QuickSpecs

Overview

Models

HP 1810-8G v2 Switch	J9802A
HP 1810-24G v2 Switch	J9803A
HP 1810-48G Switch	J9660A
HP 1810-8 v2 Switch	J9800A
HP 1810-24 v2 Switch	J9801A

Key features

- Customized operation using intuitive Web interface
- Flexible connection and deployment options
- Layer 2 operation at wire speeds
- Fanless design for quiet operation
- Lifetime warranty

Product overview

HP 1810 Switch Series devices are smart-managed, fixed-configuration Gigabit Ethernet and Fast Ethernet Layer 2 switches designed for small businesses looking for key features in an easy-to-administer solution.The series includes 8- and 24-port Gigabit Ethernet and Fast Ethernet models and a 48-port Gigabit Ethernet switch. Some models include SFP ports for fiber connectivity and some are fanless, making them ideal for office deployments. All 1810 Switches support flexible installation options, including mounting on walls, under tables, or on desktops. The 8-port Gigabit Ethernet model can be powered by an upstream Power over Ethernet (PoE) switch for environments where no line power is available.Customizable features include VLANs, Spanning Tree, and link aggregation trunking; 8- and 24-port switches offer Rapid Spanning Tree Protocol (RSTP) and DSCP QoS policies. The 8- and 24-port models also include the latest energy-saving capabilities—Energy Efficient Ethernet (EEE) and idle-port power down. The HP 1810 Switch Series have a lifetime warranty.

Features and Benefits

Connectivity

- **Auto-MDI/MDIX**
  automatically adjusts for straight-through or crossover cables on all ports
- **Packet storm protection**
  protects against broadcast, multicast, or unicast storms with user-defined thresholds
- **IEEE 802.3af PoE-powered device option**
  obtains power provided by a standard PoE device connected to Port 1; deploy the switch wherever an Ethernet cable can reach as a power outlet is not needed (8-port GbE model only)
- **SFP ports for fiber connectivity**
  provides fiber connections for uplinks and other connections across longer distances than what copper cabling can support; "true" SFP ports operate in addition to available copper Ethernet ports, providing a higher total number of available ports vs. "combo" ports which are either a copper or fiber connection

Performance

- **Half-/Full-duplex auto-negotiating capability on every port**
  doubles the throughput of every port

Overview

- **Link aggregation (trunking)**
  brings together groups of ports automatically using Link Aggregation Control Protocol (LACP) or, manually, to form an ultra-high-bandwidth connection to the network backbone; helps prevent traffic bottlenecks; the 8-port models have four trunks of four links each, the 24-port models have eight trunks of four links each, and the 1810-48G switch has 16 trunks of eight links each

Quality of Service (QoS)

- **Traffic prioritization (IEEE 802.1p)**
  allows real-time traffic classification with eight priority levels mapped to four queues
- **IEEE 802.1p prioritization with DSCP**
  delivers data from the switch to devices based on the priority and type of traffic using Differentiated Services Code Point (DSCP); available only with v2 switch models
- **Broadcast control**
  allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic

Layer 2 switching

- **VLAN support and tagging**
  support up to 64 port-based VLANs and dynamic configuration of IEEE 802.1Q VLAN tagging, providing security between workgroups
- **Jumbo packet support**
  improves the performance of large data transfers; supports frame size of up to 9220 bytes

Resiliency and high availability

- **IEEE 802.1D Spanning Tree Protocol (STP) and IEEE 802.1W Rapid Spanning Tree Protocol (RSTP)**
  provides redundant links while preventing network loops; available only with v2 switch models

Security

- **Secure Sockets Layer (SSL)**
  encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- **Automatic denial-of-service protection**
  monitors six types of malicious attacks and protects the network by blocking the attacks
- **Management password**
  provides security so that only authorized access to the Web browser interface is allowed

