Product overview
The HP 2920 Switch Series consists of four switches: the HP 2920-24G and 2920-24G-PoE+ Switches with 24 10/100/1000 ports, and the HP 2920-48G and 2920-48G-PoE+ Switches with 48 10/100/1000 ports. Each switch has four dual-personality ports for 10/100/1000 or SFP connectivity.

In addition, the 2920 switch series supports up to four optional 10 Gigabit Ethernet (SFP+ and/or 10GBASE-T) ports, as well as a two-port stacking module. These options provide you with flexible and easy-to-deploy uplinks and stacking.

Together with static and RIP routing, robust security and management, enterprise-class features, free lifetime warranty and free software updates, the 2920 switch series is a cost-effective, scalable solution for customers who are building high-performance networks. These switches can be deployed at the enterprise edge, in remote branch offices, and in converged networks.

Key Features
- High-performance Gigabit Ethernet access switch
- Four optional 10GbE (SFP+ and/or 10GBASE-T) ports
- Stacking capability with a total of four switches
- Layer 2 and Layer 3 plus static and RIP routing, PoE and PoE+ support
- Lifetime Warranty, sFlow, ACLs, Openflow and rate limiting

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

Connectivity
- Flexible 10 Gbps Ethernet connectivity
  up to four optional 10-Gigabit ports (SFP+ and/or 10GBASE-T)
- Two-port stacking module with up to 40 Gbps/port
  optional two-port stacking module allows stacking of up to four switch units into a single virtual device
- Auto-MDI
  automatically adjusts for straight-through or crossover cables on all 10/100 and 10/100/1000 ports
- IPv6
  - IPv6 host
Overview

allows the switches to be managed and deployed at the edge of IPv6 networks

- **Dual stack (IPv4/IPv6)**
  provides transition mechanism from IPv4 to IPv6; supports connectivity for both protocols

- **MLD snooping**
  forwards IPv6 multicast traffic to the appropriate interface; prevents IPv6 multicast traffic from flooding the network

- **IEEE 802.3at Power over Ethernet (PoE+)**
  provide up to 30 W per port that 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; eliminates the cost for additional electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments

- **Pre-standard PoE support**
  detects and provides power to pre-standard PoE devices

- **Dual-personality functionality**
  includes four 10/100/1000 ports or SFP slots for optional fiber connectivity such as Gigabit-SX, -LX, and -LH, or 100-FX

Performance

- **Energy-efficient design**
  - **High-efficiency power supplies**
    80 PLUS Silver Certified power supply increases power savings
  - **Energy-efficient Ethernet (EEE) support**
    reduces power consumption in accordance with IEEE 802.3az

- **HP ProVision ASIC architecture**
  is designed with the latest HP ProVision ASIC, providing very low latency, increased packet buffering, and adaptive power consumption

- **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

Software-defined networking

- **NEW OpenFlow**
  is a key technology enabling software-defined networking by allowing the separation of data (packet forwarding) and control (routing decision) paths

Convergence

- **IP multicast snooping and data-driven IGMP**
  automatically prevent flooding of IP multicast traffic

- **LLDP-MED (Media Endpoint Discovery)**
  is a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones

- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP)**
  is an automated device discovery protocol that provides easy mapping of network management applications

- **PoE and PoE+ allocations**
  support multiple methods (automatic, IEEE 802.3at dynamic, LLDP-MED fine grain, IEEE 802.3af device class, or user specified) to allocate and manage PoE/PoE+ power for more efficient energy savings

Resiliency and high availability

- **IEEE 802.1s Multiple Spanning Tree**
  provides high link availability in multiple VLAN environments by allowing multiple spanning trees; provides legacy support for
Overview

- IEEE 802.1d and IEEE 802.1w
- IEEE 802.3ad Link Aggregation Control Protocol (LACP) and HP port trunking
  support up to 60 static, dynamic or distributed trunks active across a stack, with each trunk having up to eight links (ports) per static trunk; trunking across stack members is supported
- Ring and chain stacking topology
  allows failure of a link or switch in the ring of stacked switches, while the remaining connected switches continue operation

Management

- SNMPv1, v2, and v3
  provide complete support of SNMP; provide full support of industry-standard Management Information Base (MIB) plus private extensions; SNMPv3 supports increased security using encryption
- Out-of-band Ethernet management port
  enables management over a separate physical management network, keeping management traffic segmented from network data traffic

Manageability

- Dual flash images
  provides independent primary and secondary operating system files for backup while upgrading
- Friendly port names
  allow assignment of descriptive names to ports
- Find-Fix-Inform
  finds and fixes common network problems automatically, then informs administrator
- Multiple configuration files
  allow multiple configuration files to be stored to a flash image
- Software updates
  free downloads from the Web
- RMON, XRMON, and sFlow
  provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- Troubleshooting
  ingress and egress port monitoring enable network problem solving
- Uni-Directional Link Detection (UDLD)
  monitors a link between two switches and blocks the ports on both ends of the link if the link goes down at any point between the two devices.

Layer 2 switching

- VLAN support and tagging
  supports IEEE 802.1Q (4,094 VLAN IDs) and 256 VLANs simultaneously
- GARP VLAN Registration Protocol
  allows automatic learning and dynamic assignment of VLANs
- Jumbo packet support
  supports up to 9220-byte frame size to improve the performance of large data transfers
- IEEE 802.1v protocol VLANs
  isolate select non-IPv4 protocols automatically into their own VLANs

Layer 3 routing

- Static IP routing
  provides manually configured routing; includes ECMP capability
Overview

- **Routing Information Protocol (RIP)**
  provides RIPv1 and RIPv2 routing
- **256 static and 2,048 RIP routes**
  facilitate segregation of user data without adding external hardware

**Security**

- **Multiple user authentication methods**
  - **IEEE 802.1X**
    is an industry-standard method of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server
  - **Web-based authentication**
    is similar to IEEE 802.1X and provides a browser-based environment to authenticate clients that do not support the IEEE 802.1X supplicant
  - **MAC-based authentication**
    authenticates the client with the RADIUS server based on the client's MAC address

- **Authentication flexibility**
  - **Multiple IEEE 802.1X users per port**
    provides authentication of multiple IEEE 802.1X users per port; prevents user "piggybacking" on another user's IEEE 802.1X authentication
  - **Concurrent IEEE 802.1X, Web, and MAC authentication schemes per port**
    switch port will accept up to 32 sessions of IEEE 802.1X, Web, and MAC authentications

- **Access control lists (ACLs)**
  provide IP Layer 3 filtering based on source/destination IP address/subnet and source/destination TCP/UDP port number

- **Source-port filtering**
  allows only specified ports to communicate with each other

- **RADIUS/TACACS+**
  eases switch management security administration by using a password authentication server

- **IEEE 802.1X, MAC or Web authentication**
  provides concurrent network access control and Web authentication of up to 24 clients per port

- **Secure shell**
  encrypts all transmitted data for secure remote CLI access over IP networks

- **Secure Sockets Layer (SSL)**
  encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch

- **Port security**
  allows access only to specified MAC addresses, which can be learned or specified by the administrator

- **MAC address lockout**
  prevents particular configured MAC addresses from connecting to the network

