

Overview

HPE 5500 EI Switch Series

Models

HP 5500-24G EI Switch	JD377A
HP 5500-48G EI Switch	JD375A
HP 5500-24G-SFP EI Switch	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)
- **Traffic policing:** supports Committed Access Rate (CAR) and line rate

Overview

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
- **High-bandwidth CX4 and SFP+ local stacking:** provide 10 Gb/s SFP+ 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

Overview

- **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 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

Overview

- **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
- **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

Overview

- **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 Multicast (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 <ul style="list-style-type: none"> • 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 	JD377A See Configuration NOTE:1, 3
PDU CABLE NA/MEX/TW/JP <ul style="list-style-type: none"> • C15 PDU Jumper Cord (NA/MEX/TW/JP) 	JD377A#B2B
PDU CABLE ROW <ul style="list-style-type: none"> • C15 PDU Jumper Cord (ROW) 	JD377A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"> • NEMA L6-20P Cord (NA/MEX/JP/TW) 	JD377A#B2E
HP 5500-24G-SFP EI Switch <ul style="list-style-type: none"> • 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 	JD374A See Configuration NOTE:1, 3
PDU CABLE NA/MEX/TW/JP <ul style="list-style-type: none"> • C15 PDU Jumper Cord (NA/MEX/TW/JP) 	JD374A#B2B
PDU CABLE ROW <ul style="list-style-type: none"> • C15 PDU Jumper Cord (ROW) 	JD374A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"> • NEMA L6-20P Cord (NA/MEX/JP/TW) 	JD374A#B2E

Configuration

HP 5500-24G-PoE+ EI Switch with 2 Interface Slots <ul style="list-style-type: none"> • 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 	JG241A See Configuration NOTE:1, 3
PDU CABLE NA/MEX/TW/JP <ul style="list-style-type: none"> • C15 PDU Jumper Cord (NA/MEX/TW/JP) 	JG241A#B2B
PDU CABLE ROW <ul style="list-style-type: none"> • C15 PDU Jumper Cord (ROW) 	JG241A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"> • NEMA L6-20P Cord (NA/MEX/JP/TW) 	JG241A#B2E
HP 5500-48G EI Switch <ul style="list-style-type: none"> • 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 	JD375A See Configuration NOTE:1, 3
PDU CABLE NA/MEX/TW/JP <ul style="list-style-type: none"> • C15 PDU Jumper Cord (NA/MEX/TW/JP) 	JD375A#B2B
PDU CABLE ROW <ul style="list-style-type: none"> • C15 PDU Jumper Cord (ROW) 	JD375A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"> • NEMA L6-20P Cord (NA/MEX/JP/TW) 	JD375A#B2E
HP 5500-48G-PoE+ EI Switch with 2 Interface Slots <ul style="list-style-type: none"> • 48 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 	JG240A See Configuration NOTE:1, 3

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)

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

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

Box Level Integration CTO Models

CTO Solution Sku

HP 55xx CTO Switch Solution JG506A

- SSP trigger sku

Configuration

CTO Base Sku

HP 5500-24G EI Switch <ul style="list-style-type: none"> • 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 	JD377A See Configuration NOTE:1, 3, 6, 7
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> • C15 PDU Jumper Cord (NA/MEX/TW/JP) 	JD377A#B2B
PDU Cable ROW <ul style="list-style-type: none"> • C15 PDU Jumper Cord (ROW) 	JD377A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"> • NEMA L6-20P Cord (NA/MEX/JP/TW) 	JD377A#B2E
HP 5500-24G-SFP EI Switch <ul style="list-style-type: none"> • 24 fixed Gigabit Ethernet SFP ports • 8 dual-personality ports; autosensing 10/100/1000Base-T or SFP • min=0 \ max=32 SFP Transceivers • 2 - port expansion module slots • 1 - JD362A - HP 5500 150WAC Power Supply Included • 1U - Height 	JD374A See Configuration NOTE:1, 3, 6, 7
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> • C15 PDU Jumper Cord (NA/MEX/TW/JP) 	JD374A#B2B
PDU Cable ROW <ul style="list-style-type: none"> • C15 PDU Jumper Cord (ROW) 	JD374A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"> • NEMA L6-20P Cord (NA/MEX/JP/TW) 	JD374A#B2E
HP 5500-24G-PoE+ EI Switch with 2 Interface Slots <ul style="list-style-type: none"> • 24 RJ-45 autosensing 10/100/1000 PoE+ ports • 4 dual-personality ports; autosensing10/100/1000Base-T or SFP • min=0 \ max=4 SFP Transceivers • 2 - port expansion module slots 	JG241A See Configuration NOTE:1, 3, 6, 7