Ease of use

- **Locator LED (switch)**
  allows users to set the locator LED on a specific switch to either turn on, blink, or turn off; simplifies troubleshooting by making it easy to locate a particular switch within a rack of similar switches
- **Comprehensive LED display with per-port indicators**
  provides an at-a-glance view of status, activity, speed, and full-duplex operation

Flexibility

- **Flexible installation**
  allows mounting on wall, desktop, or under-table
- **Rack mountable (24- and 48-port models)**

Overview

offers a rack-mounting option with included hardware

- **Kensington lock slot**
  allows switches to be physically secured in open-space deployments

Management

- **Simple Web management**
  allows easy management of devices by even nontechnical users with its intuitive Web GUI
- **Secure Web GUI**
  provides a secure, easy-to-use graphical interface for configuring the module via HTTPS
- **SNMPv1, v2c**
  enables devices to be discovered and monitored from an SNMP management station
- **Dual flash images**
  provide independent primary and secondary operating system files for backup while upgrading
- **Port mirroring**
  enables traffic on a port to be simultaneously sent to a network analyzer for monitoring
- **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

Additional information

- **Energy savings**
  utilizes Energy Efficient Ethernet (EEE) IEEE 802.3az standard for lower power consumption; available only with v2 switch models
- **Green IT and power**
  places inactive ports automatically in low power mode and its LED in power-down mode to conserve energy
- **Green initiative support**
  provides support for RoHS and WEEE regulations

Warranty and support

- **Lifetime warranty**
  for as long as you own the product with advance replacement and
  next-business-day delivery (available in most countries)†
- **Electronic and telephone support**
  limited electronic and telephone support is available from HP; 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

†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 1810-8 Switch   **J9800A**
- 7 RJ-45 autosensing 10/100 ports
- 1 RJ-45 autosensing 10/100/1000 port
- 1U - Height

See Configuration
Note:2

HP 1810-8G Switch   **J9802A**
- 8 RJ-45 autosensing 10/100/1000 ports
- 1U - Height

See Configuration
Note:2

HP 1810-24 Switch   **J9801A**
- 22 RJ-45 autosensing 10/100 ports
- 2 RJ-45 autosensing 10/100/1000 ports
- 2 SFP autosensing 100/1000 ports
- 1U - Height

See Configuration
Note:1, 3

PDU Cable NA/MX/TW/JP   **J9801A#B2B**
- C15 PDU Jumper Cord (NA/MX/TW/JP)

PDU Cable ROW   **J9801A#B2C**
- C15 PDU Jumper Cord (ROW)

HP 1810-24G Switch   **J9803A**
- 24 RJ-45 autosensing 10/100/1000 ports
- 2 SFP 100/1000 ports
- 1U - Height

See Configuration
Note:1, 3

PDU Cable NA/MX/TW/JP   **J9803A#B2B**
- C15 PDU Jumper Cord (NA/MX/TW/JP)

PDU Cable ROW   **J9803A#B2C**
- C15 PDU Jumper Cord (ROW)

HP 1810-48G Switch   **J9660A**
- 48 autosensing 10/100/1000 ports
- 4 SFP 100/1000 Mbps ports
- 1U - Height

See Configuration
Note:1, 3

PDU Cable NA/MX/TW/JP   **J9660A#B2B**
- C15 PDU Jumper Cord (NA/MX/TW/JP)

PDU Cable ROW   **J9660A#B2C**
- C15 PDU Jumper Cord (ROW)

Configuration

Note 1	The following Transceivers install into this switch:	
	HP X121 1G SFP LC SX Transceiver	J4858C
	HP X121 1G SFP LC LX Transceiver	J4859C
	HP X111 100M SFP LC FX Transceiver	J9054C
	HP X122 1G SFP LC BX-D Transceiver	J8177C
Note 2	Localization required. (See Localization Menu for list.)	
Note 3	Localization (Wall Power Cord) required on orders without #B2B or #B2C (PDU Power Cord). (See Localization Menu)	

