## Overview

## HPE 5500 EI Switch Series

## Models

| | |
|---|---|
| HP 5500-24G EI Switch with 2 Interface Slots | JD377A |
| HP 5500-48G EI Switch with 2 Interface Slots | JD375A |
| HP 5500-24G-SFP EI Switch with 2 Interface Slots | JD374A |
| HP 5500-48G-PoE+ EI Switch with 2 Interface Slots | JG240A |
| HP 5500-24G-PoE+ EI Switch with 2 Interface Slots | JG241A |

## Key features

- High expandability for investment protection
- Premium security and integrated management
- Multilayer reliability
- Convergence-ready support
- Outstanding Quality of Service (QoS)

## Product overview

These Gigabit Ethernet switches deliver outstanding security, reliability, and multiservice support capabilities for robust switching at the edge or aggregation layer of large enterprise and campus networks, or in the core layer of SMB networks. The HPE 5500 EI Switch Series is comprised of Layer 2/3 Gigabit Ethernet switches that can accommodate the most demanding applications and provide resilient and secure connectivity as well as the latest traffic prioritization technologies to enhance applications on convergent networks. With complete IPv4/IPv6 dual-stack support, the series provides a migration path from IPv4 to IPv6 and has hardware support for IPv6. Designed for increased flexibility, these switches are available with 24 or 48 Gigabit Ethernet ports. Power over Ethernet (PoE) and non-PoE models are available with optional GbE and 10GbE expansion capability. The all-fiber model with dual power supplies is ideal for applications that require the highest availability.

## Features and benefits

### Software-defined networking

- **OpenFlow**
  supports OpenFlow 1.0 and 1.3 specifications to enable SDN by allowing separation of the data (packet forwarding) and control (routing decision) paths

**Quality of Service** (QoS)

- **Storm restraint**: allows limitation of broadcast, multicast, and unknown unicast traffic rate to cut down on unwanted broadcast traffic on the network
- **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 bi-directional selected traffic on a per-port, per-VLAN, or whole switch basis
- **Powerful QoS feature**: creates traffic classes based on ACLs, IEEE 802.1p precedence, IP, DSCP or ToS precedence; supports filter, redirect, mirror, or remark; supports the following congestion actions: strict priority queuing (SP), weighted round robin (WRR), SP+WRR, weighted fair queuing (WFQ), and weighted random early discard (WRED)

## Overview

- **Traffic policing**: supports Committed Access Rate (CAR) and line rate

**Management**

- **Friendly port names**: allow assignment of descriptive names to ports
- **Remote configuration and management**: is available through a secure Web browser or a CLI
- **Manager and operator privilege levels**: enable read-only (operator) and read-write (manager) access on CLI and Web browser management interfaces
- **Command authorization**: leverages HWTACACS to link a custom list of CLI commands to an individual network administrator's login; also provides an audit trail
- **Secure Web GUI**: provides a secure, easy-to-use graphical interface for configuring the module via HTTPS
- **Dual flash images**: provide independent primary and secondary operating system files for backup while upgrading
- **Multiple configuration files**: can be stored to the flash image
- **Complete session logging**: provides detailed information for problem identification and resolution
- **SNMPv1, v2c, and v3**: facilitate centralized discovery, monitoring, and secure management of networking devices
- **Remote monitoring** (RMON): uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group
- **IEEE 802.1AB Link Layer Discovery Protocol** (LLDP): advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications
- **sFlow** (RFC 3176): provides scalable ASIC-based wirespeed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes
- **Management VLAN**: segments traffic to and from management interfaces, including CLI/telnet, a Web browser interface, and SNMP
- **Remote Intelligent Mirroring**: mirrors ingress/egress ACL-selected traffic from a switch port or VLAN to a local or remote switch port anywhere on the network
- **Device Link Detection Protocol** (DLDP): monitors a cable between two switches and shuts down the ports on both ends if the cable is broken, preventing network problems such as loops
- **IPv6 management**: provides future-proof networking because the switch is capable of being managed whether the attached network is running IPv4 or IPv6; supports pingv6, tracertv6, Telnetv6, TFTPv6, DNSv6, syslogv6, FTPv6, SNMPv6, DHCPv6, and RADIUS for IPv6
- **Troubleshooting**: ingress and egress port monitoring enable network problem solving; virtual cable tests provide visibility into cable problems
- **In-Service Software Upgrade** (ISSU): enables operators to perform upgrades in the shortest possible amount of time with minimal risk to network operations or traffic disruptions

**Connectivity**

- **Auto-MDIX**: automatically adjusts for straight-through or crossover cables on all 10/100/1000 ports
- **Flow control**: provides back pressure using standard IEEE 802.3x, reducing congestion in heavy traffic situations
- **Jumbo packet support**: supports up to 9216-byte frame size to improve the performance of large data transfers
- **Optional 10 GbE ports**: deliver, through the use of optional modules, additional 10GbE connections, which are available for uplinks or high-bandwidth server connections; flexibly support copper, XFP, SFP+, or CX4 local connections
- **High-density port connectivity**: provides up to 48 fixed 10/100/1000BASE-T or 24 SFP 100/1000BASE-X ports in a Layer 2/Layer 3 stackable switch supporting unique IRF stacking
- **IEEE 802.3at Power over Ethernet** (PoE+) **support**: simplifies deployment and dramatically reduces installation costs by helping to eliminate the time and cost involved in supplying local power at each access point location
- **Ethernet operations, administration and maintenance (OAM):** detects data link layer problems that occurred in the "last mile" using the IEEE 802.3ah OAM standard; monitors the status of the link between two devices

## Overview

- **High-bandwidth CX4 and SFP+ local stacking**: provide 10 Gb/s SPF+ or 12 Gb/s CX4 local stacking cables; achieve a resilient stacking configuration

### Performance

- **Nonblocking architecture**
  up to 192 Gb/s nonblocking switching fabric provides wire-speed switching with up to 143 million pps throughput
- **Hardware-based wirespeed access control lists (ACLs)**
  help provide high levels of security and ease of administration without impacting network performance with a feature-rich TCAM-based ACL implementation

### Resiliency and high availability

- **Separate data and control paths**: keeps control separated from services and keeps service processing isolated; increases security and performance
- **External redundant power supply**: provides high reliability
- **Smart link**: allows 50 ms failover between links
- **Spanning Tree/MSTP, RSTP**: provides redundant links while preventing network loops
- **Rapid Ring Protection Protocol** (RRPP): connects multiple switches in a high-performance ring using standard Ethernet technology; traffic can be rerouted around the ring in less than 50 ms, reducing the impact on traffic and applications
- **Virtual Router Redundancy Protocol** (VRRP): allows a group of routers to dynamically back each other up to create highly available routed environments
- **Intelligent Resilient Fabric** (IRF): creates virtual resilient switching fabrics, where two or more switches perform as a single L2 switch and L3 router; switches do not have to be co-located and can be part of a disaster recovery system; servers or switches can be attached using standard LACP for automatic load balancing and high availability; can eliminate the need for complex protocols like Spanning Tree Protocol, Equal-Cost Multipath (ECMP), or VRRP, thereby simplifying network operation
- **IP Fast Reroute** (FRR): forms backup paths and allows 50 ms switchover in case of a main path fault

### Layer 2 switching

- **32K MAC addresses**: provide access to many Layer 2 devices
- **IEEE 802.1ad QinQ and Selective QinQ**: increase the scalability of an Ethernet network by providing a hierarchical structure; connect multiple LANs on a high-speed campus or metro network
- **GARP VLAN Registration Protocol**: allows automatic learning and dynamic assignment of VLANs
- **IEEE 802.1ad QinQ**: increases the scalability of an Ethernet network by providing a hierarchical structure; connects multiple LANs on a high-speed campus or metro network
- **10 GbE port aggregation**: allows grouping of ports to increase overall data throughput to a remote device
- **Internet Group Management Protocol** (IGMP) **and Multicast Listener Discovery** (MLD) **protocol snooping**: effectively control and manage the flooding of multicast packets in a Layer 2 network

### Layer 3 services

- **Address Resolution Protocol** (ARP): determines the MAC address of another IP host in the same subnet
- **Dynamic Host Configuration Protocol** (DHCP): simplifies the management of large IP networks and supports client and server; DHCP Relay enables DHCP operation across subnets
- **Loopback interface address**: defines an address in Routing Information Protocol (RIP) and Open Standard Path First (OSPF), improving diagnostic capability
- **User Datagram Protocol** (UDP) **helper function**: allows UDP broadcasts to be directed across router interfaces to

## Overview

specific IP unicast or subnet broadcast addresses and prevents server spoofing for UDP services such as DHCP
- **Route maps**: provide more control during route redistribution; allow filtering and altering of route metrics

**Layer 3 routing**

- **IPv4 routing protocols**: support static routes, RIP, OSPF, ISIS, and BGP
- **IPv6 routing protocols**: provide routing of IPv6 at wire speed; support static routes, RIPng, OSPFv3, IS-ISv6, and BGP4+ for IPv6
- **Equal-Cost Multipath** (ECMP): enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth
- **Policy-based routing**: makes routing decisions based on policies set by the network administrator
- **IGMPv1, v2, and v3**: allow individual hosts to be registered on a particular VLAN
- **PIM-SSM, PIM-DM, and PIM-SM** (for IPv4 and IPv6): support IP Multicast address management and inhibition of DoS attacks
- **IPv6 tunneling**: allows a smooth transition from IPv4 to IPv6 by encapsulating IPv6 traffic over an existing IPv4 infrastructure
- **Unicast Reverse Path Forwarding** (uRPF): is defined by RFC 3704 and limits erroneous or malicious traffic
- **Bidirectional Forwarding Detection** (BFD): enables link connectivity monitoring and reduces network convergence time for RIP, OSPF, BGP, IS-IS, VRRP, and IRF