Configuration

- 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)

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; 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, 6, 7

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 with 2 Interface Slots JG240A

- 48 RJ-45 autosensing 10/100/1000 PoE+ 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, 6, 7

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

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

Configuration

PDU Cable ROW	JG240A#B2C
<ul style="list-style-type: none"> C15 PDU Jumper Cord (ROW) 	
High Volt Switch to Wall Power Cord	JG240A#B2E
<ul style="list-style-type: none"> 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)

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

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

Configuration

HP 5500-24G EI Switch

- 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

JD377A

See Configuration
NOTE:1, 3, 10

PDU CABLE NA/MEX/TW/JP

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

JD377A#B2B

PDU CABLE ROW

- C15 PDU Jumper Cord (ROW)

JD377A#B2C

HP 5500-24G-SFP EI Switch

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

JD374A

See Configuration
NOTE:1, 3, 10

PDU CABLE NA/MEX/TW/JP

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

JD374A#B2B

PDU CABLE ROW

- C15 PDU Jumper Cord (ROW)

JD374A#B2C

HP 5500-24G-PoE+ EI Switch with 2 Interface Slots

- 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

JG241A

See Configuration
NOTE:1, 3, 10

PDU CABLE NA/MEX/TW/JP

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

JG241A#B2B

Configuration

PDU CABLE ROW	JG241A#B2C
<ul style="list-style-type: none"> C15 PDU Jumper Cord (ROW) 	
HP 5500-48G EI Switch	JD375A
<ul style="list-style-type: none"> 48 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, 10
PDU CABLE NA/MEX/TW/JPC	JD375A#B2B
<ul style="list-style-type: none"> 15 to C14 Jumper Cord (NA) 	
PDU CABLE ROW	JD375A#B2C
<ul style="list-style-type: none"> C15 PDU Jumper Cord (ROW) 	
HP 5500-48G-PoE+ EI Switch with 2 Interface Slots	JG240A
<ul style="list-style-type: none"> 48 RJ-45 autosensing 10/100/1000 PoE+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, 10
PDU CABLE NA/MEX/TW/JP	JG240A#B2B
<ul style="list-style-type: none"> C15 PDU Jumper Cord (NA/MEX/TW/JP) 	
PDU CABLE ROW	JG240A#B2C
<ul style="list-style-type: none"> C15 PDU Jumper Cord (ROW) 	

Configuration Rules:

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

HPE X120 1G SFP LC SX Transceiver	JD118B
HPE X120 1G SFP LC LX Transceiver	JD119B
HPE X120 1G SFP LC BX 10-U Transceiver	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X125 1G SFP LC LH40 1310nm Transceiver	JD061A

Configuration

HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X125 1G SFP LC LH70 Transceiver	JD063B
HPE X115 100M SFP LC FX Transceiver	JD102B
HPE X110 100M SFP LC LX Transceiver	JD120B
HPE X110 100M SFP LC LH40 Transceiver	JD090A
HPE X110 100M SFP LC LH80 Transceiver	JD091A
HPE 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 HPE 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.

Internal Power Supplies

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

HPE FlexNetwork 5500 150WDC Power Supply	JD366A See Configuration NOTE: 4
HPE X361 150W 48-60VDC to 12VDC Power Supply	JD366B See Configuration NOTE: 4
HP 5500 150WAC Power Supply <ul style="list-style-type: none"> includes 1 x c13, 910w 	JD362A See Configuration NOTE:2, 3, 4
PDU CABLE NA/MEX/TW/JP <ul style="list-style-type: none"> C15 PDU Jumper Cord (NA/MEX/TW/JP) 	JD362A#B2B

Configuration

PDU CABLE ROW	JD362A#B2C
<ul style="list-style-type: none"> C15 PDU Jumper Cord (ROW) 	
High Volt Switch to Wall Power Cord	JD362A#B2E
<ul style="list-style-type: none"> NEMA L6-20P Cord (NA/MEX/JP/TW) 	
HPE X361 150W 100-240VAC to 12VDC Power Supply	JD362B
<ul style="list-style-type: none"> includes 1 x c13, 910w 	See Configuration NOTE:2, 3, 4
PDU Cable NA/MEX/TW/JP	JD362B#B2B
<ul style="list-style-type: none"> C13 PDU Jumper Cord (NA/MEX/TW/JP) 	
PDU Cable ROW	JD362B#B2C
<ul style="list-style-type: none"> C13 PDU Jumper Cord (ROW) 	
High Volt Switch to Wall Power Cord	JD362B#B2E
<ul style="list-style-type: none"> HPE 2.3M C13 to NEMA L6-20P Power Cord (J9936A) 	
No Power Cord	JD362B#AC3
<ul style="list-style-type: none"> No Localized Power Cord Selected 	

