# QuickSpecs

### **Overview**

### HPE OfficeConnect 1820 Switch Series



### Models

HPE OfficeConnect 1820 8G Switch	J9979A
HPE OfficeConnect 1820 8G PoE+ (65W) Switch	J9982A
HPE OfficeConnect 1820 24G Switch	J9980A
HPE OfficeConnect 1820 24G PoE+ (185W) Switch	J9983A
HPE OfficeConnect 1820 48G Switch	J9981A
HPE OfficeConnect 1820 48G PoE+ (370W) Switch	J9984A

### **Key features**

- Customized operation using intuitive Web interface
- Flexible deployment options including wall, under table and desktop mounting
- 24- and 48 port models include SFP ports
- 8-, 24- and 48 port non-PoE+ models are fanless for quiet operation
- Limited lifetime Warranty

### **Product overview**



Hewlett Packard Enterprise

#### QuickSpecs

### Overview

HPE OfficeConnect 1820 Switch Series devices are basic, smart-managed, fixed-configuration Gigabit Ethernet Layer 2 switches designed for small businesses looking for key features in an easy-to-administer solution. The series is part of the OfficeConnect portfolio of Hewlett Packard Enterprise small business networking products.

The series consists of six switches including 8-, 24- and 48-port Gigabit Ethernet switches and 8-, 24-, and 48-port Gigabit PoE+ models each providing non-blocking Gigabit per port performance. Some models include SFP ports for fiber connectivity and the 8-, 24-, and 48-port non PoE+ models are fanless, making them ideal for office deployments. All HPE OfficeConnect 1820 Switches support flexible installation options, including mounting on wall, under table, or on desktop. 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.

These Gigabit switches are plug-and-play out of the box, yet network operation can be fine-tuned through features available from a simple Web browser-based GUI, if necessary. Customizable features include VLANs, Rapid Spanning Tree, IGMP Snooping, link aggregation trunking, and DSCP QoS policies. All models include the latest energy-saving capabilities, including Energy Efficient Ethernet (EEE) and idle-port power down. HPE OfficeConnect 1820 Switch Series includes a Limited Lifetime Warranty. This warranty provides advance hardware replacement with next business day shipment in most countries, limited 24x7 telephone support available from HPE for the first 90 days, and limited electronic and business hours telephone support is available from HPE for the entire warranty period.

### **Features and Benefits**

#### Management

• Simple Web management

Allows for easy management of the switch—even by nontechnical users—through an intuitive Web GUI; supports HTTP and HTTP Secure (HTTPS).

• SNMPv1, v2c

Enables devices to be discovered and monitored from an SNMP management station.

• Port mirroring

Enables traffic on a port to be simultaneously sent to a network analyzer for monitoring.

- Dual flash images
   Provides independent primary and secondary operating system files for backup while upgrading.
- Network Time Protocol (NTP)
   Synchronizes timekeeping among distributed time servers and clients; keeps timekeeping consistent among all clock-dependent devices within the network.
- Manual network time configuration Manually set the date and time on the switch in the absence of an NTP server.
- Default DHCP client mode

Allows the switch to be directly connected to a network, enabling plug-and-play operation; in absence of a DHCP server on the network, the switch falls back to a default, fixed IP address.

#### **Quality of Service (QoS)**

• Traffic prioritization

Provides time-sensitive packets (like VoIP and video) with priority over other traffic based on DSCP or IEEE 802.1p classification; packets are mapped to eight hardware queues for more effective throughput.

• Broadcast control

Allows limiting of broadcast traffic rate to reduce unwanted network broadcast traffic.

• IEEE 802.1p/Q

#### Overview

Delivers data to devices based on the priority and type of traffic; supports IEEE 802.1Q.

#### Connectivity

Auto-MDI/MDIX

Automatically adjusts for straight-through or crossover cables on all ports.

• IEEE 802.3X flow control

Provides a flow throttling mechanism propagated through the network to prevent packet loss at a congested node.

• Loop protection

If the switch detects a loop, it disables the source port from forwarding data packets originating from the switch to avoid broadcast storms.

• SFP ports for fiber connectivity

Provides fiber connections for uplinks and other connections across longer distances than copper cabling can support; SFP ports are in addition to available copper Ethernet ports, providing a higher total number of available ports. SFP ports available on 24- and 48 port models.

• 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 non-PoE+ model only).

#### • IEEE 802.3at Power over Ethernet (PoE+)

Provides up to 30W per port, which allows support of the latest PoE+-capable devices such as IP phones, wireless access points, and security cameras, as well as any IEEE 802.3af-compliant end device; lowers the cost of additional electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments.

PoE+ port availability

Ports 1-4 provide PoE+ on the HPE 1820-8G-PoE+ (65W) switch. Ports 1 – 12 provide PoE+ on the HPE 1820-24G-PoE+ (180W) switch. Ports 1-24 provide PoE+ on the HPE 1820-48G-PoE+ (370W) switch.

#### • Auto PoE power configuration

The switch automatically assigns the required power to a port for a PD device based on LLDP (Link Layer Discovery Protocol). Optionally, the switch permits manual, per port, PoE power configuration.

• PoE shut down mode

A PoE scheduler provides the ability to define the hours of PoE power being supplied on a group of switch ports based on a 24 hour day. The scheduler enables the flexibility to select individual days of a week as well as reoccurrence on a weekly basis with a start and end date.

• Energy Efficient Ethernet

Compliant with IEEE 802.3az standard requirements to save energy during periods of low data activity.

• Auto port shut-down

The switch saves power by automatically shutting down power to inactive ports. Power is restored on a port upon link detection.

• Energy savings status

The switch provides an estimated cumulative energy savings due to green Ethernet features enabled.