**Security**

- **Access control lists** (ACLs): provide IP Layer 2 to Layer 4 traffic filtering; support global ACL, VLAN ACL, port ACL, and IPv6 ACL. Up to 3072 ingress ACLs and 448 egress ACLs are supported.
- **IEEE 802.1X**: is an industry-standard method of user authentication that uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server
- **MAC-based authentication**: authenticates the client with the RADIUS server based on the client's MAC address
- **Identity-driven security and access control**:
    - **Per-user ACLs**: permit or deny user access to specific network resources based on user identity and time of day, allowing multiple types of users on the same network to access specific network services without risking network security or providing unauthorized access to sensitive data
    - **Automatic VLAN assignment**: automatically assigns users to the appropriate VLAN based on their identities
- **Secure management access**: securely encrypts all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3
- **Secure FTP**: allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **Guest VLAN**: provides a browser-based environment to authenticated clients that is similar to IEEE 802.1X
- **Endpoint Admission Defense** (EAD): provides security policies to users accessing a network
- **Port security**: allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **Port isolation**: secures and adds privacy, and prevents malicious attackers from obtaining user information
- **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 attack or configuration mistakes
- **DHCP protection**: blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- **Dynamic ARP protection**: blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- **IP source guard**: helps prevent IP spoofing attacks
- **RADIUS/HWTACACS**: eases switch management security administration by using a password authentication server
- **Multiple Customer Edge** (MCE): facilitates MPLS VPN network integration with up to 64 VPNs support

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- **Unicast Reverse Path Forwarding** (URPF): allows normal packets to be forwarded correctly, whereas the attaching packet will be discarded due to lack of reverse path route or incorrect inbound interface; prevents source spoofing and distributed attacks; supports distributed URPF

**Convergence**

- **IEEE 802.1AB Link Layer Discovery Protocol** (LLDP): facilitates easy mapping using network management applications with LLDP automated device discovery protocol
- **LLDP-MED**: is a standard extension that automatically configures network devices, including LLDP-capable IP phones
- **LLDP-CDP compatibility**: receives and recognizes CDP packets from Cisco's IP phones for seamless interoperation
- **IEEE 802.3af Power over Ethernet**: provides up to 15.4 W per port to PoE-powered devices such as IP phones, wireless access points, and video cameras
- **PoE allocations**: supports multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user-specified) to allocate PoE power for more efficient energy savings
- **Voice VLAN**: automatically assigns VLAN and priority for IP phones, simplifying network configuration and maintenance
- **IP multicast snooping** (data-driven IGMP): prevents flooding of IP multicast traffic
- **Internet Group Management Protocol** (IGMP): utilizes Any-Source Multicast (ASM) or Source-Specific Multicast (SSM) to manage IPv4 multicast networks; supports IGMPv1, v2, and v3
- **Protocol Independent Multicast** (PIM): defines modes of Internet multicasting to allow one-to-many and many-to-many transmission of information; supports PIM Dense Mode (DM), Sparse Mode (SM), and Source-Specific Mode (SSM)
- **Multicast Source Discovery Protocol** (MSDP): allows multiple PIM-SM domains to interoperate; is used for inter-domain multicast applications
- **Multicast Border Gateway Protocol** (MBGP): allows multicast traffic to be forwarded across BGP networks and kept separate from unicast traffic
- **Multicast VLAN**: allows multiple VLANs to receive the same IPv4 or IPv6 multicast traffic, lessening network bandwidth demand by reducing or eliminating multiple streams to each VLAN

**Device support**

- **Cisco prestandard PoE support**: detects and provides power to Cisco's prestandard PoE devices such as wireless LAN access points and IP phones

**Additional information**

- **Green IT and power**: use the latest advances in silicon development, shut off unused ports, and use variable-speed fans to improve energy efficiency
- **Green initiative support**: provides support for RoHS and WEEE regulations

**Warranty and support**

- **Limited Lifetime Warranty**
  see **http://www.hpe.com/networking/warrantysummary** for warranty and support information included with your product purchase.
- **Software releases**
  to find software for your product, refer to **http://www.hpe.com/networking/support**; for details on the software releases available with your product purchase, refer to **http://www.hpe.com/networking/warrantysummary**

## Configuration

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

### Switch Chassis

HP 5500-24G EI Switch — JD377A

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 dual-personality ports; autosensing10/100/1000Base-T or SFP
- min=0 \ max=4 SFP Transceivers
- 2 port expansion module slots
- Power Supply included
- 1U - Height

See Configuration **NOTE:**1, 3

PDU CABLE NA/MEX/TW/JP — JD377A#B2B

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

PDU CABLE ROW — JD377A#B2C

- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord — JD377A#B2E

- NEMA L6-20P Cord (NA/MEX/JP/TW)

HP 5500-24G-SFP EI Switch — JD374A

- 24 fixed Gigabit Ethernet SFP ports
- (Of the 24, 8 are dual-personality ports; autosensing 10/100/1000Base-T or SFP)
- min=0 \ max=2432 SFP Transceivers
- 2 - port expansion module slots
- 1 - JD362A - HP 5500 150WAC Power Supply Included
- 1U - Height

See Configuration **NOTE:**1, 3

PDU CABLE NA/MEX/TW/JP — JD374A#B2B

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

PDU CABLE ROW — JD374A#B2C

- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord — JD374A#B2E

## Configuration

- NEMA L6-20P Cord (NA/MEX/JP/TW)

HP 5500-24G-PoE+ EI Switch w/2 Intf Slts — JG241A
- 24 RJ-45 autosensing 10/100/1000 PoE+ports
- 4 dual-personality ports; autosensing 10/100/1000Base-T or SFP
- min=0 \ max=4 SFP Transceivers
- 2 port expansion module slots
- Power Supply included
- 1U - Height

See Configuration **NOTE:**1, 3

PDU CABLE NA/MEX/TW/JP — JG241A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU CABLE ROW — JG241A#B2C
- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord — JG241A#B2E
- NEMA L6-20P Cord (NA/MEX/JP/TW)

HP 5500-48G EI Switch — JD375A
- 48 RJ-45 autosensing 10/100/1000 ports
- 4 dual-personality ports; autosensing 10/100/1000Base-T or SFP
- min=0 \ max=4 SFP Transceivers
- 2 port expansion module slots
- Power Supply included
- 1U - Height

See Configuration **NOTE:**1, 3

PDU CABLE NA/MEX/TW/JP — JD375A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU CABLE ROW — JD375A#B2C
- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord — JD375A#B2E
- NEMA L6-20P Cord (NA/MEX/JP/TW)

HP 5500-48G-PoE+ EI Switch w/2 Intf Slts — JG240A
- 48 RJ-45 autosensing 10/100/1000 PoE+ ports

See

## Configuration

- 4 dual-personality ports; autosensing 10/100/1000Base-T or SFP
- min=0 \ max=4 SFP Transceivers
- 2 port expansion module slots
- Power Supply included
- 1U - Height

Configuration **NOTE:**1, 3

PDU CABLE NA/MEX/TW/JP JG240A#B2B

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

PDU CABLE ROW JG240A#B2C

- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord JG240A#B2E

- NEMA L6-20P Cord (NA/MEX/JP/TW)

Configuration Rules:

Note 1 The following Transceivers install into this Switch

| | |
|---|---|
| HP X120 1G SFP LC SX Transceiver | JD118B |
| HP X120 1G SFP LC LX Transceiver | JD119B |
| HP X120 1G SFP LC BX 10-U Transceiver | JD098B |
| HP X120 1G SFP LC BX 10-D Transceiver | JD099B |
| HP X125 1G SFP LC LH40 1310nm Transceiver | JD061A |
| HP X120 1G SFP LC LH40 1550nm Transceiver | JD062A |
| HP X125 1G SFP LC LH70 Transceiver | JD063B |
| HP X115 100M SFP LC FX Transceiver | JD102B |
| HP X110 100M SFP LC LX Transceiver | JD120B |
| HP X110 100M SFP LC LH40 Transceiver | JD090A |
| HP X110 100M SFP LC LH80 Transceiver | JD091A |
| HP X120 1G SFP RJ45 T Transceiver | JD089B |

Note 3 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) or #B2E. (See Localization Menu)

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

## Configuration

## Box Level Integration CTO Models

### CTO Solution Sku

HP 55xx CTO Switch Solution — JG506A
- SSP trigger sku

### CTO Base Sku

HP 5500-24G EI Switch - CTO — JD377A
- 24 RJ-45 autosensing 10/100/1000 ports — See Configuration
- 4 dual-personality ports; autosensing 10/100/1000Base-T or SFP — **NOTE:**1, 3, 6,7
- min=0 \ max=4 SFP Transceivers
- 2 - port expansion module slots
- Power Supply Included
- 1U - Height

PDU Cable NA/MEX/TW/JP — JD377A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW — JD377A#B2C
- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord — JD377A#B2E
- NEMA L6-20P Cord (NA/MEX/JP/TW)

HP 5500-24G-SFP EI Switch - CTO — JD374A
- 24 fixed Gigabit Ethernet SFP ports — See Configuration
- 8 dual-personality ports; autosensing 10/100/1000Base-T or SFP — **NOTE:**1, 3, 6,7
- min=0 \ max=32 SFP Transceivers
- 2 - port expansion module slots
- 1 - JD362A - HP 5500 150WAC Power Supply Included
- 1U - Height