- **Secure FTP**
  allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file

- **Switch management logon security**
  helps secure switch CLI logon by optionally requiring either RADIUS or TACACS+ authentication

- **Custom banner**
  displays security policy when users log in to the switch

- **STP BPDU port protection**
  blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks

- **DHCP protection**
  blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks

- **Dynamic ARP protection**
QuickSpecs

HP 2920 Switch Series

Overview

- blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- **STP Root Guard**
  - protects the root bridge from malicious attacks or configuration mistakes
- **Identity-driven ACL**
  - enables implementation of a highly granular and flexible access security policy and VLAN assignment specific to each authenticated network user
- **Per-port broadcast throttling**
  - selectively configures broadcast control on heavy traffic port uplinks

Monitor and diagnostics

- **Digital optical monitoring of SFP+ and 1000BASE-T transceivers**
  - allows detailed monitoring of the transceiver settings and parameters

Warranty and support

- **Lifetime warranty**
  - for as long as you own the product with advance replacement and next-business-day delivery (available in most countries)†
- **Electronic and telephone support**
  - limited electronic and telephone support is available from HP; to reach our support centers, refer to [www.hp.com/networking/contact-support](http://www.hp.com/networking/contact-support); for details on the duration of support provided with your product purchase, refer to [www.hp.com/networking/warrantysummary](http://www.hp.com/networking/warrantysummary)
- **Software releases**
  - to find software for your product, refer to [www.hp.com/networking/support](http://www.hp.com/networking/support); for details on the software releases available with your product purchase, refer to [www.hp.com/networking/warrantysummary](http://www.hp.com/networking/warrantysummary)

†HP warranty includes repair or replacement of hardware for as long as you own the product, with next business day advance replacement (available in most countries). The disk drive included with HP AllianceOne Advanced Services and Services zl Modules, HP Threat Management Services zl Module, HP AllianceOne Extended zl Module with Riverbed Steelhead, HP MSM765zl Mobility Controller and HP Survivable Branch Communication zl Module powered by Microsoft Lync has a five-year hardware warranty. For details, refer to the Software license and hardware warranty statements at [www.hp.com/networking/warranty](http://www.hp.com/networking/warranty).
QuickSpecs

HP 2920 Switch Series

Configuration

HP 2920-24G Switch

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 dual-personality ports
- min=0 \ max=4 SFP Transceivers
- 1 - HP X331 165W 100-240VAC to 12VDC PS included
- 1U - Height

C15 PDU NA

- C15 to C14 Jumper Cord (NA)

C15 PDU ROW

- C15 to C14 Jumper Cord (ROW)

220 NA

- NEMA L6-20P Cord

HP 2920-24G-POE+ Switch

- 24 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 dual-personality ports
- min=0 \ max=4 SFP Transceivers
- 1 - HP X332 575W 100-240VAC to 54VDC PS included
- 1U - Height

C15 PDU NA

- C15 to C14 Jumper Cord (NA)

C15 PDU ROW

- C15 to C14 Jumper Cord (ROW)

220 NA

- NEMA L6-20P Cord

HP 2920-48G Switch

- 48 RJ-45 autosensing 10/100/1000 ports
- 4 dual-personality ports
- min=0 \ max=4 SFP Transceivers
- 1 - HP X331 165W 100-240VAC to 12VDC PS included
- 1U - Height

C15 PDU NA

- C15 to C14 Jumper Cord (NA)

C15 PDU ROW

- C15 to C14 Jumper Cord (ROW)

220 NA

- NEMA L6-20P Cord

HP 2920-48G-POE+ Switch

- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 dual-personality ports
- min=0 \ max=4 SFP Transceivers
- 1 - HP X332 575W 100-240VAC to 54VDC PS included
- 1U - Height

C15 PDU NA

- C15 to C14 Jumper Cord (NA)

C15 PDU ROW

- C15 to C14 Jumper Cord (ROW)
QuickSpecs

HP 2920 Switch Series

Configuration

220 NA

- NEMA L6-20P Cord

Configuration Rules

Note 1

<table>
<thead>
<tr>
<th>Transceiver Type</th>
<th>Part Number</th>
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<tbody>
<tr>
<td>HP X121 1G SFP LC LH Transceiver</td>
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<td>HP X121 1G SFP LC LX Transceiver</td>
<td>J4859C</td>
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<td>HP X121 1G SFP LC SX Transceiver</td>
<td>J4858C</td>
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<td>HP X122 1G SFP LC BX-D Transceiver</td>
<td>J9142B</td>
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<td>HP X122 1G SFP LC BX-U Transceiver</td>
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<td>HP X121 1G SFP RJ45 T Transceiver</td>
<td>J8177C</td>
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<td>HP X132 10G SFP+ LC ER Transceiver</td>
<td>J9153A</td>
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<td>HP X132 10G SFP+ LC LR Transceiver</td>
<td>J9151A</td>
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<td>HP X132 10G SFP+ LC LRM Transceiver</td>
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<td>HP X242 SFP+ SFP+ 1m Direct Attach Cable</td>
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<td>HP X242 SFP+ SFP+ 3m Direct Attach Cable</td>
<td>J9283B</td>
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<td>HP X242 SFP+ SFP+ 7m Direct Attach Cable</td>
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<td>HP X244 XFP SFP+ 1m Direct Attach Cable</td>
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<td>HP X244 XFP SFP+ 3m Direct Attach Cable</td>
<td>J9301A</td>
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<td>HP X244 XFP SFP+ 5m Direct Attach Cable</td>
<td>J9302A</td>
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<td>HP X242 10G SFP+ 10m DAC Cable</td>
<td>J9286B</td>
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<tr>
<td>HP X242 10G SFP+ 15m DAC Cable</td>
<td>J9287B</td>
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</table>

Note 2

Localization Or PDU cable required. (See Remarks Below)

Rack Level Integration CTO Models

HP 2920-24G Switch

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 dual-personality ports
- min=0 \ max=4 SFP Transceivers
- 1 - HP X331 165W 100-240VAC to 12VDC PS included
- 1U - Height

C15 PDU NA

- C15 to C14 Jumper Cord (NA)

C15 PDU ROW

- C15 to C14 Jumper Cord (ROW)

220 NA

- NEMA L6-20P Cord

HP 2920-24G-POE+ Switch

- 24 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 dual-personality ports
- min=0 \ max=4 SFP Transceivers
- 1 - HP X332 575W 100-240VAC to 54VDC PS included
- 1U - Height

C15 PDU NA

- C15 to C14 Jumper Cord (NA)

C15 PDU ROW

- C15 to C14 Jumper Cord (ROW)

220 NA
Configuration

- NEMA L6-20P Cord

**HP 2920-48G Switch**

- 48 RJ-45 autosensing 10/100/1000 ports
- 4 dual-personality ports
- \(\text{min}=0 \ \text{max}=4\) SFP Transceivers
- 1 - HP X331 165W 100-240VAC to 12VDC PS included
- 1U - Height

**C15 PDU NA**

- C15 to C14 Jumper Cord (NA)

**C15 PDU ROW**

- C15 to C14 Jumper Cord (ROW)

