

Overview

HPE 1920 Switch Series

Models

|                                |        |
|--------------------------------|--------|
| HP 1920-8G Switch              | JG920A |
| HP 1920-8G-PoE+ (65W) Switch   | JG921A |
| HP 1920-8G-PoE+ (180W) Switch  | JG922A |
| HP 1920-16G Switch             | JG923A |
| HP 1920-24G Switch             | JG924A |
| HP 1920-24G-PoE+ (180W) Switch | JG925A |
| HP 1920-24G-PoE+ (370W) Switch | JG926A |
| HP 1920-48G Switch             | JG927A |
| HP 1920-48G-PoE+ (370W) Switch | JG928A |

Key features

- Customized operation using intuitive Web interface
- Layer 3 static routing with 32 routes for network segmentation and expansion
- Access control lists for granular security control
- Spanning Tree: STP, RSTP, and MSTP
- Limited Lifetime warranty

Product overview

The HPE 1920 Switch Series consists of advanced smart-managed fixed-configuration Gigabit switches designed for small businesses in an easy-to-administer solution. By utilizing the latest design in silicon technology, this series is one of the most power efficient in the market.

The series has nine switches: four non-PoE models and five PoE+ models. All models are equipped with additional Gigabit SFP ports for fiber connectivity. The 8- and 24-port PoE+ models are available with PoE (at two different levels) or without PoE.

The HPE 1920 Switch Series provides a great value, and includes features to satisfy even the most advanced small business network. All models support rack mounting or desktop operation. Customizable features include basic Layer 2 features like VLANs and link aggregation, as well as advanced features such as Layer 3 static routing, IPv6, ACLs, and Spanning Tree Protocols. The switches come with a limited lifetime warranty covering the unit, fans, and power supplies.

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)
- **Single IP management**  
enables management of up to 32 HPE 1920 switches using a single Web interface; simplifies management of multiple devices

## Overview

- **SNMPv1, v2c, and v3**  
facilitates management of the switch, as the device can be discovered and monitored from an SNMP management station
- **Management Security**  
restricts access to critical configuration commands; offers multiple privilege levels with password protection; ACLs provide Telnet and SNMP access; local and remote syslog capabilities allow logging of all access
- **Complete session logging**  
provides detailed information for problem identification and resolution
- **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 so that the devices can provide diverse applications based on the consistent time
- **Limited CLI**  
enables users to quickly deploy and troubleshoot devices in the network
- **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 will fall back to a unique static address determined by the switch's MAC address
- **FTP, TFTP, and SFTP support**  
offers different mechanisms for configuration updates; FTP allows bidirectional transfers over a TCP/IP network; trivial FTP (TFTP) is a simpler method using User Datagram Protocol (UDP); Secure File Transfer Protocol (SFTP) runs over an SSH tunnel to provide additional security
- **Remote monitoring (RMON)**  
uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group

## 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
- **IEEE 802.1p/Q**  
delivers data to devices based on the priority and type of traffic; supports IEEE 802.1Q
- **Class of Service (CoS)**  
sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ
- **Broadcast control**  
allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic
- **Advanced Classifier based QoS**  
classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a per-port basis
- **Rate limiting**  
sets per-port ingress enforced maximums and per-port, per-queue minimums
- **Powerful QoS feature**  
supports the following congestion actions: strict priority queuing (SP), weighted round robin (WRR) queuing, and SP+WRR

## Connectivity

## Overview

- **IPv6**
  - **IPv6 host**  
enables switches to be managed and deployed at the IPv6 network's edge
  - **IPv6 routing**  
supports IPv6 static routes
  - **MLD snooping**  
forwards IPv6 multicast traffic to the appropriate interface, preventing traffic flooding
  - **IPv6 ACL/QoS**  
supports ACL and QoS for IPv6 network traffic
- **IEEE 802.3X flow control**  
provides a flow throttling mechanism propagated through the network to prevent packet loss at a congested node
- **IEEE 802.3af Power over Ethernet (PoE+)**  
provides upto 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.
- **Cable diagnostics**  
detects cable issues remotely using a browser-based tool
- **Flow control**  
provides back pressure using standard IEEE 802.3x, reducing congestion in heavy traffic situations
- **Auto MDI/MDI-X**  
adjusts automatically for straight-through or crossover cables on all 10/100/1000 ports

## Security

- **Advanced access control lists (ACLs)**  
enables network traffic filtering and enhances network control using MAC- and IP-based ACLs; time-based ACLs allow for greater flexibility with managing network access
- **IEEE 802.1X and RADIUS network logins**  
controls port-based access for authentication and accountability
- **Secure Socket Layer (SSL)**  
encrypts all HTTP traffic, allowing safe access to the browser-based management GUI in the switch
- **Port Isolation**  
The port isolation feature isolates Layer 2 traffic for data privacy and security without using VLANs. This feature can also be used to isolate the hosts in a VLAN from one another.
- **Port Security**  
Combines and extends IEEE 802.1X and MAC authentication to provide MAC-based network access control
- **ARP attack protection**  
The ARP detection feature enables access devices to block ARP packets from unauthorized clients to prevent user spoofing and gateway spoofing attacks.
- **Automatic VLAN assignment**  
assigns users automatically to the appropriate VLAN based on their identity, location and time of day
- **STP BPDU port protection**  
blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- **STP root guard**  
protects the root bridge from malicious attacks or configuration mistakes
- **Automatic denial-of-service protection**  
monitors for 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

## Overview

### Performance

- **Half- and full-duplex auto-negotiating capability on every port**  
doubles the throughput on every port
- **Selectable queue configurations**  
allows for increased performance by selecting the number of queues and associated memory buffering that best meet the requirements of the network applications
- **IGMP snooping**  
improves network performance through multicast filtering, instead of flooding traffic to all ports
- **Fiber uplink**  
provides greater distance connectivity using Gigabit Ethernet fiber uplinks

### Layer 2 switching

- **Spanning Tree Protocol (STP)**  
supports standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- **BPDU filtering**  
drops BPDU packets when STP is enabled globally but disabled on a specific port
- **Jumbo frame support**  
supports up to 10 kilobyte frame size to improve the performance of large data transfers
- **VLAN support and tagging**  
supports IEEE 802.1Q with 4,094 simultaneous VLAN IDs

### Layer 3 services

- **Address Resolution Protocol (ARP)**  
determines the MAC address of another IP host in the same subnet; supports static ARPs; gratuitous ARP allows detection of duplicate IP addresses; proxy ARP allows normal ARP operation between subnets or when subnets are separated by a Layer 2 network
- **DHCP relay**  
simplifies management of DHCP addresses in networks with multiple subnets

### Layer 3 routing

- **Static IPv4/IPv6 routing**  
provides basic routing (supporting up to 32 static routes and 8 virtual VLAN interfaces); allows manual routing configuration

### Resiliency and high availability

- **Available redundant power supply**  
provides additional PoE of up to 795W for high-power applications like PTZ IP cameras, Video IP phones; the HPE RPS1600 Redundant Power System (JG136A), which is sold separately, is for use with the HPE 1920-24G-PoE+ (180W) switch and HPE 1920-24G-PoE+(370W) switch models only
- **Link aggregation**  
groups together multiple ports (up to a maximum of eight ports per trunk) automatically using Link Aggregation Control Protocol (LACP), or manually, to form an ultra-high-bandwidth connection to the network backbone; helps prevent traffic bottlenecks. **NOTE:** 8 port models support 4 trunks, 16 and 24 port models support 8 trunks, 48 port models support 16

## Overview

trunks.

## Convergence

- **LLDP-MED (Media Endpoint Discovery)**  
defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones
- **PoE allocations**  
supports multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user-specified) to allocate PoE power for more efficient energy savings
- **Auto voice VLAN**  
recognizes IP phones and automatically assigns voice traffic to dedicated VLAN for IP phones

## Additional information

- **Green initiative support**  
provides support for RoHS and WEEE regulations
- **Green IT and power**  
improves energy efficiency through the use of the latest advances in silicon development; shuts off unused ports and utilizes variable-speed fans, reducing energy costs
- **Energy Efficient Ethernet**  
Compliant with IEEE 802.3az standard requirements to save energy during periods of low data activity.

## Warranty and support

- **Limited Lifetime Warranty**  
See <http://www.hpe.com/networking/warrantysummary> for warranty and 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.