PDU Cable NA/MEX/TW/JP — JD374A#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW — JD374A#B2C
- C15 PDU Jumper Cord (ROW)

## Configuration

| | |
|---|---|
| High Volt Switch to Wall Power Cord<br>• NEMA L6-20P Cord (NA/MEX/JP/TW) | JD374A#B2E |
| HP 5500-24G-PoE+ EI Switch w/2 Intf Slts - CTO<br>• 24 RJ-45 autosensing 10/100/1000 PoE+ ports<br>• 4 dual-personality ports; autosensing10/100/1000Base-T or SFP<br>• min=0 \ max=4 SFP Transceivers<br>• 2 - port expansion module slots<br>• Power Supply included<br>• 1U - Height | JG241A<br>See Configuration<br>**NOTE:**1, 3, 6,7 |
| PDU Cable NA/MEX/TW/JP<br>• C15 PDU Jumper Cord (NA/MEX/TW/JP) | JG241A#B2B |
| PDU Cable ROW<br>• C15 PDU Jumper Cord (ROW) | JG241A#B2C |
| High Volt Switch to Wall Power Cord<br>• NEMA L6-20P Cord (NA/MEX/JP/TW) | JG241A#B2E |
| HP 5500-48G EI Switch - CTO<br>• 48 RJ-45 autosensing 10/100/1000 ports<br>• 4 dual-personality ports; autosensing10/100/1000Base-T or SFP<br>• min=0 \ max=4 SFP Transceivers<br>• 2 - port expansion module slots<br>• Power Supply included<br>• 1U - Height | JD375A<br>See Configuration<br>**NOTE:**1, 3, 6,7 |
| PDU Cable NA/MEX/TW/JP<br>• C15 PDU Jumper Cord (NA/MEX/TW/JP) | JD375A#B2B |
| PDU Cable ROW<br>• C15 PDU Jumper Cord (ROW) | JD375A#B2C |
| High Volt Switch to Wall Power Cord<br>• NEMA L6-20P Cord (NA/MEX/JP/TW) | JD375A#B2E |

## Configuration

HP 5500-48G-PoE+ EI Switch w/2 Intf Slts - CTO — JG240A

- 48 RJ-45 autosensing 10/100/1000 PoE+ ports — See Configuration
- 4 dual-personality ports; autosensing10/100/1000Base-T or SFP — **NOTE:**1, 3, 6,7
- min=0 \ max=4 SFP Transceivers
- 2 - port expansion module slots
- Power Supply included
- 1U - Height

PDU Cable NA/MEX/TW/JP — JG240A#B2B

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

PDU Cable ROW — JG240A#B2C

- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord — JG240A#B2E

- NEMA L6-20P Cord (NA/MEX/JP/TW)

Configuration Rules:

Note 1 The following Transceivers install into this Switch : (Use #0D1 if switch is CTO)

| | |
|---|---|
| HP X120 1G SFP LC SX Transceiver | JD118B |
| HP X120 1G SFP LC LX Transceiver | JD119B |
| HP X120 1G SFP LC BX 10-U Transceiver | JD098B |
| HP X120 1G SFP LC BX 10-D Transceiver | JD099B |
| HP X125 1G SFP LC LH40 1310nm Transceiver | JD061A |
| HP X120 1G SFP LC LH40 1550nm Transceiver | JD062A |
| HP X125 1G SFP LC LH70 Transceiver | JD063B |
| HP X115 100M SFP LC FX Transceiver | JD102B |
| HP X110 100M SFP LC LX Transceiver | JD120B |
| HP X110 100M SFP LC LH40 Transceiver | JD090A |
| HP X110 100M SFP LC LH80 Transceiver | JD091A |
| HP X120 1G SFP RJ45 T Transceiver | JD089B |

Note 3 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) or #B2E. (See Localization Menu)

Note 6 If this Switch is selected, Then a Minimum of 1 factory integrated accessory must be ordered and integrated to CTO chassis. See Menu below, option must have a #0D1 to be integrated to the CTO Chassis.

Note 7 If the Switch Chassis is to be Box Level Factory Integrated (CTO), Then the #0D1 is required on the Switch Chassis and integrated to the JG506A - HP 55xx CTO Enablement. (Min 1/Max 1 Switch per SSP)

## Configuration

Remark:

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

## Rack Level Integration CTO Models

### Switch Chassis

HP 5500-24G EI Switch — JD377A

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 dual-personality ports; autosensing 10/100/1000Base-T or SFP
- min=0 \ max=4 SFP Transceivers
- 2 port expansion module slots
- Power Supply included
- 1U - Height

See Configuration
**NOTE:**1, 3, 10

PDU CABLE NA/MEX/TW/JP — JD377A#B2B

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

PDU CABLE ROW — JD377A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5500-24G-SFP EI Switch — JD374A

- 24 fixed Gigabit Ethernet SFP ports
- (Of the 24, 8 are dual-personality ports; autosensing 10/100/1000Base-T or SFP)
- min=0 \ max=2432 SFP Transceivers
- 2 port expansion module slots
- 1 - JD362A - HP 5500 150WAC Power Supply Included
- 1U - Height

See Configuration
**NOTE:**1, 3, 10

PDU CABLE NA/MEX/TW/JP — JD374A#B2B

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

PDU CABLE ROW — JD374A#B2C

## Configuration

- C15 PDU Jumper Cord (ROW)

HP 5500-24G-PoE+ EI Switch w/2 Intf Slts — JG241A

- 24 RJ-45 autosensing 10/100/1000 PoE+ports — See Configuration
- 4 dual-personality ports; autosensing 10/100/1000Base-T or SFP — **NOTE:**1, 3, 10
- min=0 \ max=4 SFP Transceivers
- 2 port expansion module slots
- Power Supply included
- 1U - Height

PDU CABLE NA/MEX/TW/JP — JG241A#B2B

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

PDU CABLE ROW — JG241A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5500-48G EI Switch — JD375A

- 48 RJ-45 autosensing 10/100/1000 ports — See Configuration
- 4 dual-personality ports; autosensing10/100/1000Base-T or SFP — **NOTE:**1, 3, 10
- min=0 \ max=4 SFP Transceivers
- 2 port expansion module slots
- Power Supply included
- 1U - Height

PDU CABLE NA/MEX/TW/JPC — JD375A#B2B

- 15 to C14 Jumper Cord (NA)

PDU CABLE ROW — JD375A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5500-48G-PoE+ EI Switch w/2 Intf Slts — JG240A

- 48 RJ-45 autosensing 10/100/1000 PoE+ports — See Configuration
- 4 dual-personality ports; autosensing10/100/1000Base-T or SFP — **NOTE:**1, 3, 10
- min=0 \ max=4 SFP Transceivers
- 2 port expansion module slots
- Power Supply included
- 1U - Height

## Configuration

PDU CABLE NA/MEX/TW/JP JG240A#B2B

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

PDU CABLE ROW JG240A#B2C

- C15 PDU Jumper Cord (ROW)

Configuration Rules:

Note 1 The following Transceivers install into this Switch: (Use #0D1 if switch is CTO)

| | |
|---|---|
| HP X120 1G SFP LC SX Transceiver | JD118B |
| HP X120 1G SFP LC LX Transceiver | JD119B |
| HP X120 1G SFP LC BX 10-U Transceiver | JD098B |
| HP X120 1G SFP LC BX 10-D Transceiver | JD099B |
| HP X125 1G SFP LC LH40 1310nm Transceiver | JD061A |
| HP X120 1G SFP LC LH40 1550nm Transceiver | JD062A |
| HP X125 1G SFP LC LH70 Transceiver | JD063B |
| HP X115 100M SFP LC FX Transceiver | JD102B |
| HP X110 100M SFP LC LX Transceiver | JD120B |
| HP X110 100M SFP LC LH40 Transceiver | JD090A |
| HP X110 100M SFP LC LH80 Transceiver | JD091A |
| HP X120 1G SFP RJ45 T Transceiver | JD089B |

Note 3 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) . (See Localization Menu)
REMARK: When Switches/Routers are Factory Racked, Then #B2B, or #B2C should be the Defaulted Power Cable option on the Switches/Routers.

Note 10 If HP CTO Switch Chassis is selected for Rack Level Integration, Then the Switch needs to integrate (with #0D1) to the Rack.

Remarks:

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

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

## Configuration

## Internal Power Supplies

(JD374A and JG249A Switches Only ) (std 1 // max 2) User Selection (min 0 // max 1) per switch enclosure

| | |
|---|---|
| HP 5500 150WDC Power Supply | JD366A<br>See Configuration<br>**NOTE:** 4 |
| HP 5500 150WAC Power Supply<br>• includes 1 x c13, 910w | JD362A<br>See Configuration<br>**NOTE:**1, 2,3,4 |
| PDU CABLE NA/MEX/TW/JP<br>• C15 PDU Jumper Cord (NA/MEX/TW/JP) | JD362A#B2B |
| PDU CABLE ROW<br>• C15 PDU Jumper Cord (ROW) | JD362A#B2C |
| High Volt Switch to Wall Power Cord<br>• NEMA L6-20P Cord (NA/MEX/JP/TW) | JD362A#B2E |

Configuration Rules:

Note 2 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)

Note 3 Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) . (See Localization Menu)
REMARK: When Switches/Routers are Factory Racked, Then #B2B, or #B2C should be the Defaulted Power Cable option on the Switches/Routers.