#### 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 nine types of malicious attacks and protects the network by blocking these attacks.
- Management password

Provides security so that only authorized access to the Web browser interface is allowed.

#### **Overview**

#### Performance

- Half-/full-duplex auto-negotiating capability on every port Doubles the throughput of every port.
- IGMP snooping

Improves network performance through multicast filtering, instead of flooding traffic to all ports.

#### Layer 2 switching

• VLAN support and tagging

Supports 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.
- Link aggregation

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 support 4 trunks, the 24-port models support 8 trunks and the 48-port models support 16 trunks. The 8- and 24-port switches can support up to 4 ports per trunk, the 48-port switches can support up to 8 ports per trunk

#### Ease of use

• Locator LED

Allows users to set the locator LED on a specific switch to either turn on, blink, or turn off; simplifies troubleshooting by making it easy to locate a particular switch within a rack of similar switches.

• **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 with supplied hardware.

- Rack mountable
   All models include rack-mounting hardware for mounting in a standard 19 inch telco rack.
- Kensington lock slot Allows switches to be physically secured in open-space deployments (8-,and 24 port models).

#### Warranty and support

• Limited Lifetime Warranty

This series comes with a Limited Lifetime Warranty providing advance hardware replacement with next business day shipment in most countries, 24x7 phone support available for the first 90 days, and electronic and business hours phone support for the entire warranty period. See **http://www.hpe.com/networking/warrantysummary** for full warranty and

### Overview

support information included with your product purchase.

# 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.

<ul> <li>HPE OfficeConnect 1820 8G Switch</li> <li>8 RJ-45 autosensing 10/100/1000 ports</li> <li>1U - Height (Desktop Model)</li> </ul>	J9979A See Configuration <b>NOTE:</b> 2
<ul> <li>HPE OfficeConnect 1820 24G Switch</li> <li>24 RJ-45 autosensing 10/100/1000 ports</li> <li>2 SFP 100/1000 Mbps ports (min=0 \ max=2 SFP Transceivers)</li> <li>1U - Height</li> </ul>	J9980A See Configuration <b>NOTE:</b> 1, 3
<ul> <li>PDU Cable NA/MEX/TW/JP</li> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	J9980A#B2B
<ul> <li>PDU Cable NA/MEX/TW/JP</li> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	J9980A#B2C
<ul> <li>High Volt Switch/Router to Wall Power Cord</li> <li>NEMA L6-20P Cord (NA/MEX/JP/TW)</li> </ul>	J9980A#B2E
<ul> <li>HPE OfficeConnect 1820 48G Switch</li> <li>48 RJ-45 autosensing 10/100/1000 ports</li> <li>4 SFP 100/1000 Mbps ports (min=0 \ max=4 SFP Transceivers)</li> <li>1U - Height</li> </ul>	J9981A See Configuration <b>NOTE:</b> 1, 3
<ul> <li>PDU Cable NA/MEX/TW/JP</li> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	J9981A#B2B
<ul> <li>PDU Cable NA/MEX/TW/JP</li> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	J9981A#B2C
<ul> <li>High Volt Switch/Router to Wall Power Cord</li> <li>NEMA L6-20P Cord (NA/MEX/JP/TW)</li> </ul>	J9981A#B2E
<ul> <li>HPE OfficeConnect 1820 8G PoE+ (65W) Switch</li> <li>4 RJ-45 autosensing 10/100/1000 PoE+ ports</li> <li>4 RJ-45 autosensing 10/100/1000 ports</li> <li>1U - Height (Desktop Model)</li> </ul>	J9982A See Configuration <b>NOTE:</b> 2

J9983A

#### QuickSpecs

# Configuration

<ul><li>12</li><li>2 S</li></ul>	RJ-45 autosensing 10/100/1000 PoE+ ports RJ-45 autosensing 10/100/1000 ports SFP 100/1000 Mbps ports (min=0 \ max=2 SFP Transceivers) - Height	See Configuration <b>NOTE:</b> 1, 3
	NA/MEX/TW/JP 5 PDU Jumper Cord (NA/MEX/TW/JP)	J9983A#B2B
	NA/MEX/TW/JP 5 PDU Jumper Cord (ROW)	J9983A#B2C
-	witch/Router to Wall Power Cord EMA L6-20P Cord (NA/MEX/JP/TW)	J9983A#B2E
<ul> <li>24</li> <li>24</li> <li>45</li> </ul>	Connect 1820 48G PoE+ (370W) Switch RJ-45 autosensing 10/100/1000 PoE+ ports RJ-45 autosensing 10/100/1000 ports SFP 100/1000 Mbps ports (min=0 \ max=4 SFP Transceivers) - Height	J9984A See Configuration <b>NOTE:</b> 1, 3
	NA/MEX/TW/JP 5 PDU Jumper Cord (NA/MEX/TW/JP)	J9984A#B2B
	NA/MEX/TW/JP 5 PDU Jumper Cord (ROW)	J9984A#B2C
0	witch/Router to Wall Power Cord EMA L6-20P Cord (NA/MEX/JP/TW)	J9984A#B2E
Configuratio	on Rules:	
Note 1	"The following Transceivers install into this switch: HPE X121 1G SFP LC SX Transceiver HPE X121 1G SFP LC LX Transceiver HPE X111 100M SFP LC FX Transceiver HPE X121 1G SFP RJ45 T Transceiver	J4858C J4859C J9054C J8177C
Note 2	Localization required. (See Localization Menu for list.)	
Note 3	Localization (Wall Power Cord) required on orders without #B2B or #B2C (PDU Po	ower Cord). (See Localization

# **Rack Level Integration CTO Models**

Menu)