### HP 1920-8G Switch

- 8 RJ-45 auto-negotiating 10/100/1000 ports
- 2 SFP 1000 Mbps ports
- min=0 \ max=2 SFP Transceivers
- 1U - Height

JG920A  
See Configuration  
**NOTE:**1, 2

### PDU Cable NA/MX/TW/JP

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

JG920A #B2B

### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JG920A #B2C

### HP 1920-8G-PoE+ (65W) Switch

- 8 RJ-45 auto-negotiating 10/100/1000 PoE+ ports
- 2 SFP 1000 Mbps ports
- min=0 \ max=2 SFP Transceivers
- 1U - Height

JG921A  
See Configuration  
**NOTE:**1, 2

### PDU Cable NA/MX/TW/JP

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

JG921A #B2B

### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JG921A #B2C

### HP 1920-8G-PoE+ (180W) Switch

- 8 RJ-45 auto-negotiating 10/100/1000 PoE+ ports
- 2 SFP 1000 Mbps ports
- min=0 \ max=2 SFP Transceivers
- 1U - Height

JG922A  
See Configuration  
**NOTE:**1, 2

### PDU Cable NA/MX/TW/JP

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

JG922A#B2B

### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JG922A#B2C

### HP 1920-16G Switch

- 16 RJ-45 auto-negotiating 10/100/1000 ports
- 4 SFP 1000 Mbps ports
- min=0 \ max=4 SFP Transceivers
- 1U - Height

JG923A  
See Configuration  
**NOTE:**1, 2

## Configuration

|                                                                                                                                                                                                |                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| PDU Cable NA/MX/TW/JP                                                                                                                                                                          | JG923A#B2B                             |
| <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MX/TW/JP)</li> </ul>                                                                                                            |                                        |
| PDU Cable ROW                                                                                                                                                                                  | JG923A#B2C                             |
| <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>                                                                                                                    |                                        |
| HP 1920-24G Switch                                                                                                                                                                             | JG924A                                 |
| <ul style="list-style-type: none"> <li>24 RJ-45 auto-negotiating 10/100/1000 ports</li> <li>4 SFP 1000 Mbps ports</li> <li>min=0 \ max=4 SFP Transceivers</li> <li>1U - Height</li> </ul>      | See Configuration<br><b>NOTE:</b> 1, 2 |
| PDU Cable NA/MX/TW/JP                                                                                                                                                                          | JG924A#B2B                             |
| <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MX/TW/JP)</li> </ul>                                                                                                            |                                        |
| PDU Cable ROW                                                                                                                                                                                  | JG924A#B2C                             |
| <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>                                                                                                                    |                                        |
| HP 1920-24G-PoE+ (180W) Switch                                                                                                                                                                 | JG925A                                 |
| <ul style="list-style-type: none"> <li>24 RJ-45 auto-negotiating 10/100/1000 PoE+ ports</li> <li>4 SFP 1000 Mbps ports</li> <li>min=0 \ max=4 SFP Transceivers</li> <li>1U - Height</li> </ul> | See Configuration<br><b>NOTE:</b> 1, 2 |
| PDU Cable NA/MX/TW/JP                                                                                                                                                                          | JG925A#B2B                             |
| <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MX/TW/JP)</li> </ul>                                                                                                            |                                        |
| PDU Cable ROW                                                                                                                                                                                  | JG925A#B2C                             |
| <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>                                                                                                                    |                                        |
| HP 1920-24G-PoE+ (370W) Switch                                                                                                                                                                 | JG926A                                 |
| <ul style="list-style-type: none"> <li>24 RJ-45 auto-negotiating 10/100/1000 PoE+ ports</li> <li>4 SFP 1000 Mbps ports</li> <li>min=0 \ max=4 SFP Transceivers</li> <li>1U - Height</li> </ul> | See Configuration<br><b>NOTE:</b> 1, 2 |
| PDU Cable NA/MX/TW/JP                                                                                                                                                                          | JG926A#B2B                             |
| <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MX/TW/JP)</li> </ul>                                                                                                            |                                        |
| PDU Cable ROW                                                                                                                                                                                  | JG926A#B2C                             |
| <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>                                                                                                                    |                                        |
| HP 1920-48G Switch                                                                                                                                                                             | JG927A                                 |
| <ul style="list-style-type: none"> <li>48 RJ-45 auto-negotiating 10/100/1000 ports</li> <li>4 SFP 1000 Mbps ports</li> <li>min=0 \ max=4 SFP Transceivers</li> <li>1U - Height</li> </ul>      | See Configuration<br><b>NOTE:</b> 1, 2 |

Configuration

|                                                    |                                     |
|----------------------------------------------------|-------------------------------------|
| PDU Cable NA/MX/TW/JP                              | JG927A#B2B                          |
| • C15 PDU Jumper Cord (NA/MX/TW/JP)                |                                     |
| PDU Cable ROW                                      | JG927A#B2C                          |
| • C15 PDU Jumper Cord (ROW)                        |                                     |
| HP 1920-48G-PoE+ (370W) Switch                     | JG928A                              |
| • 48 RJ-45 auto-negotiating 10/100/1000 PoE+ ports | See Configuration <b>NOTE:</b> 1, 2 |
| • 4 SFP 1000 Mbps ports                            |                                     |
| • min=0 \ max=4 SFP Transceivers                   |                                     |
| • 1U - Height                                      |                                     |
| PDU Cable NA/MX/TW/JP                              | JG928A#B2B                          |
| • C15 PDU Jumper Cord (NA/MX/TW/JP)                |                                     |
| PDU Cable ROW                                      | JG928A#B2C                          |
| • C15 PDU Jumper Cord (ROW)                        |                                     |

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 X121 1G SFP RJ45 T Transceiver                                                                                                                                                                                                                                                                                                                          | J8177C |
|          | HP X120 1G SFP LC SX Transceiver                                                                                                                                                                                                                                                                                                                           | JD118B |
|          | HP X120 1G SFP LC LX Transceiver                                                                                                                                                                                                                                                                                                                           | JD119B |
|          | HP X120 1G SFP RJ45 T Transceiver                                                                                                                                                                                                                                                                                                                          | JD089B |
| Note 2   | Localization (Wall Power Cord) required on orders without #B2B or #B2C (PDU Power Cord). (See Localization Menu)                                                                                                                                                                                                                                           |        |
| Remarks: | Drop down under power supply should offer the following options and results:<br>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)<br>Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO) |        |

Transceivers

SFP Transceivers

|                                   |        |
|-----------------------------------|--------|
| 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 X120 1G SFP LC SX Transceiver  | JD118B |
| HP X120 1G SFP LC LX Transceiver  | JD119B |
| HP X120 1G SFP RJ45 T Transceiver | JD089B |

Configuration

Cables

Multi-Mode Cables

|                                      |        |
|--------------------------------------|--------|
| HP .5m Multi-mode OM3 LC/LC FC Cable | AJ833A |
| HP 1m Multi-mode OM3 LC/LC FC Cable  | AJ834A |
| HP 2 m Multimode OM3 LC/LC FC Cable  | AJ835A |
| HP 5 m Multimode OM3 LC/LC FC Cable  | AJ836A |
| HP 15 m Multimode OM3 LC/LC FC Cable | AJ837A |
| HP 30 m Multimode OM3 LC/LC FC Cable | AJ838A |
| HP 50 m Multimode OM3 LC/LC FC Cable | AJ839A |
| HP Premier Flex LC/LC OM4 2f 1m Cbl  | QK732A |
| HP Premier Flex LC/LC OM4 2f 2m Cbl  | QK733A |
| HP Premier Flex LC/LC OM4 2f 5m Cbl  | QK734A |
| HP Premier Flex LC/LC OM4 2f 15m Cbl | QK735A |
| HP Premier Flex LC/LC OM4 2f 30m Cbl | QK736A |
| HP Premier Flex LC/LC OM4 2f 50m Cbl | QK737A |

Switch Enclosure Options

External/Redundant Power Supplies

|                                                                                                                   |                                           |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| HP RPS1600 Redundant Power System                                                                                 | JG136A                                    |
| <ul style="list-style-type: none"><li>Height = 1U</li><li>includes 1 x c13, 1600w and Power Supply port</li></ul> | See Configuration<br><b>NOTE:</b> 2, 3, 4 |
| HP RPS1600 1600W AC Power Supply                                                                                  | JG137A                                    |
| <ul style="list-style-type: none"><li>Installs into JG136A only</li></ul>                                         | See Configuration<br><b>NOTE:</b> 1, 3    |

Configuration Rules:

|        |                                                                                                                |
|--------|----------------------------------------------------------------------------------------------------------------|
| Note 1 | If this power supply is selected, The JG136A - HP A-RPS1600 Redundant Power System must be on order or onsite. |
| Note 2 | Localization required.                                                                                         |
| Note 3 | Each switch will only support 1 JG136A and 1 JG137A Power supply systems.                                      |
| Note 4 | This power supply only supported on switch JG926A and JG928A.                                                  |

External/Redundant Power Cables

|                                 |                   |
|---------------------------------|-------------------|
| HP X290 1000 A JD5 2m RPS Cable | JD187A            |
|                                 | See Configuration |