**220 NA**

- NEMA L6-20P Cord

**HP 2920-48G-POE+ Switch**

- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 dual-personality ports
- \(\text{min}=0 \ \text{max}=4\) SFP Transceivers
- 1 - HP X332 575W 100-240VAC to 54VDC PS included
- 1U - Height

**C15 PDU NA**

- C15 to C14 Jumper Cord (NA)

**C15 PDU ROW**

- C15 to C14 Jumper Cord (ROW)

**220 NA**

- NEMA L6-20P Cord

**Configuration Rules**

The following Transceivers install into this Module (Use #0D1 quoted to switch if switch is CTO) - if applicable:

**Note 1**

- HP X121 1G SFP LC LH Transceiver J4860C
- HP X121 1G SFP LC LX Transceiver J4859C
- HP X121 1G SFP LC SX Transceiver J4858C
- HP X122 1G SFP LC BX-D Transceiver J9142B
- HP X122 1G SFP LC BX-U Transceiver J9143B
- HP X121 1G SFP RJ45 T Transceiver J8177C
- HP X132 10G SFP+ LC ER Transceiver J9153A
- HP X132 10G SFP+ LC LR Transceiver J9151A
- HP X132 10G SFP+ LC LRM Transceiver J9152A
- HP X242 SFP+ SFP+ 1m Direct Attach Cable J9281B
- HP X242 SFP+ SFP+ 3m Direct Attach Cable J9283B
- HP X242 SFP+ SFP+ 7m Direct Attach Cable J9285B
- HP X244 XFP SFP+ 1m Direct Attach Cable J9300A
- HP X244 XFP SFP+ 3m Direct Attach Cable J9301A
- HP X244 XFP SFP+ 5m Direct Attach Cable J9302A
- HP X242 10G SFP+ 10m DAC Cable J9286B
- HP X242 10G SFP+ 15m DAC Cable J9287B

**Note 2**

Localization Or PDU cable required. (See Remarks Below)
Configuration

Note 3  If this switch is factory installed in HP Universal Racks, Then the J9583A, J9583A#0D1 or J9583AZ is required.
AMThen J9583A is required.
EMEA then J9583A is required.
APD, Japan and China then J9583A#0D1 is required.

Note 4  If Switch is ordered #0D1 (Rack Integrated), Then #B2B, or #B2C is Required on the Switch.
#B2B replaces localization in AMS, AP, J, C And #B2C is added to localized option in EMEA.

Note 5  If HP CTO Switch Chassis is selected to be Rack Level Integration, Then the CTO Switch Chassis needs to integrate (with #0D1) to the HP Universal Rack.

Remarks  Drop down under power supply should offer the following options and results:
Switch to PDU Power Cord - Should replace localized option with #B2B in AMS, AP, J, C. #B2C added to localized option in EMEA.

Internal Power Supplies

System (std 1 // max 2) User Selection (min 0 // max 1) per switch enclosure

HP X331 165W 100-240VAC to 12VDC PS  
- includes 1 x c15, 165w

C15 PDU NA
- C15 to C14 Jumper Cord (NA)

C15 PDU ROW
- C15 to C14 Jumper Cord (ROW)

220 NA
- NEMA L6-20P Cord

HP X332 575W 100-240VAC to 54VDC PS  
- includes 1 x c15, 575w

C15 PDU NA
- C15 to C14 Jumper Cord (NA)

C15 PDU ROW
- C15 to C14 Jumper Cord (ROW)

220 NA
- NEMA L6-20P Cord

Configuration Rules

Note 1  This power supply is only supported on the J9726A and J9728A.

Note 2  This power supply is only supported on the J9727A and J9729A.

Note 3  If Switch is ordered #0D1 (Rack Integrated), Then #B2B, or #B2C is Required on the Switch.
#B2B replaces localization in AMS, AP, J, C And #B2C is added to localized option in EMEA.

Note 4  If #B2E is selected Then replace Localized option with #B2E for power supply and with #B2E for switch.  
(Offered only in AMS, Taiwan, and Japan)

Remarks  Drop down under power supply should offer the following options and results:
Switch to PDU Power Cord - Should replace localized option with #B2B in AMS, AP, J, C. #B2C added to localized option in EMEA.
Switch to Wall Power Cord - Should leave existing Localized Option (no #B2x options)
High Volt Power Cord - Should replace Localized option with #B2E for power supply and with #B2E for switch. (Offered only in AMS, Taiwan, and Japan)

Localization  X332 575W 100-240VAC to 54VDC PS, CL - Chile - English localization
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<thead>
<tr>
<th>Model Details</th>
<th>Part Store #:</th>
<th>Localization Details</th>
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<tbody>
<tr>
<td>Power Cord: Quantity :1, NEMA 5-15P, C13 STRAIGHT, 125 V, 15 A, 2.5 meters, 8.21 feet</td>
<td>8121-0973</td>
<td>NEMA 5-15P, C13 STRAIGHT, 125 V, 15 A, 2.5 meters, 8.21 feet, EU - Europe - English localization</td>
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<td>Power Cord: Quantity :1, AS/NZS 3112, C13 STRAIGHT, 250 V, 10 A, 2.3 meters, 7.55 feet</td>
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<td>AS/NZS 3112, C13 STRAIGHT, 250 V, 10 A, 2.3 meters, 7.55 feet, BR - Brazil - Portuguese localization</td>
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<td>Power Cord: Quantity :1, BS 1363/A, C13 STRAIGHT, 250 V, 10 A, 2.3 meters, 7.55 feet</td>
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<td>BS 1363/A, C13 STRAIGHT, 250 V, 10 A, 2.3 meters, 7.55 feet, UK - United Kingdom - English localization</td>
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<td>8121-0973</td>
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<td>GB 1002, C13 STRAIGHT, 250 V, 10 A, 2.3 meters, 7.55 feet, TW - Taiwan - English localization</td>
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<td>X331 165W 100-240VAC to 12VDC PS, CL - Chile - English localization</td>
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<td>Power Cord: Quantity :1, NEMA 5-15P, C15 STRAIGHT, 125 V, 15 A, 2.5 meters, 8.21 feet</td>
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<td>X331 165W 100-240VAC to 12VDC PS, EU - Europe - English localization</td>
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<td>Part Store #: 8121-0834</td>
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<tr>
<td>X331 165W 100-240VAC to 12VDC PS, BR - Brazil - Portuguese localization</td>
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<tr>
<td>Power Cord: Quantity :1, SI 32 90-DEG, C13 STRAIGHT, 250 V, 10 A, 2.5 meters, 8.21 feet</td>
<td>Part Store #: 8121-1035</td>
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<td>X331 165W 100-240VAC to 12VDC PS, TH - Thailand - English localization</td>
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<td>2920-24G Switch, SZ</td>
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<td>2920-24G Switch, JP</td>
<td>Japan</td>
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<td>India</td>
<td>Power Cord: Quantity :1, IS 1293, C13 STRAIGHT, 250 V, 10 A, 2.3 meters, 7.55 feet ,Part Store #: 8121-0780</td>
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<td>2920-24G Switch, ZA</td>
<td>South Africa</td>
<td>Power Cord: Quantity :1, IS 1293, C13 STRAIGHT, 250 V, 10 A, 2.3 meters, 7.55 feet ,Part Store #: 8121-0780</td>
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## Power Cord Specifications