#### HPE OfficeConnect 1820 Switch Series

#### QuickSpecs

# Configuration

<ul> <li>HPE OfficeConnect 1820 24G Switch</li> <li>24 RJ-45 autosensing 10/100/1000 ports</li> <li>2 SFP 100/1000 Mbps ports (min=0 \ max=2 SFP Transceivers)</li> <li>1U - Height</li> </ul>	J9980A See Configuration <b>NOTE:</b> 1, 2, 3
<ul> <li>PDU Cable NA/MEX/TW/JP</li> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	J9980A#B2B
<ul> <li>PDU Cable NA/MEX/TW/JP</li> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	J9980A#B2C
<ul> <li>HPE OfficeConnect 1820 48G Switch</li> <li>48 RJ-45 autosensing 10/100/1000 ports</li> <li>4 SFP 100/1000 Mbps ports (min=0 \ max=4 SFP Transceivers)</li> <li>1U - Height</li> </ul>	J9981A See Configuration <b>NOTE:</b> 1, 2, 3
<ul> <li>PDU Cable NA/MEX/TW/JP</li> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	J9981A#B2B
<ul> <li>PDU Cable NA/MEX/TW/JP</li> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	J9981A#B2C
<ul> <li>HPE OfficeConnect 1820 24G PoE+ (185W) Switch</li> <li>12 RJ-45 autosensing 10/100/1000 PoE+ ports</li> <li>12 RJ-45 autosensing 10/100/1000 ports</li> <li>2 SFP 100/1000 Mbps ports (min=0 \ max=2 SFP Transceivers)</li> <li>1U - Height</li> </ul>	J9983A See Configuration <b>NOTE:</b> 1, 2, 3
<ul> <li>PDU Cable NA/MEX/TW/JP</li> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	J9983A#B2B
<ul><li>PDU Cable NA/MEX/TW/JP</li><li>C15 PDU Jumper Cord (ROW)</li></ul>	J9983A#B2C
<ul> <li>HPE OfficeConnect 1820 48G PoE+ (370W) Switch</li> <li>24 RJ-45 autosensing 10/100/1000 PoE+ ports</li> <li>24 RJ-45 autosensing 10/100/1000 ports</li> <li>4 SFP 100/1000 Mbps ports (min=0 \ max=4 SFP Transceivers)</li> <li>1U - Height</li> </ul>	J9984A See Configuration <b>NOTE:</b> 1, 2, 3
<ul> <li>PDU Cable NA/MEX/TW/JP</li> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	J9984A#B2B
<ul> <li>PDU Cable NA/MEX/TW/JP</li> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	J9984A#B2C

### Configuration

Configuration Rules:

Note 1	The following Transceivers install into this switch	
	HPE X121 1G SFP LC SX Transceiver	J4858C
	HPE X121 1G SFP LC LX Transceiver	J4859C
	HPE X111 100M SFP LC FX Transceiver	J9054C
	HPE X121 1G SFP RJ45 T Transceiver	J8177C
Note 2	Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) . ( Menu) REMARK: When Switches/Routers are Factory Racked, Then #B2B, or #B2C should be the De option on the Switches/Routers.	

Note 3 If this switch is factory installed in any HPE Racks, Then the J9583A#OD1 is required.

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

### Transceivers

#### **SFP Transceivers**

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

### **Internal Power Supplies**

Power supplies included

#### Remarks:

Drop down under power supply should offer the following options and results: Switch/Router/Power Supply to PDU Power Cord - #B2B in North America, Mexico, Taiwan, and Japan or #B2C ROW. (Watson Default B2B or B2C for Rack Level CTO) Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO) High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)

### Cables

#### **Multi-Mode Cables**

#### QuickSpecs

# Configuration

HP LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
HP LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
HP LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
HP LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
HP LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
HP LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
HP LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic 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

### **Switch Enclosure Options**

#### **Rack Mount Kit**

HPE X410 1U Universal 4-post Rackmount Kit	J9583A
• Supported on J9980A, J9981A, J9983A, J9984A	See Configuration
	NOTE:1

### Configuration Rules:

Note 1 If this Mounting Kit is order with #OD1 then it integrates to the HPE Network Rack. (not the switch)

HPE OfficeConnect 1820 8G Switch (J9979A)	I/O ports and slots	802.3u Type 100BASE-TX	00/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE (, IEEE 802.3ab Type 1000BASE-T); Duplex: nalf or full; 1000BASE-T: full only
		Supports a maximum of 8	autosensing 10/100/1000 ports
	Physical characteristics	Dimensions	10(w) x 6.28(d) x 1.73(h) in (25.4 x 15.95 x 4.39 cm) (1U height)
		Weight	1.81 lb (0.82 kg)
	Memory and processor	ARM Cortex-A9 @ 400 M MB flash	Hz, 128 MB SDRAM; Packet buffer size: 1.5 MB, 16
	Performance	100 Mb Latency	< 7 $\mu$ s (LIFO 64-byte packets)
		1000 Mb Latency	< 2.4 µs (LIFO 64-byte packets)
		Throughput	up to 11.9 Mpps (64-byte packets)
		Switching capacity	16 Gbps
		MAC address table size	8000 entries
	Reliability	MTBF (years)	144.93
	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 9,842 ft (3 km)
		Acoustic	Power: 0 dB no fan
	<b>Electrical characteristics</b>	Frequency	50/60 Hz
		AC Voltage	100 - 240 VAC
		Current	. 2 A
		Maximum power rating	12.2 W
		Idle power	10.2 W
		PoE power	
		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	UL 60950-1; EN 60825; IE 60950-1	C 60950-1; EN 60950-1; CAN/CSA-C22.2 No.