Configuration

NOTE:1

|                      |                                                                                               |
|----------------------|-----------------------------------------------------------------------------------------------|
| Remarks:             | These cables are used to connect the External Power System to Switch.                         |
| Configuration Rules: |                                                                                               |
| Note 1               | This Cable is only supported on switch JG926A and JG928A when used with the RPS 1600 (JG136A) |

## Technical Specifications

### HP 1920-8G Switch (JG920A)

|                                   |                                                                                                                                  |                                                                                                                                                                                                                                               |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>I/O ports and slots</b>        | 8 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T) |                                                                                                                                                                                                                                               |
|                                   | 2 SFP 1000 Mbps ports                                                                                                            |                                                                                                                                                                                                                                               |
|                                   | Supports a maximum of 8 autosensing 10/100/1000 ports plus 2 1000BASE-X SFP ports, or a combination                              |                                                                                                                                                                                                                                               |
| <b>Additional ports and slots</b> | 1 RJ-45 console port to access limited CLI port                                                                                  |                                                                                                                                                                                                                                               |
| <b>Physical characteristics</b>   | <b>Dimensions</b>                                                                                                                | 10.47(w) x 6.38(d) x 1.73(h) in (26.6 x 16.2 x 4.4 cm) (1U height)                                                                                                                                                                            |
|                                   | <b>Weight</b>                                                                                                                    | 1.98 lb (0.9 kg)                                                                                                                                                                                                                              |
| <b>Memory and processor</b>       | MIPS @ 500 MHz, 32 MB flash, 128 MB SDRAM; packet buffer size: 4.1 Mb                                                            |                                                                                                                                                                                                                                               |
| <b>Mounting and enclosure</b>     | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included), Wall Mount                                |                                                                                                                                                                                                                                               |
| <b>Performance</b>                | <b>100 Mb Latency</b>                                                                                                            | < 5 $\mu$ s                                                                                                                                                                                                                                   |
|                                   | <b>1000 Mb Latency</b>                                                                                                           | < 5 $\mu$ s                                                                                                                                                                                                                                   |
|                                   | <b>Throughput</b>                                                                                                                | 14.8 Mpps (64-byte packets)                                                                                                                                                                                                                   |
|                                   | <b>Routing/Switching capacity</b>                                                                                                | 20 Gbps                                                                                                                                                                                                                                       |
|                                   | <b>Routing table size</b>                                                                                                        | 32 entries (IPv4), 32 entries (IPv6)                                                                                                                                                                                                          |
|                                   | <b>MAC address table size</b>                                                                                                    | 8192 entries                                                                                                                                                                                                                                  |
|                                   | <b>MTBF (years)</b>                                                                                                              | 128.20                                                                                                                                                                                                                                        |
| <b>Reliability</b>                |                                                                                                                                  |                                                                                                                                                                                                                                               |
| <b>Environment</b>                | <b>Operating temperature</b>                                                                                                     | 32°F to 104°F (0°C to 40°C)                                                                                                                                                                                                                   |
|                                   | <b>Operating relative humidity</b>                                                                                               | 10% to 90%, noncondensing                                                                                                                                                                                                                     |
|                                   | <b>Nonoperating/Storage temperature</b>                                                                                          | -40°F to 158°F (-40°C to 70°C)                                                                                                                                                                                                                |
|                                   | <b>Nonoperating/Storage relative humidity</b>                                                                                    | 10% to 95%, noncondensing                                                                                                                                                                                                                     |
|                                   | <b>Altitude</b>                                                                                                                  | up to 16,404 ft (5 km)                                                                                                                                                                                                                        |
|                                   | <b>Acoustic</b>                                                                                                                  | Pressure: 0 dB No Fan                                                                                                                                                                                                                         |
|                                   |                                                                                                                                  |                                                                                                                                                                                                                                               |
| <b>Electrical characteristics</b> | <b>Frequency</b>                                                                                                                 | 50/60 Hz                                                                                                                                                                                                                                      |
|                                   | <b>AC voltage</b>                                                                                                                | 100 - 240 VAC                                                                                                                                                                                                                                 |
|                                   | <b>Maximum power rating</b>                                                                                                      | 9 W                                                                                                                                                                                                                                           |
|                                   | <b>Notes</b>                                                                                                                     | 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. |
| <b>Safety</b>                     | UL 60950; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03                                                                  |                                                                                                                                                                                                                                               |
| <b>Emissions</b>                  | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 61000-3-2 2000, 61000-3-3; ICES-003 Class A  |                                                                                                                                                                                                                                               |
| <b>Management</b>                 | IMC - Intelligent Management Center; limited command-line interface; Web browser; SNMP Manager;                                  |                                                                                                                                                                                                                                               |

## Technical Specifications

|          |                                                                                                                                                                                                                                                                                                                                                  |  |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|          | IEEE 802.3 Ethernet MIB                                                                                                                                                                                                                                                                                                                          |  |
| Notes    | SFP port and copper ports work simultaneously, independent of each other, to provide a total of 10 Gigabit switching ports.                                                                                                                                                                                                                      |  |
| Services | Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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. |  |

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|                                       |                                                                                                                                                                       |                                                                                                                                                                                                                            |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HP 1920-8G-PoE+ (65W) Switch (JG921A) |                                                                                                                                                                       |                                                                                                                                                                                                                            |
| I/O ports and slots                   | 8 RJ-45 auto-negotiating 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE, IEEE 802.3at) |                                                                                                                                                                                                                            |
|                                       | 2 SFP 1000 Mbps ports                                                                                                                                                 |                                                                                                                                                                                                                            |
|                                       | Supports a maximum of 8 autosensing 10/100/1000 ports plus 2 1000BASE-X SFP ports, or a combination                                                                   |                                                                                                                                                                                                                            |
| Additional ports and slots            | 1 RJ-45 console port to access limited CLI port                                                                                                                       |                                                                                                                                                                                                                            |
| Physical characteristics              | Dimensions                                                                                                                                                            | 12.99(w) x 9.06(d) x 1.73(h) in (33 x 23 x 4.4 cm) (1U height)                                                                                                                                                             |
|                                       | Weight                                                                                                                                                                | 6.5 lb (2.95 kg)                                                                                                                                                                                                           |
| Memory and processor                  | MIPS @ 500 MHz, 32 MB flash, 128 MB SDRAM; packet buffer size: 4.1 Mb                                                                                                 |                                                                                                                                                                                                                            |
| Mounting and enclosure                | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)                                                                                 |                                                                                                                                                                                                                            |
| Performance                           | 100 Mb Latency                                                                                                                                                        | < 5 μs                                                                                                                                                                                                                     |
|                                       | 1000 Mb Latency                                                                                                                                                       | < 5 μs                                                                                                                                                                                                                     |
|                                       | Throughput                                                                                                                                                            | 14.8 Mpps (64-byte packets)                                                                                                                                                                                                |
|                                       | Routing/Switching capacity                                                                                                                                            | 20 Gbps                                                                                                                                                                                                                    |
|                                       | Routing table size                                                                                                                                                    | 32 entries (IPv4), 32 entries (IPv6)                                                                                                                                                                                       |
|                                       | MAC address table size                                                                                                                                                | 8192 entries                                                                                                                                                                                                               |
|                                       | MTBF (years)                                                                                                                                                          | 76.33                                                                                                                                                                                                                      |
| Reliability                           |                                                                                                                                                                       |                                                                                                                                                                                                                            |
| Environment                           | Operating temperature                                                                                                                                                 | 32°F to 104°F (0°C to 40°C)                                                                                                                                                                                                |
|                                       | Operating relative humidity                                                                                                                                           | 10% to 90%, noncondensing                                                                                                                                                                                                  |
|                                       | Nonoperating/Storage temperature                                                                                                                                      | -40°F to 158°F (-40°C to 70°C)                                                                                                                                                                                             |
|                                       | Nonoperating/Storage relative humidity                                                                                                                                | 10% to 95%, noncondensing                                                                                                                                                                                                  |
|                                       | Altitude                                                                                                                                                              | up to 16,404 ft (5 km)                                                                                                                                                                                                     |
|                                       | Acoustic                                                                                                                                                              | Pressure: 0 dB No Fan                                                                                                                                                                                                      |
|                                       |                                                                                                                                                                       |                                                                                                                                                                                                                            |
| Electrical characteristics            | Frequency                                                                                                                                                             | 50/60 Hz                                                                                                                                                                                                                   |
|                                       | AC voltage                                                                                                                                                            | 100 - 240 VAC                                                                                                                                                                                                              |
|                                       | Maximum power rating                                                                                                                                                  | 94 W                                                                                                                                                                                                                       |
|                                       | PoE power                                                                                                                                                             | 65 W PoE+                                                                                                                                                                                                                  |
|                                       | 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 |

## Technical Specifications

modules populated.

PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies.

|                   |                                                                                                                                                                                                                                                                                                                                                  |
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| <b>Safety</b>     | UL 60950; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03                                                                                                                                                                                                                                                                                  |
| <b>Emissions</b>  | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 61000-3-2 2000, 61000-3-3; ICES-003 Class A                                                                                                                                                                                                                  |
| <b>Management</b> | IMC - Intelligent Management Center; limited command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB                                                                                                                                                                                                                          |
| <b>Notes</b>      | SFP port and copper ports work simultaneously, independent of each other, to provide a total of 10 Gigabit switching ports.                                                                                                                                                                                                                      |
| <b>Services</b>   | Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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 1920-8G-PoE+ (180W) Switch (JG922A)

|                                   |                                                                                                                                                                       |                                                                |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <b>I/O ports and slots</b>        | 8 RJ-45 auto-negotiating 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE, IEEE 802.3at) |                                                                |
|                                   | 2 SFP 1000 Mbps ports                                                                                                                                                 |                                                                |
|                                   | Supports a maximum of 8 autosensing 10/100/1000 ports plus 2 1000BASE-X SFP ports, or a combination                                                                   |                                                                |
| <b>Additional ports and slots</b> | 1 RJ-45 console port to access limited CLI port                                                                                                                       |                                                                |
| <b>Physical characteristics</b>   | <b>Dimensions</b>                                                                                                                                                     | 12.99(w) x 9.06(d) x 1.73(h) in (33 x 23 x 4.4 cm) (1U height) |
|                                   | <b>Weight</b>                                                                                                                                                         | 7.05 lb (3.2 kg)                                               |
| <b>Memory and processor</b>       | MIPS @ 500 MHz, 32 MB flash, 128 MB SDRAM; packet buffer size: 4.1 Mb                                                                                                 |                                                                |
| <b>Mounting and enclosure</b>     | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)                                                                                 |                                                                |
| <b>Performance</b>                | <b>100 Mb Latency</b>                                                                                                                                                 | < 5 $\mu$ s                                                    |
|                                   | <b>1000 Mb Latency</b>                                                                                                                                                | < 5 $\mu$ s                                                    |
|                                   | <b>Throughput</b>                                                                                                                                                     | 14.8 Mpps (64-byte packets)                                    |
|                                   | <b>Routing/Switching capacity</b>                                                                                                                                     | 20 Gbps                                                        |
|                                   | <b>Routing table size</b>                                                                                                                                             | 32 entries (IPv4), 32 entries (IPv6)                           |
|                                   | <b>MAC address table size</b>                                                                                                                                         | 8192 entries                                                   |
|                                   | <b>MTBF (years)</b>                                                                                                                                                   | 64.51                                                          |
| <b>Reliability</b>                |                                                                                                                                                                       |                                                                |
| <b>Environment</b>                | <b>Operating temperature</b>                                                                                                                                          | 32°F to 104°F (0°C to 40°C)                                    |
|                                   | <b>Operating relative humidity</b>                                                                                                                                    | 10% to 90%, noncondensing                                      |
|                                   | <b>Nonoperating/Storage temperature</b>                                                                                                                               | -40°F to 158°F (-40°C to 70°C)                                 |
|                                   | <b>Nonoperating/Storage relative humidity</b>                                                                                                                         | 10% to 95%, noncondensing                                      |
|                                   | <b>Altitude</b>                                                                                                                                                       | up to 16,404 ft (5 km)                                         |
| <b>Electrical characteristics</b> | <b>Acoustic</b>                                                                                                                                                       | Low-speed fan: 43.6 dB, High-speed fan: 51.5 dB; ISO 7779      |
|                                   | <b>Frequency</b>                                                                                                                                                      | 50/60 Hz                                                       |

## Technical Specifications

|                   |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                            |
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|                   | <b>AC voltage</b>                                                                                                                                                                                                                                                                                                                                | 100 - 240 VAC                                                                                                                                                                                                                                                                                                                                                              |
|                   | <b>Maximum power rating</b>                                                                                                                                                                                                                                                                                                                      | 235 W                                                                                                                                                                                                                                                                                                                                                                      |
|                   | <b>PoE power</b>                                                                                                                                                                                                                                                                                                                                 | 180 W PoE+                                                                                                                                                                                                                                                                                                                                                                 |
|                   | <b>Notes</b>                                                                                                                                                                                                                                                                                                                                     | 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.<br>PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies. |
| <b>Safety</b>     | UL 60950; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Emissions</b>  | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 61000-3-2 2000, 61000-3-3; ICES-003 Class A                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Management</b> | IMC - Intelligent Management Center; limited command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Notes</b>      | SFP port and copper ports work simultaneously, independent of each other, to provide a total of 10 Gigabit switching ports.                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Services</b>   | Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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 1920-16G Switch (JG923A)

|                                   |                                                                                                                                                                                                                                                                    |                                                                  |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| <b>I/O ports and slots</b>        | 16 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)<br>4 SFP 1000 Mbps ports<br>Supports a maximum of 16 autosensing 10/100/1000 ports plus 4 1000BASE-X SFP ports, or a combination |                                                                  |
| <b>Additional ports and slots</b> | 1 RJ-45 console port to access limited CLI port                                                                                                                                                                                                                    |                                                                  |
| <b>Physical characteristics</b>   | <b>Dimensions</b>                                                                                                                                                                                                                                                  | 17.32(w) x 6.81(d) x 1.73(h) in (44 x 17.3 x 4.4 cm) (1U height) |
|                                   | <b>Weight</b>                                                                                                                                                                                                                                                      | 4.74 lb (2.15 kg)                                                |
| <b>Memory and processor</b>       | MIPS @ 500 MHz, 32 MB flash, 128 MB SDRAM; packet buffer size: 4.1 Mb                                                                                                                                                                                              |                                                                  |
| <b>Mounting and enclosure</b>     | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)                                                                                                                                                                              |                                                                  |
| <b>Performance</b>                | <b>100 Mb Latency</b>                                                                                                                                                                                                                                              | < 5 $\mu$ s                                                      |
|                                   | <b>1000 Mb Latency</b>                                                                                                                                                                                                                                             | < 5 $\mu$ s                                                      |
|                                   | <b>Throughput</b>                                                                                                                                                                                                                                                  | 29.8 Mpps (64-byte packets)                                      |
|                                   | <b>Routing/Switching capacity</b>                                                                                                                                                                                                                                  | 40 Gbps                                                          |
|                                   | <b>Routing table size</b>                                                                                                                                                                                                                                          | 32 entries (IPv4), 32 entries (IPv6)                             |
|                                   | <b>MAC address table size</b>                                                                                                                                                                                                                                      | 8192 entries                                                     |
| <b>Reliability</b>                | <b>MTBF (years)</b>                                                                                                                                                                                                                                                | 125                                                              |
| <b>Environment</b>                | <b>Operating temperature</b>                                                                                                                                                                                                                                       | 32°F to 104°F (0°C to 40°C)                                      |
|                                   | <b>Operating relative humidity</b>                                                                                                                                                                                                                                 | 10% to 90%, noncondensing                                        |
|                                   | <b>Nonoperating/Storage</b>                                                                                                                                                                                                                                        | -40°F to 158°F (-40°C to 70°C)                                   |

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|                                   |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                               |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Electrical characteristics</b> | <b>temperature</b>                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                               |
|                                   | <b>Nonoperating/Storage</b>                                                                                                                                                                                                                                                                                                                      | 10% to 95%, noncondensing                                                                                                                                                                                                                     |
|                                   | <b>relative humidity</b>                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                               |
|                                   | <b>Altitude</b>                                                                                                                                                                                                                                                                                                                                  | up to 16,404 ft (5 km)                                                                                                                                                                                                                        |
|                                   | <b>Acoustic</b>                                                                                                                                                                                                                                                                                                                                  | No Fan                                                                                                                                                                                                                                        |
|                                   | <b>Frequency</b>                                                                                                                                                                                                                                                                                                                                 | 50/60 Hz                                                                                                                                                                                                                                      |
|                                   | <b>AC voltage</b>                                                                                                                                                                                                                                                                                                                                | 100 - 240 VAC                                                                                                                                                                                                                                 |
| <b>Electrical characteristics</b> | <b>Maximum power rating</b>                                                                                                                                                                                                                                                                                                                      | 13 W                                                                                                                                                                                                                                          |
|                                   | <b>Notes</b>                                                                                                                                                                                                                                                                                                                                     | 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. |
| <b>Safety</b>                     | UL 60950; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                               |
| <b>Emissions</b>                  | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 61000-3-2 2000, 61000-3-3; ICES-003 Class A                                                                                                                                                                                                                  |                                                                                                                                                                                                                                               |
| <b>Management</b>                 | IMC - Intelligent Management Center; limited command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB                                                                                                                                                                                                                          |                                                                                                                                                                                                                                               |
| <b>Notes</b>                      | SFP ports and copper ports can work simultaneously, independent of each other, to provide a total of 20 Gigabit Ethernet-capable ports.                                                                                                                                                                                                          |                                                                                                                                                                                                                                               |
| <b>Services</b>                   | Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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 1920-24G Switch (JG924A)