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<th>Quantity</th>
<th>Type</th>
<th>Voltage</th>
<th>Current</th>
<th>Length</th>
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<td>SABS 164, C13 STRAIGHT</td>
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<td>2.25 meters</td>
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<td>2920-24G Switch, TH - Thailand - English localization</td>
<td>1</td>
<td>SI 32 90-DEG, C13 STRAIGHT</td>
<td>250 V</td>
<td>10 A</td>
<td>2.5 meters</td>
<td>8121-1035</td>
</tr>
<tr>
<td>2920-24G Switch, CN - China - English localization</td>
<td>1</td>
<td>NEMA 5-15P, C13 STRAIGHT</td>
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<td>2.3 meters</td>
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<tr>
<td>2920-24G Switch, TW - Taiwan - English localization</td>
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<td>GB 1002, C13 STRAIGHT</td>
<td>250 V</td>
<td>10 A</td>
<td>2.3 meters</td>
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<tr>
<td>2920-24G Switch, MY - Malaysia - English localization</td>
<td>1</td>
<td>CNS 690 Type 2(1), C13 STRAIGHT</td>
<td>125 V, 13 A</td>
<td>2.5 meters</td>
<td>8.21 feet</td>
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<td>2920-24G Switch, AR - Argentina - English localization</td>
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<td>2.3 meters</td>
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<td>10 A</td>
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<td>2920-24G Switch, JmpCbl-ROW - JmpCbl-ROW</td>
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<td>10 A</td>
<td>2.5 meters</td>
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<tr>
<td>2920-24G Switch, 220V-NA - L6-20 220V-NA</td>
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<td>NEMA 6-15P, C13 STRAIGHT</td>
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<td>10 A</td>
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<td>2920-24G-POE+ Switch, CL - Chile - English localization</td>
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<td>10 A</td>
<td>2.3 meters</td>
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<td>2920-24G-POE+ Switch, US - U.S. - English localization</td>
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<td>CEE 7-VII, C13 STRAIGHT</td>
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<td>15 A</td>
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<tr>
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<td>2920-24G-POE+ Switch, AU - Australia - English localization</td>
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<td>2920-24G-POE+ Switch, BR - Brazil - Portuguese localization</td>
<td>1</td>
<td>NBR 14136 Fig13, C13 STRAIGHT</td>
<td>250 V, 2.5 A</td>
<td>2.5 meters</td>
<td>8.21 feet</td>
<td>8121-1069</td>
</tr>
</tbody>
</table>
## QuickSpecs

### HP 2920 Switch Series

#### Configuration

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<tr>
<th>Model</th>
<th>Location</th>
<th>Power Cord Specifications</th>
</tr>
</thead>
<tbody>
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<td>2920-24G-POE+ Switch, UK - United Kingdom</td>
<td>BS 1363/A, C13 STRAIGHT, 250 V, 10 A, 2.3 meters, 7.55 feet</td>
<td>J9727A#ACC</td>
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<tr>
<td>2920-24G-POE+ Switch, SZ - Switzerland</td>
<td>SEV 6534-2 Type 12, C13 STRAIGHT, 250 V, 10 A, 2.25 meters, 7.39 feet</td>
<td>J9727A#ACD</td>
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<tr>
<td>2920-24G-POE+ Switch, DK - Denmark</td>
<td>DK 2-5A, C13 STRAIGHT, 250 V, 10 A, 2.25 meters, 7.39 feet</td>
<td>J9727A#ACE</td>
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<tr>
<td>2920-24G-POE+ Switch, JP - Japan</td>
<td>JIS C 8303, C13 STRAIGHT, 125 V, 12 A, 2.3 meters, 7.55 feet</td>
<td>J9727A#ACF</td>
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<tr>
<td>2920-24G-POE+ Switch, IN - India</td>
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<td>2920-24G-POE+ Switch, TH - Thailand</td>
<td>NEMA 5-15P, C13 STRAIGHT, 250 V, 10 A, 2.3 meters, 7.55 feet</td>
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<td>2920-24G-POE+ Switch, TW - Taiwan</td>
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<td>2920-24G-POE+ Switch, AR - Argentina</td>
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<td>NEMA 6-15P, C15 STRAIGHT, 220V-NA, 2.5 meters, 8.21 feet</td>
<td>J9727A#B2E</td>
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<td>2920-48G Switch, CN</td>
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<td>2920-48G Switch, TW</td>
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<tr>
<td>2920-48G Switch, MY</td>
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<tr>
<td>2920-48G Switch, AR - Argentina - English localization</td>
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<td>Power Cord: Quantity: 1, IRAM 2073, C13 STRAIGHT, 250 V, 10 A, 2.3 meters, 7.55 feet, Part Store #: 8120-6869</td>
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<td>2920-48G Switch, JmpCbl-NA/JP/TW - JmpCbl-NA/JP/TW</td>
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<td>Power Cord: Quantity: 1, C14 STRAIGHT, C15 STRAIGHT, 250 V, 10 A, 2.5 meters, 8.21 feet, Part Store #: 8121-1091</td>
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<td>Power Cord: Quantity: 1, SEV 6534-2 Type 12, C13 STRAIGHT, 250 V, 10 A, 2.25 meters, 7.39 feet, Part Store #: 8120-6815</td>
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<tr>
<td>ZA - South Africa</td>
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<td>IL - Israel</td>
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<td>AR - Argentina</td>
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<td>JmpCbl-ROW</td>
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<td>220V-NA</td>
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</tbody>
</table>

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

**Networking**

| HP 2920 2-port 10GbE SFP+ Module | 1 |

**Ethernet**

| min=0 | max=2 SFP + Transceivers |

**Configuration**

**Rules**

**Note 1**

- HP X121 1G SFP LC LH Transceiver
- HP X121 1G SFP LX Transceiver
- HP X121 1G SFP LC SX Transceiver
- HP X122 1G SFP LC BX-D Transceiver
- HP X122 1G SFP LX BX-U Transceiver
- HP X121 1G SFP RJ45 T Transceiver
- HP X132 10G SFP+ LC ER Transceiver
- HP X132 10G SFP+ LC LR Transceiver
**QuickSpecs**

**HP 2920 Switch Series**

### System (std 0 // max 1) User Selection (min 0 // max 1) per enclosure

- **Stacking Modules**
  - HP 2920 2-port Stacking Module
  - J9733A

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

- **SFP+ Transceivers**
  - HP X132 10G SFP+ LC LR Transceiver
  - J9151A
  - HP X132 10G SFP+ LC SR Transceiver
  - J9150A
  - HP X132 10G SFP+ LC LRM Transceiver
  - J9152A
  - HP X242 10G SFP+ SFP+ 1m DAC Cable
  - J9281B
  - HP X242 10G SFP+ SFP+ 3m DAC Cable
  - J9283B
  - HP X242 10G SFP+ SFP+ 7m DAC Cable
  - J9285B
  - HP X244 XFP SFP+ 1m Direct Attach Cable
  - J9300A
  - HP X244 XFP SFP+ 3m Direct Attach Cable
  - J9301A
  - HP X244 XFP SFP+ 5m Direct Attach Cable
  - J9302A
  - HP X242 10G SFP+ 10m DAC Cable
  - J9286B
  - HP X242 10G SFP+ 15m DAC Cable
  - J9287B