Note 4 Not supported on JD377A, JG241A, JD375A, JG240A, JG251A, JG250A, JG252A, JG253A

Remarks: If Power Supply is added to switch with power supply, then Switch and Power Supply localization must match.

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

# Configuration

## Switch Enclosure Options

### External Redundant Power Supplies

| | |
|---|---|
| HP RPS 800 Redundant Power Supply<br>• Height = 1U<br>• includes 1 x c13 | JD183A<br>See Configuration<br>**NOTE:**2,4,6 |
| HP RPS1600 Redundant Power System<br>• Height = 1U<br>includes 1 x c13, 1600w and Power Supply port | JG136A<br>See Configuration<br>**NOTE:**2, 3,5 |
| HP RPS1600 1600W AC Power Supply<br>• Installs into JG136A only | JG137A<br>See Configuration<br>**NOTE:**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 | Supported only on the JD377A, JG250A, JD375A and JG251A Switches |
| Note 5 | Supported only on the JG241A, JG252A, JG240A and JG253A Switches |
| Note 6 | Each switch will only support 1 JD183A Power supply. |

### Options for the HPN 5500 Power Supplies

| | |
|---|---|
| HP X290 1000 A JD5 2m RPS Cable | JD187A |
| HP X290 1000 A JD5 Non-PoE 2m RPS Cable | JD188A |
| HP X290 1000 B JD5 2m RPS Cable | JD189A |
| HP X290 500/800 1m RPS Cable | JD190A |
| HP X290 500 U 1m RPS Cable | JD185A |

Remarks: These cables are used to connect the External Power System to Switch.

## Modules

## Configuration

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

| | |
|---|---|
| HP 5500 2-port 10GbE XFP Module | JD359B |
| • min=0 \ max=2 XFP Transceivers | See Configuration **NOTE:**2, 5, 6 |
| HP 5500 2-port 10GbE Local Connect Mod | JD360B |
| • min=0 \ max=2 CX4 Cables | See Configuration **NOTE:**4, 5, 6 |
| HP 5500 1-port 10GbE XFP Module | JD361B |
| • min=0 \ max=1 XFP Transceivers | See Configuration **NOTE:**2, 5, 6 |
| HP 5500/5120 2-port 10GbE SFP+ Module | JD368B |
| • min=0 \ max=2 SFP+ Transceivers | See Configuration **NOTE:**1, 5, 6 |
| HP 5500/4800 2-port GbE SFP Module | JD367A |
| • min=0 \ max=2 SFP Transceivers | See Configuration **NOTE:**3, 5, 6 |
| HP 5500/5120 2p 10GBASE-T Module | JG535A |
| • No Transceivers | See Configuration **NOTE:**5, 6 |

Configuration Rules:

| | | |
|---|---|---|
| Note 1 | The following Transceivers install into this Module: (Use #0D1 or #B01 if switch is CTO) | |
| | HP X130 10G SFP+ LC ER 40km Transceiver | JG234A |
| | HP X130 10G SFP+ LC SR Transceiver | JD092B |
| | HP X130 10G SFP+ LC LRM Transceiver | JD093B |
| | HP X130 10G SFP+ LC LR Transceiver | JD094B |
| | HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable | JD095C |
| | HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable | JD096C |
| | HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable | JD097C |
| | HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable | JG081C |
| | HP X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable | JC784C |
| Note 2 | The following Transceivers install into this Module: (Use #0D1 if switch is CTO) | |
| | HP X135 10G XFP LC ER Transceiver | JD121A |
| | HP X130 10G XFP LC LR Single Mode 10km 1310nm Transceiver | JD108B |
| | HP X130 10G XFP LC SR Transceiver | JD117B |
| Note 3 | The following Transceivers install into this Module: (Use #0D1 if switch is CTO) | |

## Configuration

| | | |
|---|---|---|
| | HP X120 1G SFP LC SX Transceiver | JD118B |
| | HP X120 1G SFP LC LX Transceiver | JD119B |
| | HP X120 1G SFP LC BX 10-U Transceiver | JD098B |
| | HP X120 1G SFP LC BX 10-D Transceiver | JD099B |
| | HP X125 1G SFP LC LH40 1310nm Transceiver | JD061A |
| | HP X120 1G SFP LC LH40 1550nm Transceiver | JD062A |
| | HP X125 1G SFP LC LH70 Transceiver | JD063B |
| | HP X115 100M SFP LC FX Transceiver | JD102B |
| | HP X110 100M SFP LC LX Transceiver | JD120B |
| | HP X110 100M SFP LC LH40 Transceiver | JD090A |
| | HP X110 100M SFP LC LH80 Transceiver | JD091A |
| | HP X120 1G SFP RJ45 T Transceiver | JD089B |
| Note 4 | The following Cables install into this Module: (Use #B01 if switch is CTO) | |
| | HP X230 Local Connect 50cm CX4 Cable | JD363B |
| | HP X230 Local Connect 100cm CX4 Cable | JD364B |
| | HP X230 CX4 to CX4 3m Cable | JD365A |
| | **NOTE:** Two JD365A - HP X230 CX4 to CX4 3m Cable should be added by default if Module is selected. | |
| Note 5 | If factory intergrated into the switch, This Module must be ordered as #0D1 when the switch is not Factory Racked. | |
| Note 6 | If factory intergrated into the switch, This Module must be ordered as #B01 when the switch is Factory Racked (Rack Level Integration CTO). | |

## Transceivers

### SFP Transceivers

| | |
|---|---|
| HP X120 1G SFP LC SX Transceiver | JD118B |
| HP X120 1G SFP LC LX Transceiver | JD119B |
| HP X125 1G SFP LC LH70 Transceiver | JD063B |
| HP X120 1G SFP LC LH40 1550nm Transceiver | JD062A |
| HP X125 1G SFP LC LH40 1310nm Transceiver | JD061A |
| HP X120 1G SFP LC BX 10-U Transceiver | JD098B |
| HP X120 1G SFP LC BX 10-D Transceiver | JD099B |
| HP X115 100M SFP LC FX Transceiver | JD102B |
| HP X110 100M SFP LC LX Transceiver | JD120B |
| HP X110 100M SFP LC LH40 Transceiver | JD090A |
| HP X110 100M SFP LC LH80 Transceiver | JD091A |
| HP X120 1G SFP RJ45 T Transceiver | JD089B |

### SFP+ Transceivers

## Configuration

| | |
|---|---|
| HP X130 10G SFP+ LC ER 40km Transceiver | JG234A |
| HP X130 10G SFP+ LC SR Transceiver | JD092B |
| HP X130 10G SFP+ LC LRM Transceiver | JD093B |
| HP X130 10G SFP+ LC LR Transceiver | JD094B |
| HP X240 10G SFP+ SFP+ 0.65m DAC Cable | JD095C#B01 |
| HP X240 10G SFP+ SFP+ 1.2m DAC Cable | JD096C#B01 |
| HP X240 10G SFP+ SFP+ 3m DAC Cable | JD097C#B01 |
| HP X240 10G SFP+ SFP+ 5m DAC Cable | JG081C #B01 |
| HP X240 10G SFP+ 7m DAC Cable | JC784C #B01 |

### XFP Transceivers

| | |
|---|---|
| HP X130 10G XFP LC LR Single Mode 10km 1310nm Transceiver | JD108B |
| HP X130 10G XFP LC SR Transceiver | JD117B |
| HP X135 10G XFP LC ER Transceiver | JD121A |

## Cables

### Local Connect Cables

| | |
|---|---|
| HP X230 Local Connect 50cm CX4 Cable | JD363B#B01 |
| HP X230 Local Connect 100cm CX4 Cable | JD364B#B01 |
| HP X230 CX4 to CX4 3m Cable | JD365A#B01 |

### Multi-Mode 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 |

## Opacity Shield Kit

System (std 0 // max 1) User Selection (min 0 // max 1)

## Configuration

| | |
|---|---|
| HP 5500/5120 Gig-T EI Opcty Shld Kit | JG557A |
| • Supported on JG250A, JG251A | See Configuration **NOTE:**1 |
| HP 5500/5120 Gig-T PoE EI Opcty Shld Kit | JG559A |
| • Supported on JG252A, JG253A | See Configuration **NOTE:**1 |
| HP 5500-24G-SFP EI Opcty Shld Kit | JG558A |
| • Supported on JG249A | See Configuration **NOTE:**1 |

Configuration Rules:

Note 1 If selected with a CTO Switch Solution, Quantity 1 of JG585A#B01 must also be ordered.

## Tamper Evidence Labels

System (std 0 // max 1) User Selection (min 0 // max 1)

| | |
|---|---|
| HP 12mm x 60mm Tmpr-Evidence (30) Lbl | JG585A |
| • Supported on JG557A, JG559A or JG558A | See Configuration **NOTE:**1 |

Configuration Rules:

Note 1 If selected with a CTO Switch Solution, Quantity 1 of JG557A#B01, JG558A#B01 or JG559A#B01 must also be ordered.

Remarks: Each JG557A, JG559A or JG558A would use 1 of JG585A.