CTO Models

HP 1810-48G Switch   J9660A
- 48 autosensing 10/100 ports   See Configuration
- 4 SFP 100/1000 Mbps ports   Note:1, 2, 3
- 1U - Height

PDU Cable NA/MX/TW/JP   J9660A#B2B
- C15 PDU Jumper Cord (NA/MX/TW/JP)

PDU Cable ROW   J9660A#B2C
- C15 PDU Jumper Cord (ROW)

Note 1	The following Transceivers install into this switch:	
	HP X121 1G SFP LC SX Transceiver	J4858C
	HP X121 1G SFP LC LX Transceiver	J4859C
	HP X111 100M SFP LC FX Transceiver	J9054C
	HP X122 1G SFP LC BX-D Transceiver	J8177C
Note 2	Localization (Wall Power Cord) required on orders without #B2B or #B2C (PDU Power Cord). (See Localization Menu)	
Note 3	If this switch is factory installed in HP Universal Racks, Then the J9583A#0D1 is required. EMEA then J9583A#0D1 is required. APD, Japan and China then J9583A#0D1 is required. CLIC Only - Allow the J9583AZ in all regions.	

Internal or External Power Supplies (Model Dependant)

Configuration

Power supplies Included

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

Transceivers

SFP Transceivers

HP X121 1G SFP LC SX Transceiver	J4858C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X111 100M SFP LC FX Transceiver	J9054C
HP X121 1G SFP RJ45 T Transceiver	J8177C

Cables

Multi-Mode Cables

HP .5m Multi-mode OM3 LC/LC FC Cable	AJ833A
HP 1m Multi-mode OM3 LC/LC FC Cable	AJ834A
HP 2 m Multimode OM3 LC/LC FC Cable	AJ835A
HP 5 m Multimode OM3 LC/LC FC Cable	AJ836A
HP 15 m Multimode OM3 LC/LC FC Cable	AJ837A
HP 30 m Multimode OM3 LC/LC FC Cable	AJ838A
HP 50 m Multimode OM3 LC/LC FC Cable	AJ839A

OM4 Cables

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

Configuration

HP Premier Flex LC/LC OM4 2f 30m Cbl	QK736A
HP Premier Flex LC/LC OM4 2f 50m Cbl	QK737A
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

HP X410 1U Univ 4-post Rack Mnt Kit	J9583A
	See Configuration Note:1

Configuration Rules:

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

Technical Specifications

HP 1810-8G v2 Switch (J9802A)	Ports	8 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
		Supports a maximum of 8 autosensing 10/100/1000 ports	
	Physical characteristics	**Dimensions**	7.93(w) x 4.65(d) x 1.73(h) in (20.14 x 11.81 x 4.39 cm) (1U height)
		Weight	0.84 lb (.38 kg)
	Memory and processor	128 MB RAM, 8 MB flash; packet buffer size: 512 KB	
	Mounting	wall, desktop and under table mounting	
	Performance	**100 Mb Latency**	< 3.3 µs (64-byte packets)
		1000 Mb Latency	< 2.3 µs (64-byte packets)
		Throughput	up to 11.9 million pps
		Switching capacity	16 Gbps
		MAC address table size	8000 entries
	Environment	**Operating temperature**	32°F to 104°F (0°C to 40°C)
		Operating relative humidity	15% to 95% @ 104°F (40°C)
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 95% @ 140°F (60°C)
		Altitude	up to 10,000 ft (3 km)
		Acoustic	Power: 0 dB no fan
	Electrical characteristics	**Voltage**	100-127/200-240 VAC
		Current	0.5 A
		Maximum power rating	7.2 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	UL 60950-1; IEC 60950; EN 60950	
	Emissions	EN 55022 Class A; CISPR 22 Class A; VCCI V-3; FCC (CFR 47, Part 15) Subpart B Class A; VCCI V-4	
	Immunity	**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