### Cables

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

HP 2920 Switch Series

Configuration

<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 50 m Multimode OM3 LC/LC FC Cable</td>
<td>AJ839A</td>
</tr>
<tr>
<td>HP 2920 0.5m Stacking Cable</td>
<td>J9734A</td>
</tr>
<tr>
<td>HP 2920 1.0m Stacking Cable</td>
<td>J9735A</td>
</tr>
<tr>
<td>HP 2920 3.0m Stacking Cable</td>
<td>J9736A</td>
</tr>
</tbody>
</table>

Switch Enclosure Options

<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP X410 1U Univ 4-post Rack Mnt Kit</td>
<td>J9583A</td>
</tr>
</tbody>
</table>

**Note**

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

2. If the J9583A is ordered in EMEA fire the following UNBUILDABLE error:
   "The J9583A cannot be ordered with option integrated to the Rack in the EMEA region. The Rack Mount kit must be ordered as BTO using supplier 80CZ."
# HP 2920-24G Switch (J9726A)

## Ports
- 20 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
- 4 RJ-45 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)
- 2 module slots
- 1 Stacking module slot
- 1 Dual-personality (RJ-45 or USB micro-B)
- 1 USB 1.1
- 1 RJ-45 out-of-band management port

## Power supplies
- 1 power supply slot
- 1 minimum power supply required
- includes: 1 x J9739A (HP X331 165W 100-240VAC to 12VDC Modular Power Supply)

## Physical characteristics
- **Dimensions**: 17.42(w) x 13.23(d) x 1.75(h) in (44.25 x 33.6 x 4.45 cm) (1U height)
- **Weight**: 11.57 lb (5.25 kg)

## Memory and processor
- Tri Core ARM1176 @ 625 MHz, 512 MB SDRAM, 1 GB flash MB; packet buffer size: 11.25 MB (6.75 MB Dynamic Egress + 4.5 MB Ingress)

## Performance
- **100 Mb Latency**: < 9.0 µs (FIFO 64-byte packets)
- **1000 Mb Latency**: < 3.3 µs (FIFO 64-byte packets)
- **10 Gbps Latency**: < 3.3 µs (FIFO 64-byte packets)
- **Throughput**: 95.2 million pps
- **Switching capacity**: 128 Gbps
- **Routing table size**: 2048 entries (IPv4), 256 entries (IPv6)
- **MAC address table size**: 16000 entries

## Environment
- **Operating temperature**: 32°F to 131°F (0°C to 55°C)
- **Operating relative humidity**: 15% to 95%, noncondensing
- **Non-operating/Storage temperature**: -40°F to 158°F (-40°C to 70°C)
- **Non-operating/Storage relative humidity**: 15% to 95%, noncondensing
- **Altitude**: up to 10,000 ft (3 km)
- **Acoustic**
  - Power: 57 dB
  - Pressure: 41.4 dB

## Electrical characteristics
- **Frequency**: 50/60 Hz
- **80plus.org Certification**: Silver
- **Maximum heat dissipation**: 198 BTU/hr (208.89 kJ/hr)
- **Voltage**: 100-240 VAC
- **Maximum power rating**: 58 W
- **Idle power**: 26 W
Notes
Idle power is the actual power consumption of the device with no ports connected.
Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.

Safety

Emissions
FCC part 15 Class A; VCCI Class A; EN 55022/CISPR 22 Class A

Immunity
EN EN 55024, CISPR 24
ESD IEC 61000-4-2
Radiated IEC 61000-4-3
EFT/Burst IEC 61000-4-4
Surge IEC 61000-4-5
Conducted IEC 61000-4-6
Power frequency magnetic field IEC 61000-4-8
Voltage dips and interruptions IEC 61000-4-11
Harmonics IEC 61000-3-2
Flicker IEC 61000-3-3

Management
HP PCM+; IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; out-of-band management (RJ-45 Ethernet); SNMP Manager; Telnet; RMON1; FTP; in-line and out-of-band; out-of-band management (serial RS-232C or Micro USB)

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

HP 2920-24G-PoE+ Switch (J9727A)

Ports
20 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
4 RJ-45 dual-personality 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+)
2 module slots
1 Stacking module slot
1 Dual-personality (RJ-45 or USB micro-B)
1 USB 1.1
1 RJ-45 out-of-band management port

Power supplies
1 power supply slot
1 minimum power supply required includes: 1 x J9738A (HP X332 575W 100-240VAC to 54VDC Modular Power Supply)

Physical characteristics
Dimensions 17.42(w) x 13.23(d) x 1.75(h) in (44.25 x 33.6 x 4.45 cm) (1U height)
## QuickSpecs

### Technical Specifications

<table>
<thead>
<tr>
<th><strong>Weight</strong></th>
<th>12.04 lb (5.46 kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Memory and processor</strong></td>
<td>Tri Core ARM1176 @ 625 MHz, 512 MB SDRAM, 1 GB flash; packet buffer size: 11.25 MB (6.5 MB Dynamic Egress + 4.5 MB Ingress)</td>
</tr>
<tr>
<td><strong>Performance</strong></td>
<td></td>
</tr>
<tr>
<td>100 Mb Latency</td>
<td>&lt; 9.0 µs (FIFO 64-byte packets)</td>
</tr>
<tr>
<td>1000 Mb Latency</td>
<td>&lt; 3.3 µs (FIFO 64-byte packets)</td>
</tr>
<tr>
<td>10 Gbps Latency</td>
<td>&lt; 3.3 µs (FIFO 64-byte packets)</td>
</tr>
<tr>
<td>Throughput</td>
<td>95.2 million pps</td>
</tr>
<tr>
<td><strong>Switching capacity</strong></td>
<td>128 Gbps</td>
</tr>
<tr>
<td><strong>Routing table size</strong></td>
<td>2048 entries (IPv4), 256 entries (IPv6)</td>
</tr>
<tr>
<td><strong>MAC address table size</strong></td>
<td>16000 entries</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>32°F to 131°F (0°C to 55°C)</td>
</tr>
<tr>
<td>Operating relative humidity</td>
<td>15% to 95%, noncondensing</td>
</tr>
<tr>
<td>Non-operating/Storage temperature</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
</tr>
<tr>
<td>Non-operating/Storage relative humidity</td>
<td>15% to 95%, noncondensing</td>
</tr>
<tr>
<td><strong>Acoustic</strong></td>
<td></td>
</tr>
<tr>
<td>Altitude</td>
<td>up to 10,000 ft (3 km)</td>
</tr>
<tr>
<td><strong>Electrical characteristics</strong></td>
<td>Power: 61 dB, Pressure: 44.9 dB</td>
</tr>
<tr>
<td>Frequency</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td><strong>80plus.org Certification</strong></td>
<td>Silver</td>
</tr>
<tr>
<td>Maximum heat dissipation</td>
<td>358 BTU/hr (377.69 kJ/hr)</td>
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<tr>
<td><strong>Voltage</strong></td>
<td>100-240 VAC</td>
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<tr>
<td>Maximum power rating</td>
<td>475 W</td>
</tr>
<tr>
<td>Idle power</td>
<td>42 W</td>
</tr>
<tr>
<td>PoE power</td>
<td>370 W</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). 370 W of PoE+ power is available using the internal default power supply.</td>
</tr>
</tbody>
</table>

