Overview

HP PS1810 Switch Series

Models

HP PS1810-8G Switch

HP PS1810-24G Switch

J9833A

J9833A

Key features

- Switches designed to work seamlessly with HP ProLiant Gen8 Servers
- 8-port switch allows for physical stacking on HP ProLiant MicroServer Gen8
- Built-in HP ProLiant Server Management dashboard
- Fanless design for quiet operation
- Limited Lifetime warranty

Product overview

The HP PS1810 Switch Series consists of smart-managed, fixed-configuration Gigabit Ethernet Layer 2 switches that are purpose built to work with HP ProLiant Gen8 servers. The series switches are designed for small businesses looking for an integrated, easy-to-administer switch that complements the HP ProLiant Gen8 server solution.

The series includes 8- and 24-port models. The 8-port model has an innovative design that allows it to be physically stacked on top of the HP ProLiant MicroServer Gen8 platform. This switch can be powered by an upstream Power over Ethernet (PoE) switch for deployments where no line power is available. The 24-port model ships with a rackmount kit for rack deployments and includes SFP ports for fiber uplink connectivity. Both models have a fanless design, making them ideal for office deployments. Both models support additional flexible mounting options, including wallmount and under-table mounting.

The HP PS1810 Switch Series has a built-in ability to autodiscover and monitor HP ProLiant Gen8 servers. Monitored ProLiant Gen8 servers report real-time health status to the switch via the HP Integrated Lights-Out (iLO) interface, enabling an integrated single pane-of-glass view for switch and server maintenance. Layer 2 switching features include VLANs, Spanning Tree, and link aggregation trunking. The latest energy-saving capabilities like Energy Efficient Ethernet (EEE) and idle-port power down are also supported on this series. The PS1810 switch models come with an HP limited lifetime warranty.

Features and benefits

Management

HP Proliant Server Dashboard

enables autodiscovery of HP ProLiant Gen8 servers in the network; provides up-to-date server health status for up to ten monitored servers

• Simple web management

allows easy management of device 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

provides 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



Overview

Connectivity

Auto-MDI/MDIX

adjusts automatically 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 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 numer of available ports (24-port model only)

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
provides redundant links while preventing network loops

Link Aggregation (trunking or bonding)

groups ports together automatically using Link Aggregation Control Protocol (LACP) or manually, to form an ultra-high-bandwidth connection to the server or network backbone; bonds together two NIC ports on the ProLiant MicroServer doubling the speed of services to the server

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 mounting options

stacks physically on top of an HP ProLiant MicroServer Gen8 due to the unique design of the switch (8-port model); 24-port model ships with rackmount kit; both switches support desktop, wall mount, and under table mounting option



Overview

Rack mountable (24-port models)
 offers a rack-mounting option with included hardware

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

Additional information

Energy savings
 utilizes Energy Efficient Ethernet (EEE) IEEE 802.3az standard for lower power consumption

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

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 Differentiated Services Code Point (DSCP) delivers data to devices based on the priority and type of traffic using DSCP

Broadcast control
allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic

Warranty and support

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

Electronic and telephone support (for Limited Lifetime Warranty 2.0)
 limited 24x7 telephone support is available from HP for the first 3 years; limited electronic and business hours telephone support is available from HP for the entire warranty period; to reach our support centers, refer to www.hp.com/networking/contact-support; for details on the duration of support provided with your product purchase, refer to www.hp.com/networking/warrantysummary

Software releases

to find software for your product, refer to www.hp.com/networking/support; for details on the software releases available with your product purchase, refer to www.hp.com/networking/warrantysummary



Configuration

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

HP PS1810-8G Switch

J9833A

8 RJ-45 autosensing 10/100/1000 ports

See Configuration Note:2

1U - Height

HP PS1810-8G Switch

J9833AB01

8 RJ-45 autosensing 10/100/1000 ports

See Configuration Note:2,

1U - Height

HP PS1810-24G Switch

2 SFP 100/1000 ports

J9834A

24 RJ-45 autosensing 10/100/1000 ports

See Configuration Note:1,

1U - Height

HP PS1810-24G Switch

J9834A B01

24 RJ-45 autosensing 10/100/1000 ports

See Configuration Note:1.

2, 3

2 SFP 100/1000 ports 1U - Height

Configuration Rules

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 X121 1G SFP RJ45 T Transceiver J8177C

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

Note 3

This is a Ship-Along with specific ISS Servers only. See ISS Menu for further details.