Technical Specifications

Power frequency magnetic field	IEC 61000-4-8	
Voltage dips and interruptions	IEC 61000-4-11	
Harmonics	IEC 61000-3-2	
Flicker	IEC 61000-3-3	
Management	Web browser	
Notes	Use only supported genuine HP mini-GBICs with your switch.	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UE256E)	

Services

3-year, 4-hour onsite, 13x5 coverage for hardware (UE256E)
3-year, 4-hour onsite, 24x7 coverage for hardware (UE257E)
3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UE258E)
3-year, 24x7 SW phone support, software updates (UE260E)
Installation with minimum configuration, system-based pricing (U4826E)
Installation with HP-provided configuration, system-based pricing (U4830E)
4-year, 4-hour onsite, 13x5 coverage for hardware (UR846E)
4-year, 4-hour onsite, 24x7 coverage for hardware (UR847E)
4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR848E)
4-year, 24x7 SW phone support, software updates (UR849E)
5-year, 4-hour onsite, 13x5 coverage for hardware (UR850E)
5-year, 4-hour onsite, 24x7 coverage for hardware (UR851E)
5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR852E)
5-year, 24x7 SW phone support, software updates (UR853E)
3 Yr 6 hr Call-to-Repair Onsite (UW383E)
4 Yr 6 hr Call-to-Repair Onsite (UW384E)
5 Yr 6 hr Call-to-Repair Onsite (UW385E)
1-year, 4-hour onsite, 13x5 coverage for hardware (HR899E)
1-year, 4-hour onsite, 24x7 coverage for hardware (HR900E)
1-year, 6 hour Call-To-Repair Onsite for hardware (HR903E)
1-year, 24x7 software phone support, software updates (HR902E)
1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR901E)
1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HU347E)
1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HU348E)
3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HU349E)
3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HU350E)
4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS810E)
4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS811E)
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS812E)
5-year, 24x7 software phone support, software updates + 4 hour Hardware

Technical Specifications

Exchange (HS813E)

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 1810-24G v2 Switch (J9803A)	Ports		24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
			2 SFP 100/1000 Mbps ports Supports a maximum of 24 autosensing 10/100/1000 ports plus 2 SFP ports
	Physical characteristics	Dimensions	12.99(w) x 6.81(d) x 1.73(h) in (32.99 x 17.3 x 4.39 cm) (1U height)
		Weight	2.54 lb (1.15 kg)
	Memory and processor		128 MB RAM, 8 MB flash; packet buffer size: 512 KB
	Mounting		Mounts in an EIA-standard 19 in. telco rack (hardware included), horizontal surface, wall and under table mounting
	Performance	100 Mb Latency	< 3.3µs (64-byte packets)
		1000 Mb Latency	< 2.2µs (64-byte packets)
		Throughput	up to 38.7 million pps
		Switching capacity	52 Gbps
		MAC address table size	8000 entries
	Environment	Operating temperature	32°F to 104°F (0°C to 40°C)
		Operating relative humidity	15% to 95% @ 104°F (40°C)
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 95% @ 140°F (60°C)
		Altitude	up to 10,000 ft (3 km)
		Acoustic	Power: 0 dB no fan
	Electrical characteristics	Voltage	100-127/200-240 VAC
		Current	0.4/0.3 A
		Maximum power rating	22 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		UL 60950-1; IEC 60950; EN 60950

Technical Specifications

Emissions	EN 55022 Class A; CISPR 22 Class A; VCCI V-3; FCC (CFR 47, Part 15) Subpart B Class A; VCCI V-4	
Immunity	**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	IEC 61000-3-2
	Flicker	IEC 61000-3-3
Management	Web browser	
Notes	Use only supported genuine HP mini-GBICs with your switch.	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U4683E)	