### Safety


### Emissions

FCC part 15 Class A; VCCI Class A; EN 55022/CISPR 22 Class A

### Immunity

EN 55024, CISPR 24
QuickSpecs

HP 2920 Switch Series

Technical Specifications

<table>
<thead>
<tr>
<th>ESD</th>
<th>IEC 61000-4-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiated</td>
<td>IEC 61000-4-3</td>
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<tr>
<td>EFT/Burst</td>
<td>IEC 61000-4-4</td>
</tr>
<tr>
<td>Surge</td>
<td>IEC 61000-4-5</td>
</tr>
<tr>
<td>Conducted</td>
<td>IEC 61000-4-6</td>
</tr>
<tr>
<td>Power frequency</td>
<td>IEC 61000-4-8</td>
</tr>
<tr>
<td>magnetic field</td>
<td></td>
</tr>
<tr>
<td>Voltage dips and</td>
<td>IEC 61000-4-11</td>
</tr>
<tr>
<td>interruptions</td>
<td></td>
</tr>
<tr>
<td>Harmonics</td>
<td>IEC 61000-3-2</td>
</tr>
<tr>
<td>Flicker</td>
<td>IEC 61000-3-3</td>
</tr>
</tbody>
</table>

Management

HP PCM+; IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; out-of-band management (RJ-45 Ethernet); SNMP Manager; Telnet; RMON1; FTP; in-line and out-of-band; out-of-band management (serial RS-232C or Micro USB)

Services

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

HP 2920-48G Switch (J9728A)

Ports

44 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
4 RJ-45 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)
2 module slots
1 Stacking module slot
1 Dual-personality (RJ-45 or USB micro-B)
1 USB 1.1
1 RJ-45 out-of-band management port

Power supplies

1 power supply slot
1 minimum power supply required
includes: 1 x J9739A (HP X331 165W 100-240VAC to 12VDC Modular Power Supply)

Physical characteristics

Dimensions: 17.42(w) x 13.23(d) x 1.75(h) in (44.25 x 33.6 x 4.45 cm) (1U height)
Weight: 11.95 lb (5.42 kg)

Memory and processor

Tri Core ARM1176 @ 625 MHz, 512 MB SDRAM, 1 GB flash; packet buffer size: 11.25 MB (6.75 MB Dynamic Egress + 4.5 MB Ingress)

Performance

100 Mb Latency: < 9.0 µs (FIFO 64-byte packets)
1000 Mb Latency: < 3.3 µs (FIFO 64-byte packets)
10 Gbps Latency: < 3.2 µs (FIFO 64-byte packets)
Throughput: 130.9 million pps
Switching capacity: 176 Gbps
Routing table size: 2048 entries (IPv4), 256 entries (IPv6)
MAC address table size: 16000 entries

Environment

Operating temperature: 32°F to 131°F (0°C to 55°C)
Operating relative humidity: 15% to 95%, noncondensing
Non-operating/Storage temperature: -40°F to 158°F (-40°C to 70°C)
Non-operating/Storage relative humidity: 15% to 95%, noncondensing
Altitude: up to 10,000 ft (3 km)
Acoustic
- Power: 57 dB
- Pressure: 41.8 dB

Electrical characteristics
- Frequency: 50/60 Hz
- 80plus.org Certification: Silver
- Maximum heat dissipation: 239 BTU/hr (252.15 kJ/hr)
- Voltage: 100-240 VAC
- Maximum power rating: 70 W
- Idle power: 27 W

Notes: Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.

Safety

Emissions
- FCC part 15 Class A; VCCI Class A; EN 55022/CISPR 22 Class A

Immunity
- EN 55024, CISPR 24
- ESD: IEC 61000-4-2
- Radiated: IEC 61000-4-3
- EFT/Burst: IEC 61000-4-4
- Surge: IEC 61000-4-5
- Conducted: IEC 61000-4-6
- Power frequency magnetic field: IEC 61000-4-8
- Voltage dips and interruptions: IEC 61000-4-11
- Harmonics: IEC 61000-3-2
- Flicker: IEC 61000-3-3

Management
- HP PCM+; IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; out-of-band management (RJ-45 Ethernet); SNMP Manager; Telnet; RMON1; FTP; in-line and out-of-band; out-of-band management (serial RS-232C or Micro USB)
## HP 2920 Switch Series

### HP 2920-48G-PoE+ Switch (J9729A)

**Ports**
- 44 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
- 4 RJ-45 dual-personality 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at Type 1000BASE-T, IEEE 802.3at PoE+)
- 2 module slots
- 1 Stacking module slot
- 1 Dual-personality (RJ-45 or USB micro-B)
- 1 USB 1.1
- 1 RJ-45 out-of-band management port

**Power supplies**
- 1 power supply slot
- 1 minimum power supply required
  - includes: 1 x J9738A (HP X332 575W 100-240VAC to 54VDC Modular Power Supply)

**Physical characteristics**
- **Dimensions**: 17.42(w) x 13.23(d) x 1.73(h) in (44.25 x 33.6 x 4.39 cm) (1U height)
- **Weight**: 12.57 lb (5.7 kg)

**Memory and processor**
- Tri Core ARM1176 @ 625 MHz, 512 MB SDRAM, 1 GB flash; packet buffer size: 11.25 MB (6.75 MB Dynamic Egress + 4.5 MB Ingress)

**Performance**
- **100 Mb Latency**: < 9.0 µs (FIFO 64-byte packets)
- **1000 Mb Latency**: < 3.2 µs (FIFO 64-byte packets)
- **10 Gbps Latency**: < 3.2 µs (FIFO 64-byte packets)
- **Throughput**: 130.9 million pps
- **Switching capacity**: 176 Gbps
- **Routing table size**: 2048 entries (IPv4), 256 entries (IPv6)
- **MAC address table size**: 16000 entries

**Environment**
- **Operating temperature**: 32°F to 131°F (0°C to 55°C)
- **Operating relative humidity**: 15% to 95%, noncondensing
- **Non-operating/Storage temperature**: -40°F to 158°F (-40°C to 70°C)
- **Non-operating/Storage relative humidity**: 15% to 95%, noncondensing
- **Altitude**: up to 10,000 ft (3 km)
- **Acoustic**
  - Power: 62 dB, Pressure: 45.2 dB

**Electrical characteristics**
- **Frequency**: 50/60 Hz
- **80plus.org Certification**: Silver
- **Maximum heat dissipation**: 399 BTU/hr (420.95 kJ/hr)
- **Voltage**: 100-240 VAC

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

<table>
<thead>
<tr>
<th><strong>Maximum power rating</strong></th>
<th>487 W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Idle power</strong></td>
<td>46 W</td>
</tr>
<tr>
<td><strong>PoE power</strong></td>
<td>370 W</td>
</tr>
</tbody>
</table>

**Notes**
- Idle power is the actual power consumption of the device with no ports connected.
- Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
- PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS).
- 370 W of PoE+ power is available using the internal default power supply.