## Technical Specifications

**HP 5500-24G EI Switch with 2 Interface Slots** (JD377A)

| | | |
|---|---|---|
| **Ports** | 24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only | |
| | 4 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP | |
| | 2 port expansion module slots | |
| | 1 RJ-45 serial console port | |
| | Supports a maximum of 24 autosensing 10/100/1000 ports | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 11.81(d) x 1.72(h) in (44 x 30 x 4.36 cm) (1U height) |
| | **Weight** | 8.82 lb (4 kg) |
| **Memory and processor** | 256 MB SDRAM, 32 MB flash; packet buffer size: 2 MB | |
| **Mounting** | Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included) | |
| **Performance** | **1000 Mb Latency** | < 3.2 µs |
| | **10 Gbps Latency** | < 2.6 µs |
| | **Throughput** | 107.2 million pps |
| | **Routing/Switching capacity** | 144 Gb/s |
| | **Routing table size** | 12000 entries (IPv4) |
| **Environment** | **Operating temperature** | 32ºF to 113ºF (0ºC to 45ºC) |
| | **Operating relative humidity** | 10% to 90%, noncondensing |
| | **Nonoperating/Storage temperature** | -40ºF to 158ºF (-40ºC to 70ºC) |
| | **Nonoperating/Storage relative humidity** | 5% to 95%, noncondensing |
| | **Acoustic** | Low-speed fan: 42.6 dB, High-speed fan: 49.7 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 375 BTU/hr (395.63 kJ/hr) |
| | **Voltage** | 100-240 VAC |
| | **Maximum power rating** | 110 W |
| | **Notes** | Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. |
| **Safety** | UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |
| **Emissions** | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN | |

## Technical Specifications

| | | |
|---|---|---|
| | 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A | |
| **Management** | IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB | |
| **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 5500-48G EI Switch with 2 Interface Slots** (JD375A)

| | | |
|---|---|---|
| **Ports** | 48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only | |
| | 4 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP | |
| | 2 port expansion module slots | |
| | 1 RJ-45 serial console port | |
| | Supports a maximum of 48 autosensing 10/100/1000 ports | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 11.81(d) x 1.72(h) in (44 x 30 x 4.36 cm) (1U height) |
| | **Weight** | 9.92 lb (4.5 kg) |
| **Memory and processor** | 256 MB SDRAM, 32 MB flash; packet buffer size: 4 MB | |
| **Mounting** | Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included) | |
| **Performance** | **1000 Mb Latency** | < 3.2 µs |
| | **10 Gbps Latency** | < 2.6 µs |
| | **Throughput** | 142.9 million pps |
| | **Routing/Switching capacity** | 192 Gb/s |
| | **Routing table size** | 12000 entries (IPv4) |
| **Environment** | **Operating temperature** | 32ºF to 113ºF (0ºC to 45ºC) |
| | **Operating relative humidity** | 10% to 90%, noncondensing |
| | **Nonoperating/Storage temperature** | -40ºF to 158ºF (-40ºC to 70ºC) |
| | **Nonoperating/Storage relative humidity** | 5% to 95%, noncondensing |
| | **Acoustic** | Low-speed fan: 41.3 dB, High-speed fan: 50.1 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 528 BTU/hr (557.04 kJ/hr) |
| | **Voltage** | 100-240 VAC |
| | **Maximum power rating** | 155 W |
| | **Notes** | Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. |
| **Safety** | UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; | |

## Technical Specifications

| | |
|---|---|
| | IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance |
| **Emissions** | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A |
| **Management** | IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB |
| **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 5500-24G-SFP EI Switch with 2 Interface Slots** (JD374A)

| | | |
|---|---|---|
| **Ports** | 24 fixed Gigabit Ethernet SFP ports | |
| | 8 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP | |
| | 2 port expansion module slots | |
| | 1 RJ-45 serial console port | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 14.17(d) x 1.72(h) in (44 x 36 x 4.36 cm) (1U height) |
| | **Weight** | 13.89 lb (6.3 kg) |
| **Memory and processor** | 256 MB SDRAM, 32 MB flash; packet buffer size: 2 MB | |
| **Mounting** | Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included) | |
| **Performance** | **1000 Mb Latency** | < 3.2 µs |
| | **10 Gbps Latency** | < 2.6 µs |
| | **Throughput** | 107.2 million pps |
| | **Routing/Switching capacity** | 144 Gb/s |
| | **Routing table size** | 12000 entries (IPv4) |
| **Environment** | **Operating temperature** | 32°F to 113°F (0°C to 45°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** | 5% to 95%, noncondensing |
| | **Acoustic** | Low-speed fan: 45.3 dB, High-speed fan: 50.4 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 392 BTU/hr (413.56 kJ/hr) |
| | **Voltage** | 100-240 VAC |
| | **Maximum power rating** | 115 W |
| | **Notes** | Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. |

## Technical Specifications

| | |
|---|---|
| **Safety** | UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance |
| **Emissions** | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A |
| **Management** | IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB |
| **Notes** | 1 power supply included |
| **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 5500-48G-PoE+ EI Switch with 2 Interface Slots** (JG240A)

| | | |
|---|---|---|
| **Ports** | 48 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+); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only | |
| | 4 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP | |
| | 2 port expansion module slots | |
| | 1 RJ-45 serial console port | |
| | Supports a maximum of 48 autosensing 10/100/1000 ports | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 16.54(d) x 1.72(h) in (43.99 x 42.01 x 4.37 cm) (1U height) |
| | **Weight** | 14.33 lb. (6.5 kg) |
| **Memory and processor** | 256 MB SDRAM, 32 MB flash; packet buffer size: 4 MB | |
| **Mounting** | Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included) | |
| **Performance** | **1000 Mb Latency** | < 3.2 µs |
| | **10 Gbps Latency** | < 2.6 µs |
| | **Throughput** | 142.9 million pps |
| | **Routing/Switching capacity** | 192 Gb/s |
| | **Routing table size** | 12000 entries (IPv4) |
| **Environment** | **Operating temperature** | 32ºF to 113ºF (0ºC to 45ºC) |
| | **Operating relative humidity** | 10% to 90%, noncondensing |
| | **Nonoperating/Storage temperature** | -40ºF to 158ºF (-40ºC to 70ºC) |
| | **Nonoperating/Storage relative humidity** | 5% to 95%, noncondensing |
| | **Acoustic** | Low-speed fan: 49.5 dB, High-speed fan: 54.1 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 2255 BTU/hr (2379.02 kJ/hr). Max heat dissipation for AC is 2255 BTU/hr and 3173 BTU/hr for DC. |
| | **Voltage** | 100-240 VAC |

## Technical Specifications

| | | |
|---|---|---|
| | **DC voltage** | -52 to -55 VDC |
| | **Maximum power rating** | 661 W |
| | **PoE power** | 740 W |
| | **Notes** | Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.<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>With AC input, the maximum power consumption is 661 W; PoE is 370 W.<br>With DC input, the maximum power consumption is 930 W; PoE is 740 W. |
| **Safety** | UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |
| **Emissions** | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A | |
| **Management** | IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB | |
| **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 5500-24G-PoE+ EI Switch with 2 Interface Slots** (JG241A)

| | | |
|---|---|---|
| **Ports** | 24 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+); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only | |
| | 4 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP | |
| | 2 port expansion module slots | |
| | 1 RJ-45 serial console port | |
| | Supports a maximum of 24 autosensing 10/100/1000 ports | |
| **Physical characteristics** | **Dimensions** | 17.32(w) x 16.54(d) x 1.69(h) in (43.99 x 42.01 x 4.29 cm) (1U height) |
| | **Weight** | 13.23 lb (6 kg) |
| **Memory and processor** | 256 MB SDRAM, 32 MB flash; packet buffer size: 2 MB | |
| **Mounting** | Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included) | |
| **Performance** | **1000 Mb Latency** | < 3.2 µs |
| | **10 Gbps Latency** | < 2.6 µs |
| | **Throughput** | 107.2 million pps |
| | **Routing/Switching capacity** | 144 Gb/s |
| | **Routing table size** | 12000 entries (IPv4) |
| **Environment** | **Operating temperature** | 32ºF to 113ºF (0ºC to 45ºC) |
| | **Operating relative** | 10% to 90%, noncondensing |

## Technical Specifications

| | | |
|---|---|---|
| | **humidity** | |
| | **Nonoperating/Storage temperature** | -40°F to 158°F (-40°C to 70°C) |
| | **Nonoperating/Storage relative humidity** | 5% to 95%, noncondensing |
| | **Acoustic** | Low-speed fan: 48.1 dB, High-speed fan: 51.1 dB; ISO 7779 |
| **Electrical characteristics** | **Frequency** | 50/60 Hz |
| | **Maximum heat dissipation** | 2016 BTU/hr (2126.88 kJ/hr). Max heat dissipation for AC is 2016 BTU/hr and 1678 BTU/hr for DC. |
| | **Voltage** | 100-240 VAC |
| | **DC Voltage** | 52 to -55 VDC |
| | **Maximum power rating** | 591 W |
| | **PoE power** | 370 W |
| | **Notes** | Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. 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>With AC input, the maximum power consumption is 591 W; PoE is 370 W.<br>With DC input, the maximum power consumption is 492 W; PoE is 370 W. |
| **Safety** | UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance | |
| **Emissions** | FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A | |
| **Management** | IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB | |
| **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 | |

**Standards and protocols** (applies to all products in series)

**BGP**

RFC 1657 Definitions of Managed Objects for BGPv4
RFC 1771 BGPv4
RFC 2858 BGP-4 Multi-Protocol Extensions