|                                   |                                                                                                                                   |                                                                  |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| <b>I/O ports and slots</b>        | 24 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T) |                                                                  |
|                                   | 4 SFP 1000 Mbps ports                                                                                                             |                                                                  |
|                                   | Supports a maximum of 24 autosensing 10/100/1000 ports plus 4 1000BASE-X SFP ports, or a combination                              |                                                                  |
| <b>Additional ports and slots</b> | 1 RJ-45 console port to access limited CLI port                                                                                   |                                                                  |
| <b>Physical characteristics</b>   | <b>Dimensions</b>                                                                                                                 | 17.32(w) x 6.81(d) x 1.73(h) in (44 x 17.3 x 4.4 cm) (1U height) |
|                                   | <b>Weight</b>                                                                                                                     | 4.96 lb (2.25 kg)                                                |
| <b>Memory and processor</b>       | MIPS @ 500 MHz, 32 MB flash, 128 MB SDRAM; packet buffer size: 4.1 Mb                                                             |                                                                  |
| <b>Mounting and enclosure</b>     | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)                                             |                                                                  |
| <b>Performance</b>                | <b>100 Mb Latency</b>                                                                                                             | < 5 $\mu$ s                                                      |
|                                   | <b>1000 Mb Latency</b>                                                                                                            | < 5 $\mu$ s                                                      |
|                                   | <b>Throughput</b>                                                                                                                 | 41.7 Mpps (64-byte packets)                                      |
|                                   | <b>Routing/Switching capacity</b>                                                                                                 | 56 Gbps                                                          |
|                                   | <b>Routing table size</b>                                                                                                         | 32 entries (IPv4), 32 entries (IPv6)                             |
|                                   | <b>MAC address table size</b>                                                                                                     | 8192 entries                                                     |
| <b>Reliability</b>                | <b>MTBF (years)</b>                                                                                                               | 120.48                                                           |

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|                                   |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                               |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environment</b>                | <b>Operating temperature</b>                                                                                                                                                                                                                                                                                                                     | 32°F to 104°F (0°C to 40°C)                                                                                                                                                                                                                   |
|                                   | <b>Operating relative humidity</b>                                                                                                                                                                                                                                                                                                               | 10% to 90%, noncondensing                                                                                                                                                                                                                     |
|                                   | <b>Nonoperating/Storage temperature</b>                                                                                                                                                                                                                                                                                                          | -40°F to 158°F (-40°C to 70°C)                                                                                                                                                                                                                |
|                                   | <b>Nonoperating/Storage relative humidity</b>                                                                                                                                                                                                                                                                                                    | 10% to 95%, noncondensing                                                                                                                                                                                                                     |
|                                   | <b>Altitude</b>                                                                                                                                                                                                                                                                                                                                  | up to 16,404 ft (5 km)                                                                                                                                                                                                                        |
|                                   | <b>Acoustic</b>                                                                                                                                                                                                                                                                                                                                  | No Fan                                                                                                                                                                                                                                        |
| <b>Electrical characteristics</b> | <b>Frequency</b>                                                                                                                                                                                                                                                                                                                                 | 50/60 Hz                                                                                                                                                                                                                                      |
|                                   | <b>AC voltage</b>                                                                                                                                                                                                                                                                                                                                | 100 - 240 VAC                                                                                                                                                                                                                                 |
|                                   | <b>Maximum power rating</b>                                                                                                                                                                                                                                                                                                                      | 19 W                                                                                                                                                                                                                                          |
|                                   | <b>Notes</b>                                                                                                                                                                                                                                                                                                                                     | 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. |
| <b>Safety</b>                     | UL 60950; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                               |
| <b>Emissions</b>                  | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 61000-3-2 2000, 61000-3-3; ICES-003 Class A                                                                                                                                                                                                                  |                                                                                                                                                                                                                                               |
| <b>Management</b>                 | IMC - Intelligent Management Center; limited command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB                                                                                                                                                                                                                          |                                                                                                                                                                                                                                               |
| <b>Notes</b>                      | SFP ports and copper ports can work simultaneously, independent of each other, to provide a total of 28 Gigabit Ethernet-capable ports.                                                                                                                                                                                                          |                                                                                                                                                                                                                                               |
| <b>Services</b>                   | Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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 1920-24G-PoE+ (180W) Switch (JG925A)

|                                   |                                                                                                                                                                        |                                                                  |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| <b>I/O ports and slots</b>        | 24 RJ-45 auto-negotiating 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE, IEEE 802.3at) |                                                                  |
|                                   | 4 SFP 1000 Mbps ports                                                                                                                                                  |                                                                  |
|                                   | Supports a maximum of 24 autosensing 10/100/1000 ports plus 4 1000BASE-X SFP ports, or a combination                                                                   |                                                                  |
| <b>Additional ports and slots</b> | 1 RJ-45 console port to access limited CLI port                                                                                                                        |                                                                  |
| <b>Physical characteristics</b>   | <b>Dimensions</b>                                                                                                                                                      | 17.32(w) x 9.37(d) x 1.73(h) in (44 x 23.8 x 4.4 cm) (1U height) |
|                                   | <b>Weight</b>                                                                                                                                                          | 7.5 lb (3.4 kg)                                                  |
| <b>Memory and processor</b>       | MIPS @ 500 MHz, 32 MB flash, 128 MB SDRAM; packet buffer size: 4.1 Mb                                                                                                  |                                                                  |
| <b>Mounting and enclosure</b>     | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)                                                                                  |                                                                  |
| <b>Performance</b>                | <b>100 Mb Latency</b>                                                                                                                                                  | < 5 µs                                                           |
|                                   | <b>1000 Mb Latency</b>                                                                                                                                                 | < 5 µs                                                           |
|                                   | <b>Throughput</b>                                                                                                                                                      | 41.7 Mpps (64-byte packets)                                      |
|                                   | <b>Routing/Switching capacity</b>                                                                                                                                      | 56 Gbps                                                          |

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|                                   |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>Reliability</b>                | <b>Routing table size</b>                                                                                                                                                                                                                                                                                                                        | 32 entries (IPv4), 32 entries (IPv6)                                                                                                                                                                                                                                                                                                                                       |
|                                   | <b>MAC address table size</b>                                                                                                                                                                                                                                                                                                                    | 8192 entries                                                                                                                                                                                                                                                                                                                                                               |
| <b>Environment</b>                | <b>MTBF (years)</b>                                                                                                                                                                                                                                                                                                                              | 68.96                                                                                                                                                                                                                                                                                                                                                                      |
|                                   | <b>Operating temperature</b>                                                                                                                                                                                                                                                                                                                     | 32°F to 104°F (0°C to 40°C)                                                                                                                                                                                                                                                                                                                                                |
|                                   | <b>Operating relative humidity</b>                                                                                                                                                                                                                                                                                                               | 10% to 90%, noncondensing                                                                                                                                                                                                                                                                                                                                                  |
|                                   | <b>Nonoperating/Storage temperature</b>                                                                                                                                                                                                                                                                                                          | -40°F to 158°F (-40°C to 70°C)                                                                                                                                                                                                                                                                                                                                             |
|                                   | <b>Nonoperating/Storage relative humidity</b>                                                                                                                                                                                                                                                                                                    | 10% to 95%, noncondensing                                                                                                                                                                                                                                                                                                                                                  |
|                                   | <b>Altitude</b>                                                                                                                                                                                                                                                                                                                                  | up to 16,404 ft (5 km)                                                                                                                                                                                                                                                                                                                                                     |
| <b>Electrical characteristics</b> | <b>Acoustic</b>                                                                                                                                                                                                                                                                                                                                  | Power: 44.9 dB, Pressure: 53.3 dB; ISO 7779                                                                                                                                                                                                                                                                                                                                |
|                                   | <b>Frequency</b>                                                                                                                                                                                                                                                                                                                                 | 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                   |
|                                   | <b>AC voltage</b>                                                                                                                                                                                                                                                                                                                                | 100 - 240 VAC                                                                                                                                                                                                                                                                                                                                                              |
|                                   | <b>Maximum power rating</b>                                                                                                                                                                                                                                                                                                                      | 235 W                                                                                                                                                                                                                                                                                                                                                                      |
|                                   | <b>PoE power</b>                                                                                                                                                                                                                                                                                                                                 | 180 W PoE+                                                                                                                                                                                                                                                                                                                                                                 |
|                                   | <b>Notes</b>                                                                                                                                                                                                                                                                                                                                     | 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.<br>PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies. |
| <b>Safety</b>                     | UL 60950; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Emissions</b>                  | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 61000-3-2 2000, 61000-3-3; ICES-003 Class A                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Management</b>                 | IMC - Intelligent Management Center; limited command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Notes</b>                      | SFP ports and copper ports work simultaneously, independent of each other, to provide a total of 28 Gigabit switching ports.                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Services</b>                   | Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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 1920-24G-PoE+ (370W) Switch (JG926A)