Services (continued):
3-year, 4-hour onsite, 13x5 coverage for hardware (U4683E)
3-year, 4-hour onsite, 24x7 coverage for hardware (U4835E)
3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (U6321E)
3-year, 24x7 SW phone support, software updates (UF792E)
1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR849E)
1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR850E)
1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR851E)
Installation with minimum configuration, system-based pricing (U4826E)
Installation with HP-provided configuration, system-based pricing (U4830E)
4-year, 4-hour onsite, 13x5 coverage for hardware (UR948E)
4-year, 4-hour onsite, 24x7 coverage for hardware (UR949E)
4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR950E)
4-year, 24x7 SW phone support, software updates (UR951E)
5-year, 4-hour onsite, 13x5 coverage for hardware (UR952E)
5-year, 4-hour onsite, 24x7 coverage for hardware (UR953E)
5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR954E)
5-year, 24x7 SW phone support, software updates (UR955E)
3 Yr 6 hr Call-to-Repair Onsite (UW368E)
4 Yr 6 hr Call-to-Repair Onsite (UW369E)
5 Yr 6 hr Call-to-Repair Onsite (UW370E)
1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)
1-year, 24x7 software phone support, software updates (HR852E)
1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)
1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)
1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)

Technical Specifications

3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)

3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)

4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)

4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)

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

5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at: www.hp.com/networking/services 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 1810-48G Switch (J9660A)	**Ports**	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
		4 SFP 100/1000 Mbps ports
		Supports a maximum of 48 autosensing 10/100/1000 ports plus 4 SFP ports
	Physical characteristics	**Dimensions** 17.4(w) x 9.75(d) x 1.75(h) in (44.2 x 24.77 x 4.45 cm) (1U height)
		Weight 6.31 lb (2.86 kg)
	Memory and processor	8 MB flash, 64 MB SDRAM; packet buffer size: 1.5 MB
	Mounting	Mounts in an EIA-standard 19 in. telco rack (hardware included); wall, desktop, tabletop, and under-table mounting
	Performance	**100 Mb Latency** < 8.4 µs (64-byte packets)
		1000 Mb Latency < 3.2 µs (64-byte packets)
		Throughput up to 77.4 million pps (64-byte packets)
		Switching capacity 104 Gbps
		MAC address table size 16000 entries
	Environment	**Operating temperature** 32°F to 113°F (0°C to 45°C)
		Operating relative humidity 15% to 95% @ 104°F (40°C), noncondensing
		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: 22 dB single fan
	Electrical characteristics	**Maximum heat** 204 BTU/hr (215.22 kJ/hr)

Technical Specifications

	dissipation	
	Voltage	100-127/200-240 VAC
	Current	0.9/0.5 A
	Maximum power rating	60 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	EN 55022 Class A; CISPR 22 Class A; VCCI V-3; FCC (CFR 47, Part 15) Subpart B Class A; VCCI V-4	
Immunity	**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	IEC 61000-3-2
	Flicker	IEC 61000-3-3
Management	Web browser	
Notes	Use only supported genuine HP mini-GBICs with your switch.	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (HS854E) 3-year, 4-hour onsite, 24x7 coverage for hardware (HS856E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (U6321E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (HS858E) 3-year, 24x7 SW phone support, software updates (UF792E) 3-year, 24x7 SW phone support, software updates (HS859E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HS846E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HS848E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HS850E) Installation with minimum configuration, system-based pricing (U4826E) Installation with HP-provided configuration, system-based pricing (U4830E) 4-year, 4-hour onsite, 13x5 coverage for hardware (HS862E) 4-year, 4-hour onsite, 24x7 coverage for hardware (HS864E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HS866E)	

Technical Specifications

4-year, 24x7 SW phone support, software updates (HS867E)
5-year, 4-hour onsite, 13x5 coverage for hardware (HS870E)
5-year, 4-hour onsite, 24x7 coverage for hardware (HS872E)
5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (HS874E)
5-year, 24x7 SW phone support, software updates (HS875E)
3 Yr 6 hr Call-to-Repair Onsite (HS860E)
3 Yr 6 hr Call-to-Repair Onsite (UW368E)
4 Yr 6 hr Call-to-Repair Onsite (HS868E)
5 Yr 6 hr Call-to-Repair Onsite (HS876E)
1-year, 6 hour Call-To-Repair Onsite for hardware (HS852E)
1-year, 24x7 software phone support, software updates (HS851E)