**Device management**

RFC 1157 SNMPv1/v2c
RFC 1256 ICMP Router Discovery Protocol (IRDP)
RFC 1305 NTPv3
RFC 1901 (Community based SNMPv2)
RFC 2452 MIB for TCP6
RFC 2454 MIB for UDP6
RFC 2573 (SNMPv3 Applications)
RFC 2464 Transmission of IPv6 over Ethernet Networks
RFC 2475 IPv6 DiffServ Architecture
RFC 2710 Multicast Listener Discovery (MLD) for IPv6
RFC 2740 OSPFv3 for IPv6
RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)
RFC 2925 Remote Operations MIB (Ping only)
RFC 3056 Connection of IPv6 Domains via IPv4 Clouds

## Technical Specifications

RFC 2576 (Coexistence between SNMP V1, V2, V3)
RFC 2819 RMON
RFC 3410 (Management Framework)
RFC 3416 (SNMP Protocol Operations v2)
RFC 3417 (SNMP Transport Mappings)
HTML and telnet management
Multiple Configuration Files
SNMP v3 and RMON RFC support
SSHv1/SSHv2 Secure Shell

**General protocols**

IEEE 802.1ad Q-in-Q
IEEE 802.1D MAC Bridges
IEEE 802.1p Priority
IEEE 802.1Q (GVRP)
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.3ab 1000BASE-T
IEEE 802.3ad Link Aggregation (LAG)
IEEE 802.3ae 10-Gigabit Ethernet
IEEE 802.3af Power over Ethernet
IEEE 802.3i 10BASE-T
IEEE 802.3u 100BASE-X
IEEE 802.3x Flow Control
IEEE 802.3z 1000BASE-X
RFC 768 UDP
RFC 791 IP
RFC 792 ICMP
RFC 793 TCP
RFC 854 TELNET
RFC 925 Multi-LAN Address Resolution
RFC 950 Internet Standard Subnetting Procedure
RFC 951 BOOTP
RFC 1027 Proxy ARP
RFC 1058 RIPv1
RFC 1122 Host Requirements
RFC 1141 Incremental updating of the Internet checksum
RFC 1213 Management Information Base for Network Management of TCP/IP-based internets
RFC 1256 ICMP Router Discovery Protocol (IRDP)
RFC 1305 NTPv3
RFC 1350 TFTP Protocol (revision 2)
RFC 1519 CIDR
RFC 1542 BOOTP Extensions
RFC 1723 RIP v2
RFC 1812 IPv4 Routing
RFC 1887 An Architecture for IPv6 Unicast Address Allocation
RFC 2131 DHCP
RFC 3162 RADIUS and IPv6
RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses
RFC 3307 IPv6 Multicast Address Allocation
RFC 3315 DHCPv6 (client and relay)
RFC 3484 Default Address Selection for IPv6
RFC 3493 Basic Socket Interface Extensions for IPv6
RFC 3513 IPv6 Addressing Architecture
RFC 3542 Advanced Sockets API for IPv6
RFC 3587 IPv6 Global Unicast Address Format
RFC 3596 DNS Extension for IPv6
RFC 3810 MLDv2 for IPv6
RFC 4113 MIB for UDP
RFC 4443 ICMPv6

**MIBs**

RFC 1212 Concise MIB Definitions
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 1657 BGP-4 MIB
RFC 1724 RIPv2 MIB
RFC 1757 Remote Network Monitoring MIB
RFC 1850 OSPFv2 MIB
RFC 2012 SNMPv2 MIB for TCP
RFC 2013 SNMPv2 MIB for UDP
RFC 2233 Interface MIB
RFC 2452 IPV6-TCP-MIB
RFC 2454 IPV6-UDP-MIB
RFC 2465 IPv6 MIB
RFC 2466 ICMPv6 MIB
RFC 2571 SNMP Framework MIB
RFC 2572 SNMP-MPD MIB
RFC 2573 SNMP-Target MIB
RFC 2574 SNMP USM MIB
RFC 2618 RADIUS Authentication Client MIB
RFC 2620 RADIUS Accounting Client MIB
RFC 2665 Ethernet-Like-MIB
RFC 2674 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and Virtual Extensions
RFC 2737 Entity MIB (Version 2)
RFC 2787 VRRP MIB
RFC 2819 RMON MIB
RFC 2925 Ping MIB
RFC 3414 SNMP-User based-SM MIB
RFC 3415 SNMP-View based-ACM MIB
RFC 4113 UDP MIB

**Network management**

IEEE 802.1AB Link Layer Discovery Protocol

## Technical Specifications

RFC 2236 IGMP Snooping
RFC 2338 VRRP
RFC 2375 IPv6 Multicast Address Assignments
RFC 2616 HTTP Compatibility v1.1
RFC 2644 Directed Broadcast Control
RFC 2865 Remote Authentication Dial In User Service (RADIUS)
RFC 2866 RADIUS Accounting
RFC 3246 Expedited Forwarding PHB
RFC 3410 Applicability Statements for SNMP
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 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)
RFC 3484 Default Address Selection for Internet Protocol version 6 (IPv6)
RFC 3493 Basic Socket Interface Extensions for IPv6
RFC 3542 Advanced Sockets Application Program Interface (API) for IPv6
RFC 3587 IPv6 Global Unicast Address Format
RFC 3596 DNS Extensions to Support IP Version 6
RFC 3623 Graceful OSPF Restart
RFC 3704 Unicast Reverse Path Forwarding (URPF)
RFC 3768 VRRP
RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6
RFC 4113 Management Information Base for the User Datagram Protocol (UDP)
RFC 4213 Basic IPv6 Transition Mechanisms
RFC 4443 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
802.1r - GARP Proprietary Attribute Registration Protocol (GPRP)

### IP multicast

RFC 2236 IGMPv2
RFC 2710 Multicast Listener Discovery (MLD) for IPv6
RFC 2858 Multiprotocol Extensions for BGP-4
RFC 3376 IGMPv3
RFC 3569 An Overview of Source-Specific Multicast
(SSM)
RFC 3618 Multicast Source Discovery Protocol (LLDP)
IEEE 802.1D (STP)
RFC 1157 SNMPv1
RFC 1212 Concise MIB definitions
RFC 1215 SNMP Generic traps
RFC 1757 RMON 4 groups: Stats, History, Alarms and Events
RFC 1901 SNMPv2 Introduction
RFC 1918 Private Internet Address Allocation
RFC 2373 Remote Network Monitoring Management Information Base for High Capacity Networks
RFC 2571 An Architecture for Describing SNMP Management Frameworks
RFC 2572 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)
RFC 2573 SNMP Applications
RFC 2574 SNMPv3 User-based Security Model (USM)
RFC 2575 SNMPv3 View-based Access Control Model (VACM)
RFC 2576 Coexistence between SNMP versions
RFC 2578 SMIv2
RFC 2581 TCP6
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations
RFC 3176 sFlow
RFC 3410 Introduction to Version 3 of the Internet-standard Network Management Framework
RFC 3414 SNMPv3 User-based Security Model (USM)
RFC 3415 SNMPv3 View-based Access Control Model VACM)
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3

### OSPF

RFC 1587 OSPF NSSA
RFC 1850 OSPFv2 Management Information Base (MIB), traps
RFC 2328 OSPFv2
RFC 2370 OSPF Opaque LSA Option
RFC 3623 Graceful OSPF Restart

### QoS/CoS

IEEE 802.1p (CoS)
RFC 2474 DSCP DiffServ
RFC 2475 DiffServ Architecture

## Technical Specifications

(MSDP)
RFC 3973 PIM Dense Mode
RFC 4601 PIM Sparse Mode

**IPv6**

RFC 1881 IPv6 Address Allocation Management
RFC 1887 IPv6 Unicast Address Allocation Architecture
RFC 1981 IPv6 Path MTU Discovery
RFC 2080 RIPng for IPv6
RFC 2373 IPv6 Addressing Architecture
RFC 2375 IPv6 Multicast Address Assignments
RFC 2460 IPv6 Specification
RFC 2461 IPv6 Neighbor Discovery
RFC 2462 IPv6 Stateless Address Auto-configuration
RFC 2463 ICMPv6
RFC 2597 DiffServ Assured Forwarding (AF)
RFC 2598 DiffServ Expedited Forwarding (EF)
RFC 4594 Configuration Guidelines for DiffServ Service Classes

**Security**

IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
RFC 1918 Address Allocation for Private Internets
RFC 2865 RADIUS Authentication
RFC 2866 RADIUS Accounting
Access Control Lists (ACLs)
MAC Authentication
Port Security
SSHv2 Secure Shell