|                                   |                                                                                                                                                                        |                                                                 |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <b>I/O ports and slots</b>        | 24 RJ-45 auto-negotiating 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE, IEEE 802.3at) |                                                                 |
|                                   | 4 SFP 1000 Mbps ports                                                                                                                                                  |                                                                 |
|                                   | Supports a maximum of 24 autosensing 10/100/1000 ports plus 4 1000BASE-X SFP ports, or a combination                                                                   |                                                                 |
| <b>Additional ports and slots</b> | 1 RJ-45 console port to access limited CLI port                                                                                                                        |                                                                 |
| <b>Physical characteristics</b>   | <b>Dimensions</b>                                                                                                                                                      | 17.32(w) x 10.24(d) x 1.73(h) in (44 x 26 x 4.4 cm) (1U height) |
|                                   | <b>Weight</b>                                                                                                                                                          | 7.5 lb (3.4 kg)                                                 |
| <b>Memory and processor</b>       | MIPS @ 500 MHz, 32 MB flash, 128 MB SDRAM; packet buffer size: 4.1 Mb                                                                                                  |                                                                 |

## Technical Specifications

|                                   |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mounting and enclosure</b>     | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Performance</b>                | <b>100 Mb Latency</b>                                                                                                                                                                                                                                                                                                                            | < 5 $\mu$ s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                   | <b>1000 Mb Latency</b>                                                                                                                                                                                                                                                                                                                           | < 5 $\mu$ s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                   | <b>Throughput</b>                                                                                                                                                                                                                                                                                                                                | up to 41.7 Mpps (64-byte packets)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                   | <b>Routing/Switching capacity</b>                                                                                                                                                                                                                                                                                                                | 56 Gbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                   | <b>Routing table size</b>                                                                                                                                                                                                                                                                                                                        | 32 entries (IPv4), 32 entries (IPv6)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                   | <b>MAC address table size</b>                                                                                                                                                                                                                                                                                                                    | 8192 entries                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Reliability</b>                | <b>MTBF (years)</b>                                                                                                                                                                                                                                                                                                                              | 65.78                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Environment</b>                | <b>Operating temperature</b>                                                                                                                                                                                                                                                                                                                     | 32°F to 104°F (0°C to 40°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                   | <b>Operating relative humidity</b>                                                                                                                                                                                                                                                                                                               | 10% to 90%, noncondensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                   | <b>Nonoperating/Storage temperature</b>                                                                                                                                                                                                                                                                                                          | -40°F to 158°F (-40°C to 70°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                   | <b>Nonoperating/Storage relative humidity</b>                                                                                                                                                                                                                                                                                                    | 10% to 95%, noncondensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                   | <b>Altitude</b>                                                                                                                                                                                                                                                                                                                                  | up to 16,404 ft (5 km)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                   | <b>Acoustic</b>                                                                                                                                                                                                                                                                                                                                  | Low-speed fan: 44.9 dB, High-speed fan: 53.3 dB; ISO 7779                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Electrical characteristics</b> | <b>Frequency</b>                                                                                                                                                                                                                                                                                                                                 | 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                   | <b>AC voltage</b>                                                                                                                                                                                                                                                                                                                                | 100 - 240 VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                   | <b>Maximum power rating</b>                                                                                                                                                                                                                                                                                                                      | 474 W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                   | <b>PoE power</b>                                                                                                                                                                                                                                                                                                                                 | 370 W PoE+                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                   | <b>Notes</b>                                                                                                                                                                                                                                                                                                                                     | 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.<br>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).<br>When supplemented with the use of an HP RPS1600 Redundant Power System, up to 795 W of PoE+ can be supplied. Unit max. power consumption with RPS is 833 W. |
| <b>Safety</b>                     | UL 60950; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Emissions</b>                  | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 61000-3-2 2000, 61000-3-3; ICES-003 Class A                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Management</b>                 | IMC - Intelligent Management Center; limited command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Notes</b>                      | SFP ports and copper ports can work simultaneously, independent of each other, to provide a total of 28 Gigabit switching ports.                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Services</b>                   | Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Technical Specifications

|                                   |                                                                                                                                     |                                                                                                                                                                                                                                               |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>I/O ports and slots</b>        | 48 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)   |                                                                                                                                                                                                                                               |
|                                   | 4 SFP 1000 Mbps ports                                                                                                               |                                                                                                                                                                                                                                               |
|                                   | Supports a maximum of 48 autosensing 10/100/1000 ports plus 4 1000BASE-X SFP ports, or a combination                                |                                                                                                                                                                                                                                               |
| <b>Additional ports and slots</b> | 1 RJ-45 console port to access limited CLI port                                                                                     |                                                                                                                                                                                                                                               |
| <b>Physical characteristics</b>   | <b>Dimensions</b>                                                                                                                   | 17.32(w) x 9.37(d) x 1.73(h) in (44 x 23.8 x 4.4 cm) (1U height)                                                                                                                                                                              |
|                                   | <b>Weight</b>                                                                                                                       | 6.94 lb (3.15 kg)                                                                                                                                                                                                                             |
| <b>Memory and processor</b>       | MIPS @ 650 MHz, 32 MB flash, 128 MB SDRAM; packet buffer size: 12 Mb                                                                |                                                                                                                                                                                                                                               |
| <b>Mounting and enclosure</b>     | Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)                                               |                                                                                                                                                                                                                                               |
| <b>Performance</b>                | <b>100 Mb Latency</b>                                                                                                               | < 5 $\mu$ s                                                                                                                                                                                                                                   |
|                                   | <b>1000 Mb Latency</b>                                                                                                              | < 5 $\mu$ s                                                                                                                                                                                                                                   |
|                                   | <b>Throughput</b>                                                                                                                   | 77.4 Mpps (64-byte packets)                                                                                                                                                                                                                   |
|                                   | <b>Routing/Switching capacity</b>                                                                                                   | 104 Gbps                                                                                                                                                                                                                                      |
|                                   | <b>Routing table size</b>                                                                                                           | 32 entries (IPv4), 32 entries (IPv6)                                                                                                                                                                                                          |
|                                   | <b>MAC address table size</b>                                                                                                       | 16384 entries                                                                                                                                                                                                                                 |
|                                   | <b>MTBF (years)</b>                                                                                                                 | 76.92                                                                                                                                                                                                                                         |
| <b>Reliability</b>                |                                                                                                                                     |                                                                                                                                                                                                                                               |
| <b>Environment</b>                | <b>Operating temperature</b>                                                                                                        | 32°F to 104°F (0°C to 40°C)                                                                                                                                                                                                                   |
|                                   | <b>Operating relative humidity</b>                                                                                                  | 10% to 90%, noncondensing                                                                                                                                                                                                                     |
|                                   | <b>Nonoperating/Storage temperature</b>                                                                                             | -40°F to 158°F (-40°C to 70°C)                                                                                                                                                                                                                |
|                                   | <b>Nonoperating/Storage relative humidity</b>                                                                                       | 10% to 95%, noncondensing                                                                                                                                                                                                                     |
|                                   | <b>Altitude</b>                                                                                                                     |                                                                                                                                                                                                                                               |
|                                   | <b>Acoustic</b>                                                                                                                     | Pressure: 49.7 dB; ISO 7779                                                                                                                                                                                                                   |
|                                   | <b>Frequency</b>                                                                                                                    | 50/60 Hz<br>Achieved Miercom Certified Green Award                                                                                                                                                                                            |
| <b>Electrical characteristics</b> | <b>AC voltage</b>                                                                                                                   | 100 - 240 VAC                                                                                                                                                                                                                                 |
|                                   | <b>Maximum power rating</b>                                                                                                         | 32 W                                                                                                                                                                                                                                          |
|                                   | <b>Notes</b>                                                                                                                        | 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. |
|                                   |                                                                                                                                     |                                                                                                                                                                                                                                               |
| <b>Safety</b>                     | UL 60950; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03                                                                     |                                                                                                                                                                                                                                               |
| <b>Emissions</b>                  | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 61000-3-2 2000, 61000-3-3; ICES-003 Class A     |                                                                                                                                                                                                                                               |
| <b>Management</b>                 | IMC - Intelligent Management Center; limited command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB             |                                                                                                                                                                                                                                               |
| <b>Notes</b>                      | SFP ports and copper ports work simultaneously, independent of each other, to provide a total of 52 Gigabit Ethernet-capable ports. |                                                                                                                                                                                                                                               |