	Emissions	FCC Class A; EN 55022/Cl	SPR-22 Class A; VCCI Class A F	
Immunity	Immunity	Generic	EN 55024, CISPR 24	
	-	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	Web browser		
	Notes	Use only supported genui	ne HPE mini-GBICs with your switch	
	Services	Refer to the Hewlett Pack		
		http://www.hpe.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 Hewlett Packard Enterprise sales office.		
HPE OfficeConnect 1820 8G PoE+ (65W) Switch	I/O ports and slots	4 RJ-45 autosensing 10/100/1000 PoE+ ports; Duplex: 10BASE- T/100BASE-TX: half or full; 1000BASE-T: full only		
(J9982A)		4 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, I 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only		
	Physical characteristics	Dimensions	10(w) x 6.28(d) x 1.73(h) in (25.4 x 15.95 x 4.39	
			cm) (1U height)	
	<b>,</b>	Weight		
	Memory and processor	Weight	cm) (1U height)	
		<b>Weight</b> ARM Cortex-A9 @ 400 M	cm) (1U height) 2.01 lb (0.91 kg)	
	Memory and processor	<b>Weight</b> ARM Cortex-A9 @ 400 M MB flash	cm) (1U height) 2.01 lb (0.91 kg) Hz, 128 MB SRAM; Packet buffer size: 1.5 MB, 16	
	Memory and processor	<b>Weight</b> ARM Cortex-A9 @ 400 M MB flash <b>100 Mb Latency</b>	cm) (1U height) 2.01 lb (0.91 kg) Hz, 128 MB SRAM; Packet buffer size: 1.5 MB, 16 < 7 μs (LIFO 64-byte packets)	
	Memory and processor	Weight ARM Cortex-A9 @ 400 M MB flash 100 Mb Latency 1000 Mb Latency	cm) (1U height) 2.01 lb (0.91 kg) Hz, 128 MB SRAM; Packet buffer size: 1.5 MB, 16 < 7 μs (LIFO 64-byte packets) < 2.3 μs (LIFO 64-byte packets)	
	Memory and processor	Weight ARM Cortex-A9 @ 400 M MB flash 100 Mb Latency 1000 Mb Latency Throughput	cm) (1U height) 2.01 lb (0.91 kg) Hz, 128 MB SRAM; Packet buffer size: 1.5 MB, 16 < 7 μs (LIFO 64-byte packets) < 2.3 μs (LIFO 64-byte packets) up to 11.9 Mpps (64-byte packets)	
	Memory and processor	Weight ARM Cortex-A9 @ 400 M MB flash 100 Mb Latency 1000 Mb Latency Throughput Switching capacity	cm) (1U height) 2.01 lb (0.91 kg) Hz, 128 MB SRAM; Packet buffer size: 1.5 MB, 16 < 7 μs (LIFO 64-byte packets) < 2.3 μs (LIFO 64-byte packets) up to 11.9 Mpps (64-byte packets) 16 Gbps	
	Memory and processor Performance	Weight ARM Cortex-A9 @ 400 M MB flash 100 Mb Latency 1000 Mb Latency Throughput Switching capacity MAC address table size	cm) (1U height) 2.01 lb (0.91 kg) Hz, 128 MB SRAM; Packet buffer size: 1.5 MB, 16 < 7 μs (LIFO 64-byte packets) < 2.3 μs (LIFO 64-byte packets) up to 11.9 Mpps (64-byte packets) 16 Gbps 8000 entries	
	Memory and processor Performance Reliability	Weight ARM Cortex-A9 @ 400 M MB flash 100 Mb Latency 1000 Mb Latency Throughput Switching capacity MAC address table size MTBF (years)	cm) (1U height) 2.01 lb (0.91 kg) Hz, 128 MB SRAM; Packet buffer size: 1.5 MB, 16 < 7 μs (LIFO 64-byte packets) < 2.3 μs (LIFO 64-byte packets) up to 11.9 Mpps (64-byte packets) 16 Gbps 8000 entries 112.36	
	Memory and processor Performance Reliability	Weight ARM Cortex-A9 @ 400 M MB flash 100 Mb Latency 1000 Mb Latency Throughput Switching capacity MAC address table size MTBF (years) Operating temperature Operating relative	cm) (1U height) 2.01 lb (0.91 kg) Hz, 128 MB SRAM; Packet buffer size: 1.5 MB, 16 < 7 μs (LIFO 64-byte packets) < 2.3 μs (LIFO 64-byte packets) up to 11.9 Mpps (64-byte packets) 16 Gbps 8000 entries 112.36 32°F to 104°F (0°C to 40°C)	

	Nonoperating/Storage relative humidity	15% to 95% @ 140°F (60°C)
	Altitude	up to 9,842 ft (3 km)
	Acoustic	Power: 0 dB no fan
<b>Electrical characteristics</b>	Frequency	50/60 Hz
	AC Voltage	100 - 240 VAC
	Current	.9A
	Maximum power rating	83.9 W
	Idle power	12.6 W
	PoE power	65 W PoE+
	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	UL 60950-1; EN 60825; IEC 60950-1	C 60950-1; EN 60950-1; CAN/CSA-C22.2 No.
Emissions	FCC Class A; EN 55022/CIS	SPR-22 Class A; VCCI Class A
Immunity	Generic	EN 55024, CISPR 24
	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	Web browser	
Notes	Use only supported genuine HPE mini-GBICs with your switch	
Services	Refer to the Hewlett Packard Enterprise website at	
	http://www.hpe.com/ne	tworking/services for details on the service-