## Accessories

| | | |
|---|---|---|
| **HPE 5500 EI Switch Series accessories** | **Modules** | |
| | **HP 5500 2-port 10GbE XFP Module** | JD359B |
| | HP 5500 2-port 10GbE Local Connect Module | JD360B |
| | **HP 5500 1-port 10GbE XFP Module** | JD361B |
| | **HP 5500/4800 2-port GbE SFP Module** | JD367A |
| | HP 5500/5120 2-port 10GbE SFP+ Module | JD368B |
| | **NEW** HP 5500/5120 2-port 10GBASE-T Module | JG535A |
| | **Transceivers** | |
| | **HP X125 1G SFP LC LH40 1310nm Transceiver** | JD061A |
| | **HP X120 1G SFP LC LH40 1550nm Transceiver** | JD062A |
| | **HP X125 1G SFP LC LH70 Transceiver** | JD063B |
| | HP X110 100M SFP LC LH40 Transceiver | JD090A |
| | HP X110 100M SFP LC LH80 Transceiver | JD091A |
| | HP X130 SFP+ LC SR Transceiver | JD092B |
| | HP X130 SFP+ LC LRM Transceiver | JD093B |
| | HP X130 SFP+ LC LR Transceiver | JD094B |
| | **HP X120 1G SFP LC BX 10-U Transceiver** | JD098B |
| | **HP X120 1G SFP LC BX 10-D Transceiver** | JD099B |
| | HP X110 100M SFP LC FX Transceiver | JD102B |
| | HP X130 10G XFP LC LR Transceiver | JD108B |
| | HP X130 10G XFP LC SR Transceiver | JD117B |
| | **HP X120 1G SFP LC SX Transceiver** | JD118B |
| | **HP X120 1G SFP LC LX Transceiver** | JD119B |
| | HP X110 100M SFP LC LX Transceiver | JD120B |
| | HP X135 10G XFP LC ER Transceiver | JD121A |
| | HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable | JD095C |
| | HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable | JD096C |
| | HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable | JD097C |
| | HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable | JG081C |
| | HP X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable | JC784C |
| | **HP X120 1G SFP RJ45 T Transceiver** | JD089B |
| | HP X130 10G SFP+ LC ER 40km Transceiver | JG234A |
| | **Cables** | |
| | HP X230 Local Connect 100 cm CX4 Cable | JD364B |
| | HP X230 Local Connect CX4 300 cm Cable | JD365A |
| | **HP 0.5 m Multimode OM3 LC/LC Optical Cable** | AJ833A |
| | **HP 1 m Multimode OM3 LC/LC Optical Cable** | AJ834A |
| | **HP 2 m Multimode OM3 LC/LC Optical Cable** | AJ835A |
| | **HP 5 m Multimode OM3 LC/LC Optical Cable** | AJ836A |
| | **HP 15 m Multimode OM3 LC/LC Optical Cable** | AJ837A |
| | **HP 30 m Multimode OM3 LC/LC Optical Cable** | AJ838A |
| | **HP 50 m Multimode OM3 LC/LC Optical Cable** | AJ839A |

## Accessories

| | |
|---|---|
| **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 15m Cable** | QK734A |
| **HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable** | QK735A |
| **HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable** | QK736A |
| **HP 50 m PremierFlex OM3+ LC/LC Optical Cable** | QK737A |
| HP X230 Local Connect 50cm CX4 Cable | JD363B |
| **Power Supply** | |
| HP 5800/5500 150W AC Power Supply | JD362A |
| HP 5800/5500 150W DC Power Supply | JD366A |
| HP RPS 800 Redundant Power System | JD183A |
| **HP RPS 1600 Redundant Power System** | JG136A |
| **HP RPS 1600 1600W AC Power Supply** | JG137A |
| **Power cords** | |
| HP X290 1000 A JD5 2m RPS Cable | JD187A |
| HP X290 1000 A JD5 Non-PoE 2m RPS Cable | JD188A |
| HP X290 1000 B JD5 2m RPS Cable | JD189A |
| HP X290 500/800 1m RPS Cable | JD190A |
| HP X290 500 U 1m RPS Cable | JD185A |

## Accessory Product Details

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

| | | | |
|---|---|---|---|
| **HP 5500 2-port 10GbE XFP Module** (JD359B) | **Ports** | 2 XFP 10-GbE ports; Duplex: full only | |
| | **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 5500 1-port 10GbE XFP Module** (JD361B) | **Ports** | 1 XFP 10-GbE port; Duplex: full only | |
| | **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 5500/4800 2-port GbE SFP Module** (JD367A) | **Ports** | 2 SFP 1000 Mbps ports | |
| | **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 X125 1G SFP LC LH40 1310nm Transceiver** (JD061A)<br><br>A small form-factor pluggable SFP Gigabit LH40 transceiver that provides a full duplex Gigabit solution up to 40km on a single-mode fiber. | **Ports** | 1 LC 1000Base-LH port (no IEEE standard exists for 1550 nm optics) | |
| | **Connectivity** | Connector type | LC |
| | | Wavelength | 1310 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** | Cable type:<br>Single-mode fiber optic, complying with ITU-T G.652;<br><br>Maximum distance:<br><br>• 40km distance | |
| | | Fiber type | Single 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 | |

## Accessory Product Details

| | | | |
|---|---|---|---|
| **HP X120 1G SFP LC LH40 1550nm Transceiver** (JD062A)<br><br>A small form-factor pluggable (SFP) Gigabit LH40 transceiver that provides a full-duplex Gigabit solution up to 40 km on a single mode fiber. | **Ports** | | 1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics) |
| | **Connectivity** | Connector type | LC |
| | | Wavelength | 1550 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** | Cable type:<br>Single-mode fiber optic, complying with ITU-T G.652;<br><br>Maximum distance:<br>• 40km distance | |
| | | Fiber type | Single 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 X125 1G SFP LC LH70 Transceiver** (JD063B)<br><br>A small form-factor pluggable (SFP) Gigabit LH70 transceiver that provides a full-duplex Gigabit solution up to 70km on a single-mode fiber. | **Ports** | | 1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics) |
| | **Connectivity** | **Connector type** | LC |
| | | **Wavelength** | 1550 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** | Cable type:<br>Single-mode fiber optic, complying with ITU-T G.652;<br><br>Maximum distance:<br>• 70km | |
| | | Fiber type | Single 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 BX** | **Ports** | | 1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-U); |

## Accessory Product Details

| | | | |
|---|---|---|---|
| **10-U Transceiver** (JD098B)<br><br>A small form-factor pluggable (SFP) Gigabit LX-BX10-U transceiver that provides a full duplex Gigabit solution up to 10km on a single mode cable. | | Duplex: full only | |
| | **Connectivity** | **Connector type** | LC |
| | **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:<br>• 10km | |
| | | Fiber type | Single Mode |
| | **Notes** | TX 1310nm RX 1490nm | |
| | **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 BX 10-D Transceiver** (JD099B)<br><br>A small form-factor pluggable (SFP) Gigabit LX-BX10-D transceiver that provides a full duplex Gigabit solution up to 10km on a single mode cable. | **Ports** | 1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-D); Duplex: full only | |
| | **Connectivity** | **Connector type** | LC |
| | **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:<br>• Up to 10km | |
| | | Fiber type | Single Mode |
| | **Notes** | TX 1490nm RX 1310nm | |
| | **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)<br><br>A small form-factor | **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 |

## Accessory Product Details

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| pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550m on a Multimode fiber. | | | 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:<br>• FDDI Grade distance = 220m<br>• OM1 = 275m<br>• OM2 = 500m<br>• 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)<br><br>A small form-factor pluggable (SFP) Gigabig LX transceiver that provides a full duplex Gigabit solution up to 550m on MMF or 10Km on SMF | **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) |
| | | **Full configuration weight** | 0.04 lb. (0.02 kg) |
| | **Electrical characteristics** | **Power consumption typical** | 0.8 W |
| | | **Power consumption maximum** | 1.0 W |
| | **Cabling** | Cable type:<br>Either single mode or multimode;<br><br>Maximum distance:<br>• 550m for Multimode<br>• 10km for Singlemode | |
| | | Fiber type | Both |
| | **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 RJ45 T** | **Ports** | 1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T) | |
| | **Connectivity** | **Connector type** | RJ-45 |

## Accessory Product Details

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| **Transceiver** (JD089B)<br><br>A small form factor pluggable (SFP) Gigabit 1000Base-T transceiver that provides a full duplex Gigabit solution up to 100m on a Cat-5+ cable. | **Physical characteristics** | **Dimensions** | 2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm) |
| | | **Full configuration weight** | 0.07 lb. (0.03 kg) |
| | **Electrical characteristics** | **Power consumption typical** | 0.8 W |
| | | **Power consumption maximum** | 1.0 W |
| | **Cabling** | Cable type:<br>1000BASE-T: Category 5 (5E or better recommended), 100 Ù differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;<br><br>Maximum distance:<br>• 100m | |
| | **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 | |

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| **HP 0.5 m Multimode OM3 LC/LC Optical Cable** (AJ833A) | **Cabling** | **Cable type**:<br>50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m<br><br>**Maximum distance**:<br>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.<br><br>• Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um<br>• Optical glass: Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.<br>• 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.<br>• 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.<br>• BULK CABLE & CABLE ASSEMBLY CONFIGURATION:<br>• Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.<br>• Jacket Color: Aqua for OM3 multimode per TIA 598<br>• Boot Color: White<br>• Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.<br>• 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.<br>• Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg |
| | **Services** | Refer to the Hewlett Packard Enterprise website at |

## Accessory Product Details

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| | | **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**:<br>50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m<br><br>**Maximum distance**:<br>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.<br><br>• Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um<br>• Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.<br>• 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.<br>• 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.<br>• BULK CABLE & CABLE ASSEMBLY CONFIGURATION:<br>• Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.<br>• Jacket Color: Aqua for OM3 multimode per TIA 598<br>• Boot Color: White<br>• Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.<br>• 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.<br>• 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) | **Cabling** | **Cable type**:<br>50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;<br><br>**Maximum distance**:<br>10Gbps Transfer Rate (Ethernet): 300m |

## Accessory Product Details

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| | **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.<br><br>• Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um<br>• Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.<br>• 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.<br>• 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.<br>• BULK CABLE & CABLE ASSEMBLY CONFIGURATION:<br>• Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.<br>• Jacket Color: Aqua for OM3 multimode per TIA 598<br>• Boot Color: White<br>• Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.<br>• 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.<br>• 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 5 m Multimode OM3 LC/LC Optical Cable**<br>(AJ836A) | **Cabling** | **Cable type**:<br>50/125 μm core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;<br><br>**Maximum distance**:<br>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.<br><br>• Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um<br>• Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.<br>• 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