## Technical Specifications

### 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 1920-48G-PoE+ (370W) Switch (JG928A)

#### I/O ports and slots

48 RJ-45 auto-negotiating 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE, IEEE 802.3at)

4 SFP 1000 Mbps ports

Supports a maximum of 48 autosensing 10/100/1000 ports plus 4 1000BASE-X SFP ports, or a combination

#### Additional ports and slots

1 RJ-45 console port to access limited CLI port

#### Physical characteristics

**Dimensions** 17.32(w) x 17.32(d) x 1.73(h) in (44 x 44 x 4.4 cm) (1U height)

**Weight** 9.48 lb (4.3 kg)

#### Memory and processor

MIPS @ 650 MHz, 32 MB flash, 128 MB SDRAM; packet buffer size: 12 Mb

#### Mounting and enclosure

Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included)

#### Performance

**100 Mb Latency** < 5  $\mu$ s

**1000 Mb Latency** < 5  $\mu$ s

**Throughput** up to 77.4 Mpps (64-byte packets)

**Routing/Switching capacity** 104 Gbps

**Routing table size** 32 entries (IPv4), 32 entries (IPv6)

**MAC address table size** 16384 entries

#### Reliability

**MTBF (years)** 44.44

#### Environment

**Operating temperature** 32°F to 104°F (0°C to 40°C)

**Operating relative humidity** 10% to 90%, noncondensing

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

**Nonoperating/Storage relative humidity** 10% to 95%, noncondensing

**Altitude** up to 16,404 ft (5 km)

**Acoustic** Low-speed fan: 47 dB, High-speed fan: 49.3 dB; ISO 7779

#### Electrical characteristics

**Frequency** 50/60 Hz

**AC voltage** 100 - 240 VAC

**Maximum power rating** 492 W

**PoE power** 370 W PoE+

#### Notes

Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.

PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS).

## Technical Specifications

When supplemented with the use of an HP RPS1600 Redundant Power System, up to 795 W of PoE+ can be supplied. Unit max. power consumption with RPS is 876W.

|                   |                                                                                                                                                                                                                                                                                                                                                  |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safety</b>     | UL 60950; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03                                                                                                                                                                                                                                                                                  |
| <b>Emissions</b>  | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; EN 55024; EN 61000-3-2 2000, 61000-3-3; ICES-003 Class A                                                                                                                                                                                                                  |
| <b>Management</b> | IMC - Intelligent Management Center; limited command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB                                                                                                                                                                                                                          |
| <b>Notes</b>      | SFP ports and copper ports can work simultaneously, independent of each other, to provide a total of 52 Gigabit switching ports.                                                                                                                                                                                                                 |
| <b>Services</b>   | Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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 Device management

(applies to all products in series)

RFC 2819 RMON  
Web UI

#### General protocols

IEEE 802.1D MAC Bridges  
IEEE 802.1p Priority  
IEEE 802.1Q VLANs  
IEEE 802.1s (MSTP)  
IEEE 802.1w Rapid Reconfiguration of Spanning Tree  
IEEE 802.3 Type 10BASE-T  
IEEE 802.3ab 1000BASE-T  
IEEE 802.3ad Link Aggregation Control Protocol (LACP)  
IEEE 802.3i 10BASE-T  
IEEE 802.3x Flow Control  
IEEE 802.3z 1000BASE-X

#### MIBs

RFC 1213 MIB II  
RFC 1493 Bridge MIB  
RFC 2021 RMONv2 MIB  
RFC 2233 Interface MIB  
RFC 2233 Interfaces MIB  
RFC 2571 SNMP Framework MIB  
RFC 2572 SNMP-MPD MIB  
RFC 2573 SNMP-Notification MIB  
RFC 2573 SNMP-Target MIB  
RFC 2613 SMON MIB  
RFC 2618 RADIUS Client MIB  
RFC 2620 RADIUS Accounting MIB  
RFC 2665 Ethernet-Like-MIB  
RFC 2667 IP Tunnel MIB  
RFC 2668 802.3 MAU MIB  
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB  
RFC 2737 Entity MIB (Version 2)  
RFC 3414 SNMP-User based-SM MIB

## Technical Specifications

RFC 3415 SNMP-View based-ACM MIB  
RFC 3418 MIB for SNMPv3

### **Network management**

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)  
IEEE 802.1D (STP)  
RFC 1215 SNMP Generic traps

### **QoS/Cos**

IEEE 802.1p (CoS)  
RFC 2474 DiffServ Precedence, including 8 queues/port

### **Security**

IEEE 802.1X Port Based Network Access Control

## Accessories

### HPE 1920 Switch Series Transceivers

#### accessories

|                                   |        |
|-----------------------------------|--------|
| 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 X120 1G SFP LC SX Transceiver  | JD118B |
| HP X120 1G SFP LC LX Transceiver  | JD119B |
| HP X120 1G SFP RJ45 T Transceiver | JD089B |

#### Cables

|                                                                   |        |
|-------------------------------------------------------------------|--------|
| 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 |

### HP 1920-48G-PoE+ (370W) Switch (JG928A)

|                                                                   |        |
|-------------------------------------------------------------------|--------|
| 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 X120 1G SFP LC SX Transceiver                                  | JD118B |
| HP X120 1G SFP LC LX Transceiver                                  | JD119B |
| HP X120 1G SFP RJ45 T Transceiver                                 | JD089B |
| 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 |

Accessories

|                                                        |        |
|--------------------------------------------------------|--------|
| 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 |

## Accessory Product Details

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

|                                                                                                                                                                                                 |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HP X121 1G SFP LC SX Transceiver</b> (J4858C)<br><br>A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550 m on multimode fiber. | <b>Ports</b>                      | 1 LC 1000BASE-SX port; Duplex: full only                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                 | <b>Physical characteristics</b>   | Dimensions: 2.24(d) x 0.54(w) x 0.48(h) in. (5.69 x 1.37 x 1.22 cm)<br>Weight: 0.04 lb. (0.02 kg)<br>Transceiver form factor: SFP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                 | <b>Environment</b>                | Operating temperature: 32°F to 158°F (0°C to 70°C)<br>Operating relative humidity: 5% to 85%, noncondensing<br>Nonoperating/Storage temperature: -40°F to 203°F (-40°C to 85°C)<br>Altitude: up to 10,000 ft. (3 km)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                 | <b>Electrical characteristics</b> | Power consumption typical: 0.4 W<br>Power consumption maximum: 0.7 W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                 | <b>Cabling</b>                    | Type: <ul style="list-style-type: none"> <li>62.5/125 <math>\mu\text{m}</math> or 50/125 <math>\mu\text{m}</math> (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;</li> </ul> Maximum distance: <ul style="list-style-type: none"> <li>2-220 m (62.5 <math>\mu\text{m}</math> core diameter, 160 MHz*km bandwidth)</li> <li>2-275 m (62.5 <math>\mu\text{m}</math> core diameter, 200 MHz*km bandwidth)</li> <li>2-500 m (50 <math>\mu\text{m}</math> core diameter, 400 MHz*km bandwidth)</li> <li>2-550 m (50 <math>\mu\text{m}</math> core diameter, 500 MHz*km bandwidth)</li> </ul> Cable length: 2-550m<br>Fiber type: Multi Mode |
|                                                                                                                                                                                                 | <b>Services</b>                   | Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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>HP X121 1G SFP LC LX Transceiver</b> (J4859C)<br><br>HP X121 1G SFP LC LX Transceiver: An SFP format gigabit transceiver with LC connectors using LX technology.                             | <b>Ports</b>                      | 1 LC 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX); Duplex: full only                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                 | <b>Physical characteristics</b>   | Dimensions: 2.24(d) x 0.54(w) x 0.486(h) in. (5.69 x 1.37 x 1.23 cm)<br>Weight: 0.04 lb. (0.02 kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                 | <b>Environment</b>                | Operating temperature: 32°F to 158°F (0°C to 70°C)<br>Operating relative humidity: 0% to 85%, noncondensing<br>Nonoperating/Storage temperature: -40°F to 212°F (-40°C to 100°C)<br>Altitude: up to 10,000 ft. (3 km)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                 | <b>Cabling</b>                    | Type: <ul style="list-style-type: none"> <li>Either single mode or multimode; 62.5/125 <math>\mu\text{m}</math> or 50/125 <math>\mu\text{m}</math> (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## Accessory Product Details

793-2 Type A1b or A1a, respectively; Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1;

Maximum distance:

- 2-550 m (multimode 62.5 µm core diameter, 500 MHz\*km bandwidth)
- 2-550 m (multimode 50 µm core diameter, 400 MHz\*km bandwidth)
- 2-550 m (multimode 50 µm core diameter, 500 MHz\*km bandwidth)
- 2-10,000 m (single-mode fiber)

### 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.

### HP X121 1G SFP RJ45 T Transceiver (J8177C)

HP X121 1G SFP RJ45 T Transceiver: An SFP format gigabit transceiver with RJ45 connectors using 1000BaseT technology.