### Safety

### Emissions
- FCC part 15 Class A; VCCI Class A; EN 55022/CISPR 22 Class A

### Immunity
<table>
<thead>
<tr>
<th><strong>EN</strong></th>
<th>EN 55024, CISPR 24</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ESD</strong></td>
<td>IEC 61000-4-2</td>
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<tr>
<td><strong>Radiated</strong></td>
<td>IEC 61000-4-3</td>
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<tr>
<td><strong>EFT/Burst</strong></td>
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<tr>
<td><strong>Conducted</strong></td>
<td>IEC 61000-4-6</td>
</tr>
<tr>
<td><strong>Power frequency magnetic field</strong></td>
<td>IEC 61000-4-8</td>
</tr>
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<td><strong>Voltage dips and interruptions</strong></td>
<td>IEC 61000-4-11</td>
</tr>
<tr>
<td><strong>Harmonics</strong></td>
<td>IEC 61000-3-2</td>
</tr>
<tr>
<td><strong>Flicker</strong></td>
<td>IEC 61000-3-3</td>
</tr>
</tbody>
</table>

### Management
- HP PCM+; IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; out-of-band management (RJ-45 Ethernet); SNMP Manager; Telnet; RMON1; FTP; in-line and out-of-band; out-of-band management (serial RS-232C or Micro USB)

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

### Standards and protocols
- **CPU DoS Protection**
- **Denial of service protection**
- **Device management**
  - RFC 1155 Structure and Mgmt Information (SMIPv1)
  - RFC 1157 SNMPv1/v2c
  - RFC 1591 DNS (client)
  - RFC 1901 (Community based SNMPv2)
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RFC 1901-1907 SNMPv2c, SMIv2 and Revised MIB-II
RFC 1908 (SNMP v1/2 Coexistence)
RFC 2578-2580 SMIv2
RFC 2579 (SMIv2 Text Conventions)
RFC 2580 (SMIv2 Conformance)
RFC 2819 (RMON groups Alarm, Event, History and Statistics only)
RFC 3416 (SNMP Protocol Operations v2)
RFC 3417 (SNMP Transport Mappings)
HTML and telnet management
HTTP, SSHv1, and Telnet
Multiple Configuration Files
Multiple Software Images
SNMP v3 and RMON RFC support
SSHv1/SSHv2 Secure Shell
TACACS/TACACS+
Web UI

General protocols
IEEE 802.1AX-2008 Link Aggregation
IEEE 802.1D MAC Bridges
IEEE 802.1p Priority
IEEE 802.1Q VLANs
IEEE 802.1s Multiple Spanning Trees
IEEE 802.1v VLAN classification by Protocol and Port
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.3ab 1000BASE-T
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3af Power over Ethernet
IEEE 802.3at PoE+
IEEE 802.3az Energy Efficient Ethernet
IEEE 802.3x Flow Control
RFC 768 UDP
RFC 783 TFTP Protocol (revision 2)
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 854 TELNET
RFC 868 Time Protocol
RFC 951 BOOTP
RFC 1058 RIPv1
RFC 1256 ICMP Router Discovery Protocol (IRDP)
RFC 1350 TFTP Protocol (revision 2)
RFC 1519 CIDsR
RFC 1542 BOOTP Extensions
RFC 2030 Simple Network Time Protocol (SNTP) v4
RFC 2131 DHCP
RFC 2236 IGMP Snooping
RFC 2453 RIPv2
RFC 2865 Remote Authentication Dial In User Service (RADIUS)
RFC 2866 RADIUS Accounting
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Technical Specifications

RFC 3046 DHCP Relay Agent Information Option
RFC 3412 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP) Applications
RFC 3413 Simple Network Management Protocol (SNMP) Applications
RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)
RFC 3416 Protocol Operations for SNMP
RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)
RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)
RFC 3576 Ext to RADIUS (CoA only)
RFC 4541 Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches
RFC 4675 RADIUS VLAN & Priority
RFC 4861 Neighbor Discovery for IP version 6 (IPv6)
RFC 4862 IPv6 Stateless Address Autoconfiguration
UDLD (Uni-directional Link Detection)

IP multicast
RFC 1112 IGMP
RFC 2236 IGMPv2
RFC 2710 Multicast Listener Discovery (MLD) for IPv6
RFC 3376 IGMPv3 (host joins only)
RFC 4541 Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches

IPv6
RFC 1981 IPv6 Path MTU Discovery
RFC 2460 IPv6 Specification
RFC 2710 Multicast Listener Discovery (MLD) for IPv6
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)
RFC 2925 Remote Operations MIB (Ping only)
RFC 3019 MLDv1 MIB
RFC 3315 DHCPv6 (client and relay)
RFC 3513 IPv6 Addressing Architecture
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<td>HP 0.5 m PremierFlex OM3+ LC/LC Optical Cable</td>
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<td>HP 1 m PremierFlex OM3+ LC/LC Optical Cable</td>
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<td>HP 5 m PremierFlex OM3+ LC/LC Optical Cable</td>
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<tr>
<td>HP 30 m PremierFlex OM3+ LC/LC Optical Cable</td>
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<td><strong>NEW</strong> HP 2920 0.5m Stacking Cable</td>
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<td><strong>NEW</strong> HP 2920 1.0m Stacking Cable</td>
<td>J9735A</td>
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<td><strong>NEW</strong> HP 2920 3.0m Stacking Cable</td>
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<td><strong>Mounting Kit</strong></td>
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<tr>
<td><strong>NEW</strong> HP X331 165W 100-240VAC to 12VDC Modular Power Supply</td>
<td>J9739A</td>
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<td><strong>HP 2920-24G-PoE+ Switch</strong></td>
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<tr>
<td><strong>NEW</strong> HP X332 575W 100-240VAC to 54VDC Modular Power Supply</td>
<td>J9738A</td>
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<td><strong>HP 2920-48G Switch</strong></td>
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<td><strong>NEW</strong> HP X332 575W 100-240VAC to 54VDC Modular Power Supply</td>
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**NOTE:** Details are not available for all accessories. The following specifications were available at the time of publication.

### HP 0.5 m Multimode OM3 LC/LC Optical Cable
(AJ833A)

<table>
<thead>
<tr>
<th>Cabling</th>
<th>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</th>
</tr>
</thead>
</table>
| Notes   | **Maximum distance:** 10Gbps Transfer Rate (Ethernet): 300m  
Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.  
- Dimensions: Core diameter: 50 ± 3.0µm Cladding diameter: 125 ± 2.0µm  
  Coating diameter: 245 ± 10µm  
- Optical glass: Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.  
- Optical glass: Bandwidth: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links.  
- CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber and designed to work in both the 850 and 1300 nm wavelength windows.  
- BULK CABLE & CABLE ASSEMBLY CONFIGURATION:  
  - Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.  
  - Jacket Color: Aqua for OM3 multimode per TIA 598  
  - Boot Color: White  
  - Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.  
  - Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46.  
  - Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg |

### Services
Refer to the HP website at [www.hp.com/networking/services](http://www.hp.com/networking/services) for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
**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.
- BULK CABLE & CABLE ASSEMBLY CONFIGURATION:
  - Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.
  - Jacket Color: Aqua for OM3 multimode per TIA 598
  - Boot Color: White
  - Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.
  - Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46.
  - Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg

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

**Accessory Product Details**

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

**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.
- **BULK CABLE & CABLE ASSEMBLY CONFIGURATION:**
  - Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.
  - Jacket Color: Aqua for OM3 multimode per TIA 598
  - Boot Color: White
  - Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.
  - Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46.
  - Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg

**Services**

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

Accessory Product Details

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

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: This specification defines the detail requirements for a tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.