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

**Cabling**

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

**Maximum distance**:
10Gbps Transfer Rate (Ethernet): 300m

**Notes**

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

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

## Accessory Product Details

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| | | • 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**:<br>50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;<br><br>**Maximum distance**:<br>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.<br><br>• Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um<br>• Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.<br>• 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.<br>• 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.<br>• BULK CABLE & CABLE ASSEMBLY CONFIGURATION:<br>• Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.<br>• Jacket Color: Aqua for OM3 multimode per TIA 598<br>• Boot Color: White<br>• Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.<br>• 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.<br>• 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** | **Cabling** | **Cable type**:<br>50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for |

## Accessory Product Details

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| **Cable** (AJ839A) | | distances of up to 300 m;<br><br>**Maximum distance**:<br>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.<br><br>• Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um<br>• Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.<br>• 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.<br>• 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.<br>• BULK CABLE & CABLE ASSEMBLY CONFIGURATION:<br>• Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.<br>• Jacket Color: Aqua for OM3 multimode per TIA 598<br>• Boot Color: White<br>• Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.<br>• 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.<br>• 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) | **Notes** | Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.<br><br>• Core Diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um<br>• Bandwidth: 3000 MHz-km @ 850nm (Laser)<br>• Jacket Color: Blue<br>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic<br>• Boot Color: White<br>• 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.<br>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m |

## Accessory Product Details

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| | | added for lengths >30m<br>• 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) | **Notes** | Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.<br><br>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um<br>• Bandwidth: 3000 MHz-km @ 850nm (Laser)<br>• Jacket Color: Blue<br>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic<br>• Boot Color: White<br>• 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.<br>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m<br>• 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 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.<br><br>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um<br>• Bandwidth: 3000 MHz-km @ 850nm (Laser)<br>• Jacket Color: Blue<br>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic<br>• Boot Color: White<br>• 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.<br>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m<br>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm |

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| | | @ 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.<br><br>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um<br>• Bandwidth: 3000 MHz-km @ 850nm (Laser)<br>• Jacket Color: Blue<br>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic<br>• Boot Color: White<br>• 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.<br>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m<br>• 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 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.<br><br>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um<br>• Bandwidth: 3000 MHz-km @ 850nm (Laser)<br>• Jacket Color: Blue<br>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic<br>• Boot Color: White<br>• 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.<br>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m<br>• 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 |

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| | | | **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.<br><br>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um<br>• Bandwidth: 3000 MHz-km @ 850nm (Laser)<br>• Jacket Color: Blue<br>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic<br>• Boot Color: White<br>• 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.<br>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m<br>• 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 RPS1600 Redundant Power System** (JG136A) | **Ports** | | 8 redundant power supply ports<br>Restrictions: two -56V/25A DC(PoE); six -56V/8A DC(non-PoE) |
| | **Physical characteristics** | **Dimensions** | 15.63(d) x 17.32(w) x 1.74(h) in. (39.7 x 44 x 4.42 cm) |
| | | **Weight** | 14.11 lb. (6.4 kg) |
| | | **Full configuration weight** | 16.75 lb. (7.6 kg) |
| | **Environment** | **Operating temperature** | 14°F to 122°F (-10°C to 50°C) |
| | | **Operating relative humidity** | 5% to 95% |
| | | **Nonoperating/Storage temperature** | -40°F to 158°F (-40°C to 70°C) |
| | | **Nonoperating/Storage relative humidity** | 5% to 95% |
| | | **Altitude** | up to 13,123 ft. (4 km) |
| | | **Acoustic** | Pressure: 53 dB; ISO 7779, ISO 9296 |
| | **Electrical characteristics** | **Voltage** | 100-120/200-240 VAC |
| | | **Current** | 30/60 A |

## Accessory Product Details

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| | | **Idle power** | 38 W |
| | | **Maximum power rating** | 3550 W |
| | | **RPS power** | 3200 W |
| | | **PoE power** | 2800 W |
| | | **RPS** | -55 V |
| | | **PoE** | -55 V |
| | | **Frequency** | 50/60 Hz |
| | | **Notes** | Idle power is the actual power consumption of the device with no ports connected.<br>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>With one RPS1600 Power Supply, the PRS1600 Redundant Power System can provide 1600W power output; With two PRS1600 Power Supplies, the output power is 3200W. |
| | **Safety** | | CE Labeled; UL 60950-1; IEC 60950-1; ICES-003; FCC Part 15, Subpart B; EU RoHS Compliant; EN 60950-1/A11; C-Tick; VCCI Class A; ROHS Compliance; EN 300386 |
| | **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 RPS1600 1600W AC Power Supply** (JG137A) | **Physical characteristics** | **Dimensions** | 8.19(d) x 4.96(w) x 1.63(h) in. (20.8 x 12.6 x 4.15 cm) |
| | | **Weight** | 3.02 lb. (1.37 kg) |
| | **Environment** | **Operating temperature** | 14°F to 122°F (-10°C to 50°C) |
| | | **Operating relative humidity** | 5% to 95% |
| | | **Nonoperating/Storage temperature** | -40°F to 158°F (-40°C to 70°C) |
| | | **Nonoperating/Storage relative humidity** | 5% to 95% |
| | **Electrical characteristics** | **Voltage** | 100-120/200-240 VAC |
| | | **Current** | 15/30 A |
| | | **Maximum power rating** | 1600 W |
| | | **Frequency** | 50/60 Hz |
| | | **Notes** | Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if |

## Accessory Product Details

| | |
|---|---|
| | equipped), 100% traffic, all ports plugged in, and all modules populated. |
| **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 |

## Summary of Changes

| Date | Version History | Action | Description of Change: |
|---|---|---|---|
| 01-Dec-2015 | From Version 33 to 34 | Changed | Overview and Technical Specifications updated |
| 01-Dec-2014 | From Version 32 to 33 | Changed | Warranty and support updated |
| 03-Jul-2014 | From Version 31 to 32 | Changed | Configuration menu updated. |
| 10-Jun-2014 | From Version 30 to 31 | Added | Added Opacity Shield Kit and Tamper Evidence Labels to Configuration. |
| 15-Apr-2014 | From Version 29 to 30 | Changed | Notes section for Modules was revised in Configuration. |
| 19-Mar-2014 | From Version 28 to 29 | Changed | Transceivers and Cables were revised in Configuration. |
| 25-Feb-2014 | From Version 27 to 28 | Changed | HP 5500-24G-SFP EI Switch was revised in Configuration. |
| 16-Jan-2014 | From Version 26 to 27 | Changed | Features and benefits was revised. |
| 17-Dec-2013 | From Version 25 to 26 | Changed | Modules were revised in Configuration. |
| 09-Dec-2013 | From Version 24 to 25 | Changed | Notes for Modules were revised in Configuration. |
| 08-Nov-2013 | From Version 23 to 24 | Changed | Switch Chassis, Box Level Integrated CTO Models, Rack Level Integrated Models, Modules, and Cables were revised. |
| 09-Oct-2013 | From Version 22 to 23 | Removed | HP X110 100M SFP LC FX Dual Mode Transceiver and HP X110 SFP LC LX10 Transceiver were removed. |
| 30-Sep-2013 | From Version 21 to 22 | Changed | Configuration was revised.<br><br>Features and Benefits was revised.<br><br>Product overview was revised. |
| 30-Sep-2013 | From Version 21 to 22 | Changed | Configuration was revised.<br><br>Features and Benefits was revised.<br><br>Product overview was revised. |
| 19-Aug-2013 | From Version 20 to 21 | Changed | Box Level Integration CTO Models was revised in Configuration |
| 12-Jul-2013 | From Version 19 to 20 | Changed | Acoustic was added to Technical Specifications<br><br>Models were removed throughout |
| 02-Jul-2013 | From Version 18 to 19 | Added | Added new skus in the Modules section of Configuration. |
| 27-Jun-2013 | From Version 17 to 18 | Changed | Standards and protocols was revised |
| 21-Jun-2013 | From Version 16 to 17 | Changed | Security in Features and Benefits was revised<br><br>Standards and protocols was revised in Technical Specifications |
| 10-Jun-2013 | From Version 15 to 16 | Changed | Updated the notes section for CTO Switch Chassis in Configuration. |

## Summary of Changes

| | | | |
|---|---|---|---|
| 27-May-2013 | From Version 14 to 15 | Changed | Updated the Configuration Information. |
| 22-May-2013 | From Version 13 to 14 | Changed | Updated the Configuration Information. |
| 20-May-2013 | From Version 12 to 13 | Changed | Minor corrections were made to the Configuration section. |
| 13-May-2013 | From Version 10 to 12 | Added | Added the Configuration Section. |
| 14-May-2012 | From Version 9 to 10 | Changed | Features and Benefits, Accessories, and the weight and dimensions for each spec were revised. |
| 20-Apr-2012 | From Version 8 to 9 | Changed | Features and benefits was revised. |
| 15-Mar-2012 | From Version 7 to 8 | Changed | Features and benefits and Accessories were revised. |
| 05-Mar-2012 | From Version 6 to 7 | Changed | The Introduction paragraph was revised. |
| 26-Sep-2011 | From Version 3 to 6 | Changed | Model descriptions and Services were revised. |
| 30-Aug-2011 | From Version 2 to 3 | Changed | Added two new models and revised Accessories and Features and Benefits. |
| 16-Mar-2011 | From Version 1 to 2 | Changed | Accessories were revised. |
| | | | |

## Summary of Changes

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