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



Configuration

Multi-Mode Cables

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

HP PS1810-8G Switch (J9833A)

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

Physical characteristics Dimensions 9.06(w) x 4.65(d) x 1.73(h) in (23 x 24.5 x 4.39 cm) (1U height)

> 2.71 lb (1.23 kg) Weight

Memory and processor 128 MB RAM, 8 MB flash; packet buffer size: 512 KB

Mounting Mounts on HP Proliant MicroServer Gen8, desktop, wall 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)

15% to 95% @ 140°F (60°C)

Nonoperating/Storage

relative humidity

Altitude up to 10,000 ft (3 km) Acoustic Power: 0 dB no fan

Electrical characteristics Frequency 50/60 Hz

> Voltage 100-240 VAC

.5 A Current Maximum power rating 7.2 W

Maximum power rating and maximum heat dissipation are the worst-case **Notes**

> 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 EN 61000-4-2

Radiated EN 61000-4-3 EFT/Burst EN 61000-4-4 Surge EN 61000-4-5 EN 61000-4-6 Conducted **Power frequency** IEC 61000-4-8

magnetic field

Voltage dips and EN 61000-4-11

interruptions

Harmonics EN 61000-3-2 Flicker EN 61000-3-3

Management IMC - Intelligent Management Center; Web browser; HTTPS **Notes**

Use only supported genuine HP SFPs with your switch.

Link aggregation support: 4 trunks of 4 links each



Technical Specifications

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 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 PS1810-24G Switch (J9834A)

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, or a combination

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 (1.15 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 < 3.4 μs (64-byte packets)

1000 Mb Latency < 2.2 μs (64-byte packets) **Throughput** up to 38.7 million pps



Technical Specifications

Switching capacity 16 Gbps
MAC address table size 8000 entries

Environment Operating temperature $32^{\circ}F$ to $104^{\circ}F$ ($0^{\circ}C$ to $40^{\circ}C$)

Operating relative 15% to 95% @ $104^{\circ}F$ ($40^{\circ}C$)

humidity

Nonoperating/Storage -40°F to 158°F (-40°C to 70°C)

temperature

Nonoperating/Storage 15%

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 Frequency 50/60 Hz

Voltage 100-127/200-240 VAC

Current .4/.3 A Maximum power rating 22 W

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 EN 61000-4-2

 Radiated
 EN 61000-4-3

 EFT/Burst
 EN 61000-4-4

 Surge
 EN 61000-4-5

 Conducted
 EN 61000-4-6

 Power frequency
 IEC 61000-4-8

magnetic field

Voltage dips and EN 61000-4-11

interruptions

Harmonics EN 61000-3-2 **Flicker** EN 61000-3-3

Management IMC - Intelligent Management Center; Web browser; HTTPS

Use only supported genuine HP SFPs with your switch.

Link aggregation support: 4 trunks of 4 links each

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) 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)



Notes

Technical Specifications

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

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

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.

(applies to all products in CPU DoS Protection series)

Standards and protocols Denial of service protection

General protocols

IEEE 802.1p Priority IEEE 802.1Q VLANS

IEEE 802.1W Rapid Spanning Tree Protocol IEEE 802.3ad Link Aggregation Control Protocol (LACP)

IEEE 802.3az Energy Efficient Ethernet 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 PS1810 Switch Series accessories

ΗP	PS18	810-24G	Switch	(J9834A)
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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 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	69/	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	<u> </u>	QK736A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable		QK737A
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	7,7	AJ836A
HP 15 m Multimode OM3 LC/LC Optical Cable		AJ837A
HP 30 m Multimode OM3 LC/LC Optical Cable	17/	AJ838A
HP 50 m Multimode OM3 LC/LC Optical Cable	N	AJ839A



Accessory Product Details

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

Transceivers

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

Environment

Physical characteristics

1 LC 100BASE-FX port (IEEE 802.3u Type 100BASE-FX); Duplex: half or full

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)

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

62.5/125 im or 50/125 im (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.

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.

HPX1211GSFPLCSX

Transceiver (J4858C)

A small form-factor

Ports

Services

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) Transceiver form factor: SFP

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) Power consumption typical: 0.4 W Power consumption maximum: 0.7 W

Type:

pluggable (SFP) Gigabit SX Environment transceiver that provides a full-duplex Gigabit solution up to 550 m on multimode fiber.

Electrical characteristics

Cabling

62.5/125 µm or 50/125 µm (core/cladding) diameter, gradedindex, 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.

1 LC 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX); Duplex: full only

HP X121 1G SFP LC LX **Transceiver** (J4859C)

technology.

HP X121 1G SFP LC LX Transceiver: An SFP format gigabit transceiver with LC connectors using LX

Ports

Cabling

Environment

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) 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:

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, singlemode 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)

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

Physical characteristics

Environment

1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T); Duplex: full

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)

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.