### Ports

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

### Physical characteristics

Dimensions: 2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm)  
Weight: 0.06 lb. (0.03 kg)

### Environment

Operating temperature: 32°F to 158°F (0°C to 70°C); with 100 LFM airflow over the SFP module

Operating relative humidity: 0% to 95% @ 75°F (25°C), noncondensing

Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C)

Nonoperating/Storage relative humidity: 0% to 95% @ 77°F (25°C), noncondensing

Altitude: up to 10,000 ft. (3000 km)

### Cabling

Cable type:

1000BASE-T: Category 5 (5E or better recommended), 100 Ω 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

## Accessory Product Details

this product, see the document titled "Support for the J8177C 1000Base-T Mini-GBIC" on the "HP Mini-GBICs and SFPs" Manuals Web page.

The J8177C Gigabit copper mini-GBIC is not supported on dual-personality ports.

The J8177C is capable of 100 Mb operation. This is supported on only the HP E8200zl, E5400zl, and HP E6200-24G-mGBIC yl Switches using software version K.12.21 or later. Use the "auto-100" port setting to enable 100 Mb operation.

Important: The earlier J8177B does not support 100 Mb operation. When used in the Switch gl 20-Port 10/100/1000 Module (J4908A), the J8177C mini-GBIC can be installed in either the upper or lower mini-GBIC port, but will block access to the other port.

### Services

Refer to the 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 X120 1G SFP LC SX Transceiver (JD118B)

A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550m on a Multimode fiber.

### Ports

1 LC 1000BASE-SX port

### Connectivity

#### Connector type

LC

#### Wavelength

850 nm

### Physical characteristics

#### Dimensions

2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)

#### Full configuration weight

0.04 lb. (0.02 kg)

### Electrical characteristics

#### Power consumption typical

0.8 W

#### Power consumption maximum

1.0 W

### Cabling

Maximum distance:

- FDDI Grade distance = 220m
- OM1 = 275m
- OM2 = 500m
- OM3 = Not Specified by standard

Cable length up to 550m

Fiber type Multi Mode

### Services

Refer to the 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 X120 1G SFP LC LX Transceiver (JD119B)

A small form-factor pluggable (SFP) Gigabit

### Ports

1 SFP 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX)

### Connectivity

#### Connector type

LC

#### Wavelength

1300 nm

### Physical characteristics

#### Dimensions

2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)

## Accessory Product Details

LX transceiver that provides a full duplex Gigabit solution up to 550m on MMF or 10Km on SMF

|                                   |                                                                                                                                                                                                                                                                                                                                                  |                    |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <b>Electrical characteristics</b> | <b>Full configuration weight</b>                                                                                                                                                                                                                                                                                                                 | 0.04 lb. (0.02 kg) |
|                                   | <b>Power consumption typical</b>                                                                                                                                                                                                                                                                                                                 | 0.8 W              |
|                                   | <b>Power consumption maximum</b>                                                                                                                                                                                                                                                                                                                 | 1.0 W              |
| <b>Cabling</b>                    | Cable type:<br>Either single mode or multimode;<br><br>Maximum distance:<br>• 550m for Multimode<br>• 10km for Singlemode                                                                                                                                                                                                                        |                    |
| <b>Services</b>                   | Fiber type                                                                                                                                                                                                                                                                                                                                       | Both               |
|                                   | Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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 X120 1G SFP Ports RJ45 T Transceiver (JD089B)

|                                   |                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Connectivity</b>               | 1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T)                                                                                                                                                                                                                                                                                           |
| <b>Physical characteristics</b>   | <b>Connector type</b> RJ-45                                                                                                                                                                                                                                                                                                                      |
| <b>Electrical characteristics</b> | <b>Dimensions</b> 2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm)                                                                                                                                                                                                                                                                         |
| <b>Cabling</b>                    | <b>Full configuration weight</b> 0.07 lb. (0.03 kg)                                                                                                                                                                                                                                                                                              |
|                                   | <b>Power consumption typical</b> 0.8 W                                                                                                                                                                                                                                                                                                           |
|                                   | <b>Power consumption maximum</b> 1.0 W                                                                                                                                                                                                                                                                                                           |
|                                   | Cable type:<br>1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T                                                                                                                                        |
|                                   | Maximum distance:<br>• 100m                                                                                                                                                                                                                                                                                                                      |
| <b>Services</b>                   | Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)

|                |                                                                                                                                                                                        |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cabling</b> | <b>Cable type:</b><br>50/125 μm (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><br>10Gbps Transfer Rate (Ethernet): 300m                                                                                                                      |
| <b>Notes</b>   | Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 μm fiber optic cable and Ethernet assembly with LC duplex connectors on one                                        |

Accessory Product Details

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

Cabling

**Cable type:**  
50/125 μm (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.

- 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.

Accessory Product Details

- 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 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 2 m Multimode OM3 LC/LC Optical Cable

(AJ835A)

Cable type:

50/125 μm (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.

- 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 Hewlett Packard Enterprise website at

Accessory Product Details

<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 5 m Multimode OM3   Cabling**  
**LC/LC Optical Cable**  
(AJ836A)

Notes

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

Services

Refer to the 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 15 m Multimode OM3   Cabling**  
**LC/LC Optical Cable**  
(AJ837A)

- Cable type:**  
50/125 μm (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:**

## Accessory Product Details

### Notes

10Gbps Transfer Rate (Ethernet): 300m

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

- Dimensions: Core diameter:  $50 \pm 3.0\mu\text{m}$  Cladding diameter:  $125 \pm 2.0\mu\text{m}$  Coating diameter:  $245 \pm 10\mu\text{m}$
- 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 50/125 $\mu$ m 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 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 30 m Multimode OM3 LC/LC Optical 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;

#### Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

### Notes

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

- Dimensions: Core diameter:  $50 \pm 3.0\mu\text{m}$  Cladding diameter:  $125 \pm 2.0\mu\text{m}$  Coating diameter:  $245 \pm 10\mu\text{m}$
- 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.

Accessory Product Details

- 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 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 50 m Multimode OM3 LC/LC Optical Cable (AJ839A) | Cabling | <p><b>Cable type:</b></p> <p>50/125 μm (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;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                    | Notes   | <p><b>Maximum distance:</b></p> <p>10Gbps Transfer Rate (Ethernet): 300m</p> <p>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.</p> <ul style="list-style-type: none"><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 zipcord 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></ul> |

## Accessory Product Details

- Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg

### 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)

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

- Core Diameter: 50um  $\pm$ 3um, Cladding diameter: 125um  $\pm$ 2um; Coating diameter: 245  $\pm$  10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: 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.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

### Services

Refer to the 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 2m Cable (QK733A)

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

- Core diameter: 50um  $\pm$ 3um, Cladding diameter: 125um  $\pm$ 2um; Coating diameter: 245  $\pm$  10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: 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.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

## Accessory Product Details

### 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 5m Cable (QK734A)

#### Notes

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

- Core diameter: 50um  $\pm$ 3um, Cladding diameter: 125um  $\pm$ 2um; Coating diameter: 245  $\pm$  10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: 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.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

### Services

Refer to the 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.

- Core diameter: 50um  $\pm$ 3um, Cladding diameter: 125um  $\pm$ 2um; Coating diameter: 245  $\pm$  10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: 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.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

### Services

Refer to the Hewlett Packard Enterprise website at <http://www.hpe.com/networking/services> for details on the service-

## Accessory Product Details

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.

- Core diameter: 50um  $\pm$  3um, Cladding diameter: 125um  $\pm$  2um; Coating diameter: 245  $\pm$  10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: 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.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

#### Services

Refer to the 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 50m Cable (QK737A) Notes

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

- Core diameter: 50um  $\pm$  3um, Cladding diameter: 125um  $\pm$  2um; Coating diameter: 245  $\pm$  10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: 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.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

#### Services

Refer to the 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

Accessory Product Details

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## Summary of Changes

| Date        | Version History     | Action  | Description of Change:                        |
|-------------|---------------------|---------|-----------------------------------------------|
| 01-Dec-2015 | From Version 3 to 4 | Changed | Overview and Technical Specifications updated |
| 09-Feb-2015 | From Version 2 to 3 | Added   | SKU JG928A added                              |
| 01-Dec-2014 | From Version 1 to 2 | Changed | Updated Warranty and support                  |



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c04394247 - 15061 - Worldwide - V4 - 1-December-2015