Technical Specifications			
		duct numbers. For details about services and ea, please contact your local Hewlett Packard	
HPE OfficeConnect 1820 I/O ports and slots 24G Switch (J9980A)	802.3u Type 100BASE-T> 10BASE-T/100BASE-TX: H 2 SFP 100/1000 Mbps poi	24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEI 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 (IEEE 802.3z Type 1000BASE-X, IEEE 802.3u	
	Type 100BASE-FX) Supports a maximum of 2 100/1000 slots	4 autosensing 10/100/1000 ports plus 2 SFP	
Physical character	istics Dimensions	17.42(w) x 9.69(d) x 1.73(h) in (44.25 x 24.61 x 4.39 cm) (1U height)	
	Weight	6 lb (2.72 kg)	
Memory and proce	ssor ARM Cortex-A9 @ 400 M MB flash	IHz, 128 MB SDRAM; Packet buffer size: 1.5 MB, 16	
Performance	100 Mb Latency	< 7 $\mu$ s (LIFO 64-byte packets)	
	1000 Mb Latency	< 2 $\mu$ s (LIFO 64-byte packets)	
	Throughput	up to 38.6 Mpps (64-byte packets)	
	Switching capacity	52 Gbps	
	MAC address table size	8000 entries	
Reliability	MTBF (years)	80.00	
Environment	<b>Operating temperature</b>	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 9,842 ft (3 km)	
	Acoustic	Power: 0 dB no fan	
Electrical characte	ristics Frequency	50/60 Hz	
	AC Voltage	100 - 127 / 200 - 240 VAC, rated	
	Current	. 5/. 3 A	
	Maximum power rating	22 W	
	Idle power	16.9 W	
	PoE power		
	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	UL 60950-1; CAN/CSA 60950-1	22.2 No. 60950-1; EN 60825; IEC 60950-1; EN
	Emissions	FCC Class A; EN 55022	/CISPR-22 Class A; VCCI Class A
	Immunity	Generic	EN 55024, CISPR 24
		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	Web browser	
	Notes	Use only supported genuine HPE mini-GBICs with your switch	
	Services	http://www.hpe.com level descriptions and p	ackard Enterprise website at / <b>networking/services</b> for details on the service- product numbers. For details about services and r area, please contact your local Hewlett Packard
HPE OfficeConnect 1820 24G PoE+ (185W) Switch	-	0	0/100/1000 PoE+ ports; Duplex: 10BASE- full; 1000BASE-T: full only
(J9983A)		12 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BA 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full on 2 SFP 100/1000 Mbps ports (IEEE 802.3z Type 1000BASE-X, IEE	
		Type 100BASE-FX)	ports (iele 002.52 i ype 1000b) (3e 7), iele 002.50
		Supports a maximum o 100/1000 slots	of 24 autosensing 10/100/1000 ports plus 2 SFP
	Physical characteristics	Dimensions	17.42(w) x 9.69(d) x 1.73(h) in (44.25 x 24.61 x 4.39 cm) (1U height)
		Weight	7.3 lb (3.31 kg)
	Memory and processor	ARM Cortex-A9 @ 400 MB flash	0 MHz, 128 MB SDRAM; Packet buffer size: 1.5 MB, 16
	Performance	100 Mb Latency	< 7 $\mu$ s (LIFO 64-byte packets)
		1000 Mb Latency	< 2 $\mu$ s (LIFO 64-byte packets)
		Throughput	up to 38.6 Mpps (64-byte packets)

	Switching capacity	52 Gbps
	MAC address table size	8000 entries
Reliability	MTBF (years)	64.52
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 70°F (-40°C to 21.1°C)
	Nonoperating/Storage relative humidity	15% to 95% @ 140°F (60°C)
	Altitude	up to 9,842 ft (3 km)
	Acoustic	Power: 36 dB
Electrical characteristics	Frequency	50/60 Hz
	Voltage	100 - 127 / 200 - 240 VAC, rated (depending on power supply chosen)
	Current	2.6/1.3 A
	Maximum power rating	240 W
	Idle power	28.3 W
	PoE power	185 W PoE+
	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	UL 60950-1; CAN/CSA 22.2 60950-1	2 No. 60950-1; EN 60825; IEC 60950-1; EN
Emissions	FCC Class A; EN 55022/CIS	SPR-22 Class A; VCCI Class A
Immunity	Generic	EN 55024, CISPR 24
	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

Technical Specifica	tions		
		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	Web browser	
	Notes	Use only supported genui	ne HPE mini-GBICs with your switch
	Services	Refer to the Hewlett Packa	ard Enterprise website at
		level descriptions and prod	<b>etworking/services</b> for details on the service- duct numbers. For details about services and ea, please contact your local Hewlett Packard
HPE OfficeConnect 1820 48G Switch (J9981A)	I/O ports and slots	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
		4 SFP 100/1000 Mbps por Type 100BASE-FX)	rts (IEEE 802.3z Type 1000BASE-X, IEEE 802.3u
		Supports a maximum of 48 ports	8 autosensing 10/100/1000 ports plus 4 SFP
		Supports a maximum of 44 100/1000 slots	8 autosensing 10/100/1000 ports plus 4 SFP
	Physical characteristics	Dimensions	17.42(w) x 9.69(d) x 1.73(h) in (44.25 x 24.61 x 4.39 cm) (1U height)
		Weight	7.3 lb (3.31 kg)
	Memory and processor	ARM Cortex-A9 @ 400 M MB flash	Hz, 128 MB SDRAM; Packet buffer size: 1.5 MB, 16
	Performance	100 Mb Latency	< 7 µs (LIFO 64-byte packets)
		1000 Mb Latency	< 2 µs (LIFO 64-byte packets)
		Throughput	up to 77.3 Mpps (64-byte packets)
		Switching capacity	104 Gbps
		MAC address table size	16000 entries
	Reliability	MTBF (years)	61.73
	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 9,842 ft (3 km)
		Acoustic	Power: 0 dB no fan
	Electrical characteristics	Frequency	50/60 Hz