Cables

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

Notes

Graded-index, "bendable" fiber optic multimode OM4 50/125um duplex cable and Ethernet assembly with LC/MPO duplex connectors on each end; RoHS compliant

- Core diameter: 50um ±3um
- Cladding diameter: 125um ±2um
- Bandwidth: 4700 MHz-km @ 850nm (laser)
- Jacket color: blue
- Jacket material: OFNR (optical fiber, nonconductive, riser) LSZH (low smoke zero halogen) thermoplastic
- Optical clarity-attenuation (total loss, including connectors):
 0.202 db
- Minimum recommended bend radius: 2 mm

Approximate loss @ bend radius (850 nm):

- < 0.05 db @ 35.7 mm (2 turns)
- < 0.1 db @ 15 mm (2 turns)
- < 0.2 db @ 7.5 mm (2 turns)

Maximum reach (no bend):

- 125 m (14.025Gb SW)
- 380 m (10GbE)
- 190 m (8.5Gb FC)



400 m (4.25Gb FC)

Services

Cable length: 1m (3.3 ft)

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

Graded-index, "bendable" fiber optic multimode OM4 50/125um duplex cable and Ethernet assembly with LC/MPO duplex connectors on each end; RoHS compliant

- Core diameter: 50um ±3um
- Cladding diameter: 125um ±2um
- Bandwidth: 4700 MHz-km @ 850nm (laser)
- Jacket color: blue
- Jacket material: OFNR (optical fiber, nonconductive, riser) LSZH (low smoke zero halogen) thermoplastic
- Optical clarity-attenuation (total loss, including connectors):
 0.205 db
- Minimum recommended bend radius: 2 mm

Approximate loss @ bend radius (850 nm):

- < 0.05 db @ 35.7 mm (2 turns)
- < 0.1 db @ 15 mm (2 turns)
- < 0.2 db @ 7.5 mm (2 turns)

Maximum reach (no bend):

- 125 m (14.025Gb SW)
- 380 m (10GbE)
- 190 m (8.5Gb FC)
- 400 m (4.25Gb FC)

Services

Cable length: 2m (6.6 ft)

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

HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable (QK734A)

Notes

Graded-index, "bendable" fiber optic multimode OM4 50/125um duplex cable and Ethernet assembly with LC/MPO duplex connectors on each end; RoHS compliant

- Core diameter: 50um ±3um
- Cladding diameter: 125um ±2um
- Bandwidth: 4700 MHz-km @ 850nm (laser)
- Jacket color: blue
- Jacket material: OFNR (optical fiber, nonconductive, riser) LSZH (low smoke zero halogen) thermoplastic
- Optical clarity-attenuation (total loss, including connectors):

0.212 db

Minimum recommended bend radius: 2 mm

Approximate loss @ bend radius (850 nm):

- < 0.05 db @ 35.7 mm (2 turns)
- < 0.1 db @ 15 mm (2 turns)
- < 0.2 db @ 7.5 mm (2 turns)

Maximum reach (no bend):

- 125 m (14.025Gb SW)
- 380 m (10GbE)
- 190 m (8.5Gb FC)
- 400 m (4.25Gb FC)

Cable length: 5m (16.4 ft)

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

Services

Graded-index, "bendable" fiber optic multimode OM4 50/125um duplex cable and Ethernet assembly with LC/MPO duplex connectors on each end; RoHS compliant

- Core diameter: 50um ±3um
- Cladding diameter: 125um ±2um
- Bandwidth: 4700 MHz-km @ 850nm (laser)
- Jacket color: blue
- Jacket material: OFNR (optical fiber, nonconductive, riser) LSZH (low smoke zero halogen) thermoplastic
- Optical clarity-attenuation (total loss, including connectors):
 0.235 db
- Minimum recommended bend radius: 2 mm

Approximate loss @ bend radius (850 nm):

- < 0.05 db @ 35.7 mm (2 turns)
- < 0.1 db @ 15 mm (2 turns)
- < 0.2 db @ 7.5 mm (2 turns)

Maximum reach (no bend):

- 125 m (14.025Gb SW)
- 380 m (10GbE)
- 190 m (8.5Gb FC)
- 400 m (4.25Gb FC)

Cable length: 15m (49.2ft)

Refer to the HP website at www.hp.com/networking/services for details on



the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable (QK736A)

Notes

Graded-index, "bendable" fiber optic multimode OM4 50/125um duplex cable and Ethernet assembly with LC/MPO duplex connectors on each end; RoHS compliant

