hr Call-to-Repair Onsite (UW371E) 4 Yr 6 hr Call-to-Repair Onsite (UW372E) 5 Yr 6 hr Call-to-Repair Onsite (UW373E) 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 E620 Redundant/External Power Supply (J8696A)	**Ports**	2 redundant power supply ports Restrictions: 195 W available per port

Accessory Product Details

	2 external power supply ports Restrictions: 398 W available per port	
Physical characteristics	**Dimensions**	15.4(d) x 17.4(w) x 1.73(h) in. (39.12 x 44.2 x 4.39 cm) (1U height)
	Weight	15.2 lb. (6.89 kg)
Mounting and enclosure	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only	
Environment	**Operating temperature**	32°F to 131°F (0°C to 55°C)
	Operating relative humidity	15% to 95% @ 104°F (40°C), noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 90% @ 149°F (65°C), noncondensing
	Altitude	up to 10,000 ft. (3 km)
	Acoustic	LwA per ISO 7779: 54.2 dB
Electrical characteristics	**Maximum heat dissipation**	400 BTU/hr (422 kJ/hr), for the actual 620 itself. PoE-powered device heat dissipation assumed to be outside the 620.
	Voltage	100-127/200-240 VAC
	Current	16/8 A
	Maximum power rating	1440 W
	RPS power	390 W
	PoE power	796 W
	RPS	12 V
	PoE	-50 V
	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. Above figures are for maximum RPS and PoE power being supplied to two switches simultaneously. 200 - 240 V power cords shipped with the 620 have a wall plug rated as close to 13 A as specific country standards allow.
Safety	CSA 22.2 No. 60950; EN 60950/IEC 60950; UL 60950	
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	
Immunity	**EN**	EN 55024, CISPR 24
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3
	EFT/Burst	IEC 61000-4-4
	Surge	IEC 61000-4-5
	Conducted	IEC 61000-4-6
	Power frequency	IEC 61000-4-8

Accessory Product Details

	magnetic field	
	Voltage dips and interruptions	IEC 61000-4-11
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	Unmanaged power supply; provides information via LEDs (LEDs repeated on front and back panel) or through port interfaces of attached devices	
Notes	The 620 supports the HP Switch 2900 Series (RPS) and 3500yl Series (RPS/PoE), as well as 6200yl (RPS) switches. The HP Switch 5400zl Series is not supported. The 620 includes four 2 m RPS/EPS cables. These cables can be used to carry either RPS or PoE power to the switch being powered.	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U9270E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U9271E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR854E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR855E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UR857E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UR858E) 3 Yr 6 hr Call-to-Repair Onsite (UW371E) 4 Yr 6 hr Call-to-Repair Onsite (UW372E) 5 Yr 6 hr Call-to-Repair Onsite (UW373E) 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.	

Summary of Changes

Date	Version History	Action	Description of Change:
01-Dec-2014	From Version 11 to 12	Changed	Updated Warranty and support, Technical Specifications and Product Overview,
09-Dec-2013	From Version 10 to 11	Changed	Changes made in the Overview, Technical Specifications, and Accessories sections.
11-Nov-2013	From Version 9 to 10	Changed	Configuration was revised, including adding OM4 cables.
02-Oct-2013	From Version 8 to 9	Changed	Corrections were made throughout the Configuration section.
11-Sep-2013	From Version 7 to 8	Changed	Configuration was revised.
19-Aug-2013	From Version 6 to 7	Changed	Configuration was revised.
10-Jun-2013	From Version 5 to 6	Added	OM4 cables were added.
22-Apr-2013	From Version 4 to 5	Added	Overview: Added an image.
25-Mar-2013	From Version 3 to 4	Added	Overview: Added Build to Order section to the Features and benefits section.
06-Jul-2012	From Version 2 to 3	Changed	Changes made in the Technical Specifications section.
14-Oct-2011	From Version 1 to 2	Added	HP 620 Redundant/External Power Supply was added to Accessories IPv6 Ready Certification and Miercom Certified Green Award were added to Models

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