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 1810-8 v2 Switch (J9800A)	**Ports**	7 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full
		1 RJ-45 autosensing 10/100/1000 port (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 Supports a maximum of 7 autosensing 10/100 ports plus 1 autosensing 10/100/1000 ports
	Physical characteristics	**Dimensions** 7.93(w) x 4.65(d) x 1.73(h) in (20.14 x 11.81 x 4.39 cm) (1U height)
		Weight 0.77 lb (.35 kg)
	Memory and processor	128 MB RAM, 8 MB flash; packet buffer size: 512 KB
	Mounting	wall, desktop and under table mounting
	Performance	**100 Mb Latency** < 3.3 µs (64-byte packets)
		Throughput up to 2.5 million pps
		Switching capacity 3.4 Gbps
		MAC address table size 8000 entries
	Environment	**Operating temperature** 32°F to 104°F (0°C to 40°C)
		Operating relative humidity 15% to 95% @ 104°F (40°C)
		Nonoperating/Storage temperature -40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity 15% to 95% @ 140°F (60°C)
		Altitude up to 10,000 ft (3 km)
		Acoustic Power: 0 dB no fan
	Electrical characteristics	**Voltage** 100-240 VAC
		Current 0.5 A

Technical Specifications

Maximum power rating	4.8 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	UL 60950-1; IEC 60950; EN 60950	
Emissions	EN 55022 Class A; CISPR 22 Class A; VCCI V-3; FCC (CFR 47, Part 15) Subpart B Class A; VCCI V-4	
Immunity	**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	IEC 61000-3-2
	Flicker	IEC 61000-3-3
Management	Web browser	
Notes	Use only supported genuine HP mini-GBICs with your switch.	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UE256E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UE257E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UE258E) 3-year, 24x7 SW phone support, software updates (UE260E) Installation with minimum configuration, system-based pricing (U4826E) Installation with HP-provided configuration, system-based pricing (U4830E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR846E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR847E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR848E) 4-year, 24x7 SW phone support, software updates (UR849E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UR850E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UR851E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR852E) 5-year, 24x7 SW phone support, software updates (UR853E) 3 Yr 6 hr Call-to-Repair Onsite (UW383E) 4 Yr 6 hr Call-to-Repair Onsite (UW384E) 5 Yr 6 hr Call-to-Repair Onsite (UW385E) 1-year, 4-hour onsite, 13x5 coverage for hardware (HR899E) 1-year, 4-hour onsite, 24x7 coverage for hardware (HR900E)	

Technical Specifications

1-year, 6 hour Call-To-Repair Onsite for hardware (HR903E)
1-year, 24x7 software phone support, software updates (HR902E)
1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR901E)
1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HU347E)
1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HU348E)
3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HU349E)
3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HU350E)
4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS810E)
4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS811E)
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS812E)
5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS813E)

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 1810-24 v2 Switch (J9801A)	**Ports**	22 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full
		2 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
		2 SFP 100/1000 Mbps ports Supports a maximum of 22 autosensing 10/100 ports plus 2 autosensing 10/100/1000 ports plus 2 SFP port
	Physical characteristics	**Dimensions** 12.99(w) x 6.81(d) x 1.73(h) in (32.99 x 17.3 x 4.39 cm) (1U height)
		Weight 2.2 lb (1 kg)
	Memory and processor	128 MB RAM, 8 MB flash; packet buffer size: 512 KB
	Mounting	Mounts in an EIA-standard 19 in. telco rack (hardware included), horizontal surface, wall and under table mounting
	Performance	**100 Mb Latency** < 3.4µs (64-byte packets)
		Throughput up to 38.7 million pps
		Switching capacity 12.4 Gbps
		MAC address table size 8000 entries
	Environment	**Operating temperature** 32°F to 104°F (0°C to 40°C)
		Operating relative humidity 15% to 95% @ 104°F (40°C)