	Voltage	100 - 127 / 200 - 240 VAC, rated (depending on power supply chosen)
	Current	. 8/. 5 A
	Maximum power ra	ating 39 W
	Idle power	28.8 W
	PoE power	
	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	UL 60950-1; CAN/C 60950-1	5A 22.2 No. 60950-1; EN 60825; IEC 60950-1; EN
Emissions	FCC Class A; EN 550	22/CISPR-22 Class A; VCCI Class A
Immunity	Generic	EN 55024, CISPR 24
	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
Managem	ent Web browser	
Notes	Use only supported	genuine HPE mini-GBICs with your switch
Services	http://www.hpe.co level descriptions an	Packard Enterprise website at pm/networking/services for details on the service- d product numbers. For details about services and our area, please contact your local Hewlett Packard ce.
HPE OfficeConnect 1820 I/O ports a 48G PoE+ (370W)		g 10/100/1000 PoE+ ports; Duplex: 10BASE- or full; 1000BASE-T: full only
Switch (J9984A)	802.3u Type 100BA	g 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE SE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: -TX: half or full; 1000BASE-T: full only
	4 SFP 100/1000 Mb	ps ports (IEEE 802.3z Type 1000BASE-X, IEEE 802.3u

	Type 100BASE-FX)	
	Supports a maximum of 48 100/1000 slots	3 autosensing 10/100/1000 ports plus 4 SFP
Physical characteristics	Dimensions	17.42(w) x 12.7(d) x 1.73(h) in (44.25 x 32.26 x 4.39 cm) (1U height)
	Weight	9.7 lb (4.4 kg)
Memory and processor	ARM Cortex-A9 @ 400 Mł MB flash	Hz, 128 MB SDRAM; Packet buffer size: 1.5 MB, 16
Performance	100 Mb Latency	< 7 $\mu$ s (LIFO 64-byte packets)
	1000 Mb Latency	< 2 $\mu$ s (LIFO 64-byte packets)
	Throughput	up to 77.3 Mpps (64-byte packets)
	Switching capacity	104 Gbps
	MAC address table size	16000 entries
Reliability	MTBF (years)	45.05
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 9,842 ft (3 km)
	Acoustic	Power: 45 dB
Electrical characteristics	Frequency	50/60 Hz
	Voltage	100 - 127 / 200 - 240 VAC, rated (depending on power supply chosen)
	Current	5.1/2.6 A
	Maximum power rating	481 W
	Idle power	54.8 W
	PoE power	370 W PoE+
	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).

Safe	ty	UL 60950-1; CAN/CSA 22.2 60950-1	No. 60950-1; EN 60825; IEC 60950-1; EN
Emis	ssions	FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A	
Imm	unity	Generic	EN 55024, CISPR 24
		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
Man	agement	Web browser	
Note	es	Use only supported genuin	e HPE mini-GBICs with your switch
Serv	ices	Refer to the Hewlett Packa	rd Enterprise website at
		<b>http://www.hpe.com/networking/services</b> for details on the service- level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

#### Standards and protocols Denial of service protection

(applies to all products in CPU DoS Protection series)

#### **General protocols**

IEEE 802.1D Spanning Tree Protocol IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1W Rapid Spanning Tree Protocol 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)

#### HPE OfficeConnect 1820 Cables

Switch Series	HP LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A			
accessories	HP LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A			
	HP LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A			
	HP LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A			
	HP LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A			
	HP LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A			
	HP LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic 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				
	HPE X410 1U Universal 4-post Rackmount Kit	J9583A			
	HPE OfficeConnect 1820 24G Switch (J9980A)				
	HPE X121 1G SFP LC SX Transceiver	J4858C			
	HPE X121 1G SFP LC LX Transceiver	J4859C			
	HPE X121 1G SFP RJ45 T Transceiver	J8177C			
	HPE X111 100M SFP LC FX Transceiver	J9054C			
	HPE OfficeConnect 1820 24G PoE+ (185W) Switch (J9983A)				
	HPE X121 1G SFP LC SX Transceiver	J4858C			
	HPE X121 1G SFP LC LX Transceiver	J4859C			
	HPE X121 1G SFP RJ45 T Transceiver	J8177C			
	HPE X111 100M SFP LC FX Transceiver	J9054C			
	HPE OfficeConnect 1820 48G Switch (J9981A)				
	HPE X121 1G SFP LC SX Transceiver	J4858C			
	HPE X121 1G SFP LC LX Transceiver	J4859C			
	HPE X121 1G SFP RJ45 T Transceiver	J8177C			
	HPE X111 100M SFP LC FX Transceiver	J9054C			
	HPE OfficeConnect 1820 48G PoE+ (370W) Switch (J9984A)				
	HPE X111 100M SFP LC FX Transceiver	J9054C			
	HPE X121 1G SFP LC SX Transceiver	J4858C			
	HPE X121 1G SFP LC LX Transceiver	J4859C			
	HPE X121 1G SFP RJ45 T Transceiver	J8177C			

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

HP LC to LC Multi-mode OM3 2-Fiber 0.5m 1- Pack Fiber Optic Cable (AJ833A)	Cabling	Cable type: 50/125 $\mu\text{m}$ (core/cladding) diameter, multimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m
		<b>Maximum distance</b> : 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.
		<ul> <li>Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um</li> <li>Optical glass: Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.</li> <li>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.</li> <li>CABLE: The cable is duplex zip cord graded index 50/125um multimode optical fiber and designed to work in both the 850 and 1300 nm wavelength windows.</li> <li>BULK CABLE &amp; CABLE ASSEMBLY CONFIGURATION:</li> <li>Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.</li> <li>Jacket Color: Aqua for OM3 multimode per TIA 598</li> <li>Boot Color: White</li> <li>Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths &gt; 30 meters.</li> <li>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.</li> <li>Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg</li> </ul>
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise sales office.
HP LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable (AJ834A)	•	Cable type: 50/125 $\mu m$ (core/cladding) diameter, multimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m