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

Services

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

**HP 15 m Multimode OM3 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:**
10Gbps Transfer Rate (Ethernet): 300m

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

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

### Services
Refer to the HP website at [www.hp.com/networking/services](http://www.hp.com/networking/services) for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
### HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)

**Cabling**

**Cable type:**
50/125 µm (core/cladding) diameter, 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 HP website at [www.hp.com/networking/services](http://www.hp.com/networking/services) for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
**Cabling**

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

- **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 HP website at [www.hp.com/networking/services](http://www.hp.com/networking/services) for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
### HP 0.5 m PremierFlex OM3+ LC/LC Optical Cable (BK837A)

**Notes**
- Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.
- Core diameter: 50um ± 3um; Cladding diameter: 125um ± 2um; Coating diameter: 245 ± 10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade - Low Smoke Zero Halogen (LSZH) thermoplastic.
- Boot Color: White
- Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
- Insertion Loss: less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46

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

### HP 1 m PremierFlex OM3+ LC/LC Optical Cable (BK838A)

**Notes**
- Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.
- Core Diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ±10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310 nm @ 23°C as tested in accordance with EIA 455-45

**Services**
- Refer to the HP website at [www.hp.com/networking/services](http://www.hp.com/networking/services) for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
## Accessory Product Details

### HP 2 m PremierFlex OM3+ LC/LC Optical Cable

**Notes**

- **Cable Specs**: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.
  - Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um
  - Bandwidth: 3000 MHz-km @ 850nm (Laser)
  - Jacket Color: Blue
  - Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
  - Boot Color: White
  - Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
  - Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
  - Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

**Services**

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

### HP 5 m PremierFlex OM3+ LC/LC Optical Cable

**Notes**

- **Cable Specs**: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.
  - Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um
  - Bandwidth: 3000 MHz-km @ 850nm (Laser)
  - Jacket Color: Blue
  - Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
  - Boot Color: White
  - Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
  - Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
  - Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

**Services**

Refer to the HP website at [www.hp.com/networking/services](http://www.hp.com/networking/services) for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
### HP 15 m PremierFlex OM3+ LC/LC Optical Cable
(BK841A)

**Notes**

- Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.
- Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

**Services**

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

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### HP 30 m PremierFlex OM3+ LC/LC Optical Cable
(BK842A)

**Notes**

- Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.
- Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

**Services**

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

#### HP 50 m PremierFlex OM3+ LC/LC Optical Cable (BK843A)

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

- Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Boot Color: White
- Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

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

The rack mounting kit supports the 1U, full width switches in the following switch series and the power supply: V1810 Series, E2510 Series, E2520 Series, E2610 Series, E2810 Series, E2910 Series, E3500 Series, and the E620 Power Supply.

This universal rack mounting kit is design to fit the following racks: HP 10K 10642, HP 10K 10842, Panduit CN, Panduit CS, Wrightline Vantage 52, APC Netshelter 600mm, and APC Netshelter 800mm. It may well fit many other brands and models too.

#### HP Identity Driven Manager 3.0 Software—500-User License (J9438A)

Identity Driven Manager 3.0 software and license for managing up to 500 users.

**RADIUS server support**
- Microsoft Internet Authentication Service (IAS) on Windows Server 2003 (32-bit)
- FreeRADIUS supplied with Red Hat Enterprise Linux (4.7 and 5.2)
- RADIUS on the Network Access Controller 800
- FreeRADIUS supplied with SuSE Linux Enterprise Server (9.3 and 10.2)

**Features**
- Intuitive Explorer-style interface
- OpenView NNM integration
- Application of policies by user identity
  - Auto VLAN assignment
  - Auto set quality of service by user
  - Auto set bandwidth assignment by user

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**Services**

Refer to the HP website at [www.hp.com/networking/services](http://www.hp.com/networking/services) for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
Rule-based access rights deployment

Dynamic rights assignment based on:
- Time
- Location
- User system

Auto-discovery of:
- RADIUS servers
- Realms
- Users

**Notes**
Additional specifications
- Supports environments with up to 10,000 users.
- Supports up to 10 RADIUS servers with HP Identity Driven Manager agents installed.

Requires the HP PCM Plus 3.0 or greater network management platform.
- Please see HP PCM Plus 3.0 for hardware and software system requirements.

**Services**
3-Year, 9x5 SW phone support, software updates (UQ124E)
3-year, 24x7 SW phone support, software updates (UQ125E)

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

<table>
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<tr>
<th>HP Identity Driven Manager 3.0 Software—Additional 1,000-User License (J9440A)</th>
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- Supports environments with up to 10,000 users.
- Supports up to 10 RADIUS servers with HP Identity Driven Manager agents installed.

Requires the HP PCM Plus 3.0 or greater network management platform.
- Please see HP PCM Plus 3.0 for hardware and software system requirements. Requires the HP Identity Driven Manager 3.0 base product (J9438A).

Multiple licenses for additional 1,000 users can be added to the base HP Identity Driven Manager product to support larger numbers of users.
Accessory Product Details

**Services**
- 3-year, 24x7 SW phone support, software updates (UQ119E)
- 3-Year, 9x5 SW phone support, software updates (UQ118E)

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

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**HP Identity Driven Manager 3.0 Software—Unlimited-User License (J9439A)**

**Identity Driven Manager 3.0 software and license for managing an unlimited number of users.**

**RADIUS server support**
- Microsoft Internet Authentication Service (IAS) on Windows Server 2003 (32-bit)
- FreeRADIUS supplied with Red Hat Enterprise Linux (4.7 and 5.2)
- RADIUS on the Network Access Controller 800
- FreeRADIUS supplied with SuSE Linux Enterprise Server (9.3 and 10.2)

**Features**
- Intuitive Explorer-style interface
- OpenView NNM integration
- Application of policies by user identity
  - Auto VLAN assignment
  - Auto set quality of service by user
  - Auto set bandwidth assignment by user

Rule-based access rights deployment

Dynamic rights assignment based on:
- Time
- Location
- User system

Auto-discovery of:
- RADIUS servers
- Realms
- Users

**Notes**

Additional specifications
- Supports environments with up to 10,000 users.
- Supports up to 10 RADIUS servers with HP Identity Driven Manager agents installed.

Requires the HP PCM Plus 3.0 or greater network management platform.

Please see HP PCM Plus 3.0 for hardware and software system requirements.

**Services**
- 3-year, 24x7 SW phone support, software updates (UQ133E)
- 3-Year, 9x5 SW phone support, software updates (UQ132E)

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

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

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