- Core diameter: 50um ±3um
- Cladding diameter: 125um ±2um
- Bandwidth: 4700 MHz-km @ 850nm (laser)
- Jacket color: blue
- Jacket material: OFNR (optical fiber, nonconductive, riser) LSZH (low smoke zero halogen) thermoplastic
- Optical clarity-attenuation (total loss, including connectors):
 0.269 db
- Minimum recommended bend radius: 2 mm

Approximate loss @ bend radius (850 nm):

- < 0.05 db @ 35.7 mm (2 turns)
- < 0.1 db @ 15 mm (2 turns)
- < 0.2 db @ 7.5 mm (2 turns)

Maximum reach (no bend):

- 125 m (14.025Gb SW)
- 380 m (10GbE)
- 190 m (8.5Gb FC)
- 400 m (4.25Gb FC)

Services

Cable length: 30m (98.4ft)

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

Graded-index, "bendable" fiber optic multimode OM4 50/125um duplex cable and Ethernet assembly with LC/MPO duplex connectors on each end; RoHS compliant

- Core diameter: 50um ±3um
- Cladding diameter: 125um ±2um
- Bandwidth: 4700 MHz-km @ 850nm (laser)
- Jacket color: blue
- Jacket material: OFNR (optical fiber, nonconductive, riser) LSZH (low smoke zero halogen) thermoplastic
- Optical clarity-attenuation (total loss, including connectors):
 0.315 db
- Minimum recommended bend radius: 2 mm

Approximate loss @ bend radius (850 nm):

- < 0.05 db @ 35.7 mm (2 turns)
- < 0.1 db @ 15 mm (2 turns)
- < 0.2 db @ 7.5 mm (2 turns)

Maximum reach (no bend):

- 125 m (14.025Gb SW)
- 380 m (10GbE)
- 190 m (8.5Gb FC)
- 400 m (4.25Gb FC)

Cable length: 50m (164.0ft)

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.

Services

Notes

HP 0.5 m Multimode OM3 Cabling LC/LC Optical Cable

(AJ833A)

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

Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.

- Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um
- Optical glass: Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.
- Optical glass: Bandwidth: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links.
- CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber and designed to work in both the 850 and 1300 nm wavelength windows.
- BULK CABLE & CABLE ASSEMBLY CONFIGURATION:
- Jacket Material: Riser Grade Low Smoke Zero Halogen thermoplastic.
- Jacket Color: Aqua for OM3 multimode per TIA 598
- Boot Color: White
- Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.
- Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46.
- Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg

Services

Refer to the HP website at www.hp.com/networking/services for details on



the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)

Cabling

Notes

Cable type:

 $50/125\,\mu m$ (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

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: Agua for OM3 multimode per TIA 598
- Boot Color: White
- Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.
- Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46.
- Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg

Services

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

HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)

Cabling

Cable type:

50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

Notes

Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.

Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ±



- 2.0um Coating diameter: 245 ± 10um
- Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.
- Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links.
- CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows.
- BULK CABLE & CABLE ASSEMBLY CONFIGURATION:
- Jacket Material: Riser Grade Low Smoke Zero Halogen thermoplastic.
- Jacket Color: Aqua for OM3 multimode per TIA 598
- Boot Color: White
- Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.
- Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46.
- Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg

Services

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

HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)

Cabling

Cable type:

50/125 µm core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;

Notes

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

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

Notes

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

HP 15 m Multimode OM3 Cabling LC/LC Optical Cable (AJ837A)

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

Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.

- Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um
- Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.
- Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links.
- CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows.
- **BULK CABLE & CABLE ASSEMBLY CONFIGURATION:**
- Jacket Material: Riser Grade Low Smoke Zero Halogen thermoplastic.
- Jacket Color: Aqua for OM3 multimode per TIA 598
- **Boot Color: White**
- Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.
- Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46.
- Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg

Services

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

HP 30 m Multimode OM3 Cabling LC/LC Optical Cable (AJ838A)

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:



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.

- Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um
- Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.
- Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links.
- CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows.
- BULK CABLE & CABLE ASSEMBLY CONFIGURATION:
- Jacket Material: Riser Grade Low Smoke Zero Halogen thermoplastic.
- Jacket Color: Aqua for OM3 multimode per TIA 598
- Boot Color: White
- Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.
- Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46.
- Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg

Services

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

HP 50 m Multimode OM3 Cabling LC/LC Optical Cable (AJ839A)

Cable type:

 $50/125 \, \mu m$ (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

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:

Notes

Accessory Product Details

- 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.



Summary of Changes

Date	Version History	Action	Description of Change:
01-Dec-2014	From Version 2 to 3	Changed	Warranty and support updated
26-Jul-2013	From Version 1 to 2	Changed	Updated the Product overview section.

To learn more, visit: www.hp.com/networking

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