		<b>Maximum distance</b> : 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.
		<ul> <li>Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um</li> <li>Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.</li> <li>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.</li> <li>CABLE: The cable is duplex zip cord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows.</li> <li>BULK CABLE &amp; CABLE ASSEMBLY CONFIGURATION:</li> <li>Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.</li> <li>Jacket Color: Aqua for OM3 multimode per TIA 598</li> <li>Boot Color: White</li> <li>Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths &gt; 30 meters.</li> <li>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.</li> <li>Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg</li> </ul>
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise sales office.
HP LC to LC Multi-mode OM3 2-Fiber 2.0m 1- Pack Fiber Optic Cable (AJ835A)	Cabling	Cable type: 50/125 $\mu$ m (core/cladding) diameter, multimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;
		<b>Maximum distance</b> : 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.
		<ul> <li>Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um</li> <li>Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.</li> </ul>

		<ul> <li>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.</li> <li>CABLE: The cable is duplex zip cord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows.</li> <li>BULK CABLE &amp; CABLE ASSEMBLY CONFIGURATION:</li> <li>Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.</li> <li>Jacket Color: Aqua for OM3 multimode per TIA 598</li> <li>Boot Color: White</li> <li>Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths &gt; 30 meters.</li> <li>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.</li> <li>Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg</li> </ul>
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise sales office.
HP LC to LC Multi-mode OM3 2-Fiber 5.0m 1- Pack Fiber Optic Cable (AJ836A)	Cabling	Cable type: 50/125 $\mu$ m core/cladding) diameter, multimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;
		<b>Maximum distance</b> : 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.
		<ul> <li>Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um</li> <li>Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.</li> <li>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.</li> <li>CABLE: The cable is duplex zip cord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows.</li> <li>BULK CABLE &amp; CABLE ASSEMBLY CONFIGURATION:</li> <li>Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.</li> </ul>

Accessory Product	Details	
		<ul> <li>Jacket Color: Aqua for OM3 multimode per TIA 598</li> <li>Boot Color: White</li> <li>Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths &gt; 30 meters.</li> <li>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.</li> <li>Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg</li> </ul>
	Services	Refer to the Hewlett Packard Enterprise website at <u>http://www.hpe.com/networking/services</u> for details on the service- level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
HP LC to LC Multi-mode OM3 2-Fiber 15.0m 1- Pack Fiber Optic Cable (AJ837A)	Cabling	Cable type: 50/125 $\mu m$ (core/cladding) diameter, multimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;
		Maximum distance:
	Notes	10Gbps Transfer Rate (Ethernet): 300m 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.
		<ul> <li>Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um</li> <li>Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.</li> <li>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.</li> <li>CABLE: The cable is duplex zip cord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows.</li> <li>BULK CABLE &amp; CABLE ASSEMBLY CONFIGURATION:</li> <li>Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.</li> <li>Jacket Color: Aqua for OM3 multimode per TIA 598</li> <li>Boot Color: White</li> <li>Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths &gt; 30 meters.</li> <li>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.</li> <li>Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg</li> </ul>
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise sales office.

HP LC to LC Multi-mode OM3 2-Fiber 30.0m 1- Pack Fiber Optic Cable (AJ838A)	Cabling	Cable type: 50/125 $\mu$ m (core/cladding) diameter, multimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;
		<b>Maximum distance</b> : 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.
		<ul> <li>Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um</li> <li>Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.</li> <li>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.</li> <li>CABLE: The cable is duplex zip cord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows.</li> <li>BULK CABLE &amp; CABLE ASSEMBLY CONFIGURATION:</li> <li>Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.</li> <li>Jacket Color: Aqua for OM3 multimode per TIA 598</li> <li>Boot Color: White</li> <li>Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths &gt; 30 meters.</li> <li>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.</li> <li>Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg</li> </ul>
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise sales office.
HP LC to LC Multi-mode OM3 2-Fiber 50.0m 1- Pack Fiber Optic Cable (AJ839A)	Cabling	Cable type: 50/125 $\mu$ m (core/cladding) diameter, multimode 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.		
		<ul> <li>Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um</li> <li>Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.</li> <li>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.</li> <li>CABLE: The cable is duplex zip cord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows.</li> <li>BULK CABLE &amp; CABLE ASSEMBLY CONFIGURATION:</li> <li>Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.</li> <li>Jacket Color: Aqua for OM3 multimode per TIA 598</li> <li>Boot Color: White</li> <li>Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths &gt; 30 meters.</li> <li>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.</li> <li>Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg</li> </ul>		
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise 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.		
		<ul> <li>Core Diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>Jacket Color: Blue</li> <li>Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>Boot Color: White</li> <li>Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> </ul>		

Accessory Product	Details	
		• 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 Hewlett Packard Enterprise website at http://www.hpe.com/networking/services level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise 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.
		<ul> <li>Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>Jacket Color: Blue</li> <li>Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> </ul>
		<ul> <li>Boot Color: White</li> <li>Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul>
	Services	Refer to the Hewlett Packard Enterprise website at <u>http://www.hpe.com/networking/services</u> for details on the service- level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise 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.
		<ul> <li>Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>Jacket Color: Blue</li> <li>Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>Boot Color: White</li> <li>Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> </ul>