Technical Specifications

	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 95% @ 140°F (60°C)
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 0 dB no fan
Electrical characteristics	**Voltage**	100-127/200-240 VAC
	Current	0.4/0.3 A
	Maximum power rating	22 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	UL 60950-1; IEC 60950; EN 60950	
Emissions	EN 55022 Class A; CISPR 22 Class A; VCCI V-3; FCC (CFR 47, Part 15) Subpart B Class A; VCCI V-4	
Immunity	**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	IEC 61000-3-2
	Flicker	IEC 61000-3-3
Management	Web browser	
Notes	Use only supported genuine HP mini-GBICs with your switch.	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U4683E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U4835E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (U6321E) 3-year, 24x7 SW phone support, software updates (UF792E) Installation with minimum configuration, system-based pricing (U4826E) Installation with HP-provided configuration, system-based pricing (U4830E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR948E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR949E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR950E) 4-year, 24x7 SW phone support, software updates (UR951E)	

Technical Specifications

5-year, 4-hour onsite, 13x5 coverage for hardware (UR952E)
5-year, 4-hour onsite, 24x7 coverage for hardware (UR953E)
5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR954E)
5-year, 24x7 SW phone support, software updates (UR955E)
3 Yr 6 hr Call-to-Repair Onsite (UW368E)
4 Yr 6 hr Call-to-Repair Onsite (UW369E)
5 Yr 6 hr Call-to-Repair Onsite (UW370E)
1-year, 4-hour onsite, 13x5 coverage for hardware (HR849E)
1-year, 4-hour onsite, 24x7 coverage for hardware (HR850E)
1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)
1-year, 24x7 software phone support, software updates (HR852E)
1-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support and software updates (HR851E)
1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)
1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)
3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)
3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)
4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)
4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)
5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)
5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

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

Standards and protocols (applies to all products in series)	**Denial of service protection** CPU DoS Protection

General protocols
IEEE 802.1p Priority
IEEE 802.1Q VLANs
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3x Flow Control
RFC 1534 DHCP/BOOTP Interoperation
RFC 2030 Simple Network Time Protocol (SNTP) v4

Network management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

Accessories

HP 1810 Switch Series accessories

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
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

Mounting Kit

HP X410 1U Universal 4-Post Rack Mounting Kit	J9583A

HP 1810-24G v2 Switch (J9803A)

HP X111 100M SFP LC FX Transceiver	J9054C
HP X121 1G SFP LC SX Transceiver	J4858C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X121 1G SFP RJ45 T Transceiver	J8177C

HP 1810-48G Switch (J9660A)

HP X111 100M SFP LC FX Transceiver	J9054C
HP X121 1G SFP LC SX Transceiver	J4858C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X121 1G SFP RJ45 T Transceiver	J8177C

HP 1810-24 v2 Switch (J9801A)

HP X111 100M SFP LC FX Transceiver	J9054C
HP X121 1G SFP LC SX Transceiver	J4858C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X121 1G SFP RJ45 T Transceiver	J8177C

Accessory Product Details

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

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 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 X111 100M SFP LC FX Transceiver (J9054C) HP X111 100M SFP LC FX Transceiver: An SFP format 100-megabit transceiver with LC connectors using FX technology.	**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: 32°F to 158°F (0°C to 70°C) Operating relative humidity: 5% to 95% Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C) Nonoperating/Storage relative humidity: 5% to 85% Altitude: up to 10,000 ft. (3 km)
	Cabling	Cable type: 62.5/125 ìm or 50/125 ìm (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 this product, see the document titled "Support for the J9054B 100-FX SFP-LC Transceiver" on the "ProCurve 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.

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 bandwidth) ● 2-550 m (multimode 50 µm core diameter, 500 MHz*km bandwidth) ● 2-10,000 m (single-mode fiber)

Accessory Product Details

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