Accessory Product	Details			
		<ul> <li>Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm</li> <li>@ 23°C as tested in accordance with EIA 455-45</li> </ul>		
Services		Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise 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.		
		<ul> <li>Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>Jacket Color: Blue</li> <li>Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> </ul>		
		<ul> <li>Boot Color: White</li> <li>Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudina white stripe that runs the entire length of the cable.</li> <li>Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul>		
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise 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.		
		<ul> <li>Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>Jacket Color: Blue</li> <li>Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>Boot Color: White</li> <li>Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudina white stripe that runs the entire length of the cable.</li> <li>Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> </ul>		

Accessory Product Details		
		• 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 Hewlett Packard Enterprise website at
		http://www.hpe.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 Hewlett Packard
		Enterprise sales office.
HP Premier Flex LC/LC	Notes	Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+
Multi-mode OM4 2 fiber		50/125um duplex cable and Ethernet assembly with LC duplex connectors
<b>50m Cable</b> (QK737A)		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 lacket Dript, LIDE DromierEley, OM7 - Eiber Optic Coble, E0/12Eum
		• Outer Jacket Print: HPE 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.
		<ul> <li>Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m</li> </ul>
		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 Hewlett Packard Enterprise website at
		http://www.hpe.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 Hewlett Packard
		Enterprise sales office.
HPE X410 1U Universal	Notes	The rack mounting kit supports the 1U, full width switches in the following
4-post Rackmount Kit		switch series and the power supply: V1810 Series, E2510 Series, E2520
(J9583A)		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: HPE 10K 10642, HPE 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 Hewlett Packard Enterprise website at
		http://www.hpe.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 Hewlett Packard Enterprise sales office.
	<b>_</b> .	
HPE X111 100M SFP LC	Ports	1 LC 100BASE-FX port (IEEE 802.3u Type 100BASE-FX); Duplex: half or full
FA I FANSCEIVER (J9054C)	) 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)

HPE X111 100M SFP LC F> Transceiver: An SFP format 100-megabit transceiver with LC connectors using FX technology.	<pre> K Environment Cabling K K K K K K K K K K K K K K K K K K K</pre>	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) Cable type: $62.5/125 \ \mu m$ or 50/125 $\ \mu m$ (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 J9054C 100-FX SFP- LC Transceiver" on the "ProCurve Mini-GBICs and SFPs" Manuals Web page.	
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise sales office.	
HPE X121 1G SFP LC SX Transceiver (J4858C)	Ports Physical characteristics	1 LC 1000BASE-SX port; Duplex: full only Dimensions: 2.24(d) x 0.54(w) x 0.48(h) in. (5.69 x 1.37 x 1.22 cm) Weight: 0.04 lb. (0.02 kg)	
A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a	Environment	Transceiver form factor: SFP Operating temperature: 32°F to 158°F (0°C to 70°C) Operating relative humidity: 5% to 85%, noncondensing	
full-duplex Gigabit solution up to 550 m on multimode fiber.	n	Nonoperating/Storage temperature: -40°F to 203°F (-40°C to 85°C) Altitude: up to 10,000 ft. (3 km) Power consumption typical: 0.4 W	
	Cabling	Power consumption maximum: 0.7 W 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  $\mu$ m core diameter, 160 MHz\*km bandwidth
- 2-275 m (62.5  $\mu\text{m}$  core diameter, 200 MHz\*km bandwidth
- 2-500 m (50  $\mu$ m core diameter, 400 MHz\*km bandwidth)
- 2-550 m (50  $\mu$ m core diameter, 500 MHz\*km bandwidth)

Cable length: 2-550m Fiber type: Multi Mode

	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise sales office.	
HPE X121 1G SFP LC LX Transceiver (J4859C)	Ports Physical characteristics	1 LC 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX); Duplex: full only Dimensions: 2.24(d) x 0.54(w) x 0.486(h) in. (5.69 x 1.37 x 1.23 cm) Weight:0.04 lb. (0.02 kg)	
HPE X121 1G SFP LC LX Transceiver: An SFP format gigabit transceiver with LC connectors using LX technology.	Environment Cabling	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) Type:	
		<ul> <li>Either single mode or multimode; 62.5/125 μm or 50/125 μm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively; Low metal content, single- mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1;</li> </ul>	
		Maximum distance:	
		<ul> <li>2-550 m (multimode 62.5 μm core diameter, 500 MHz*km bandwidth)</li> <li>2-550 m (multimode 50 μm core diameter, 400 MHz*km bandwidth)</li> <li>2-550 m (multimode 50 μm core diameter, 500 MHz*km bandwidth)</li> <li>2-10,000 m (single-mode fiber)</li> </ul>	
	Notes	A mode conditioning patch cord may be needed in some multimode fiber installations. Wavelength: 1310nm Power Consumption: < 500mW Typical	
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise sales office.	
HPE X121 1G SFP RJ45 T Transceiver (J8177C)	Ports	1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T); Duplex: full only	
HPE X121 1G SFP RJ45 T Transceiver: An SFP	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)	
format gigabit transceiver	Environment	Operating temperature: 32°F to 158°F (0°C to 70°C); with 100 LFM airflow over the SFP module)	

Accessory Product	Details	
with RJ45 connectors using 1000BaseT technology.		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 HPE 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
	Services	lower mini-GBIC port, but will block access to the other port. Refer to the Hewlett Packard Enterprise website at http://www.hpe.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 Hewlett Packard Enterprise sales office.

Date	Version History	Action	Description of Change:
06-May-2016	From Version 3 to 4	Changed	Document name changed to HPE OfficeConnect 1820
			Switch Series. Overview, Features and Benefits, Technical
			Specifications updated.
22-Apr-2016	From Version 2 to 3	Changed	SKU descriptions updated on all document
01-Dec-2015	From Version 1 to 2	Changed	Overview, Features and Benefits and Technical
			Specifications updated

### **Summary of Changes**



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