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)

Modules

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

Configuration

HP 5500 2-port 10GbE XFP Module	JD359B
<ul style="list-style-type: none"> min=0 \ max=2 XFP Transceivers 	See Configuration NOTE:2, 5, 6
HP 5500 2-port 10GbE Local Connect Module	JD360B
<ul style="list-style-type: none"> min=0 \ max=2 CX4 Cables 	See Configuration NOTE:4, 5, 6
HP 5500 1-port 10GbE XFP Module	JD361B
<ul style="list-style-type: none"> min=0 \ max=1 XFP Transceivers 	See Configuration NOTE:2, 5, 6
HPE FlexNetwork 5500/5120 2-port 10GbE SFP+ Module	JD368B
<ul style="list-style-type: none"> min=0 \ max=2 SFP+ Transceivers 	See Configuration NOTE:1, 5, 6
HPE FlexNetwork 5500/4800 2-port GbE SFP Module	JD367A
<ul style="list-style-type: none"> min=0 \ max=2 SFP Transceivers 	See Configuration NOTE:3, 5, 6
HPE FlexNetwork 5500/5120 2-port 10GBASE-T Module	JG535A
<ul style="list-style-type: none"> No Transceivers 	See Configuration NOTE:5, 6

Configuration Rules:

Note 1	The following Transceivers install into this Module: (Use #OD1 or #B01 if switch is CTO)	
	HPE X130 10G SFP+ LC ER 40km Transceiver	JG234A
	HPE X130 10G SFP+ LC SR Transceiver	JD092B
	HPE X130 10G SFP+ LC LRM Transceiver	JD093B
	HPE X130 10G SFP+ LC LR Transceiver	JD094B
	HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
	HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
	HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
	HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
	HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
Note 2	The following Transceivers install into this Module: (Use #OD1 if switch is CTO)	
	HPE X135 10G XFP LC ER Transceiver	JD121A
	HPE X130 10G XFP LC LR Single Mode 10km 1310nm Transceiver	JD108B
	HPE X130 10G XFP LC SR Transceiver	JD117B
Note 3	The following Transceivers install into this Module: (Use #OD1 if switch is CTO)	
	HPE X120 1G SFP LC SX Transceiver	JD118B
	HPE X120 1G SFP LC LX Transceiver	JD119B
	HPE X120 1G SFP LC BX 10-U Transceiver	JD098B

Configuration

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

Note 4 The following Cables install into this Module: (Use #B01 if switch is CTO)

HPE X230 Local Connect 50cm CX4 Cable	JD363B
HPE X230 Local Connect 100cm CX4 Cable	JD364B
HPE 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 integrated into the switch, This Module must be ordered as #OD1 when the switch is not Factory Racked.

Note 6 If factory integrated into the switch, This Module must be ordered as #B01 when the switch is Factory Racked (Rack Level Integration CTO).

Transceivers

SFP Transceivers

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

SFP+ Transceivers

HPE X130 10G SFP+ LC ER 40km Transceiver	JG234A
HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LRM Transceiver	JD093B
HPE X130 10G SFP+ LC LR Transceiver	JD094B

Configuration

HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C

XFP Transceivers

HPE X130 10G XFP LC ZR Single Mode 80km 1550nm Transceiver	JD107A
HPE X130 10G XFP LC LR Single Mode 10km 1310nm Transceiver	JD108B
HPE X130 10G XFP LC SR Transceiver	JD117B
HPE 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

HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
HPE LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A

Switch Enclosure Options

External Redundant Power Supplies

HPE RPS 800 Redundant Power Supply	JD183A
<ul style="list-style-type: none"> Height = 1U includes 1 x c13 	See Configuration
	NOTE: 2, 4, 6
HPE RPS1600 Redundant Power System	JG136A
<ul style="list-style-type: none"> Height = 1U 	See

Configuration

includes 1 x c13, 1600w and Power Supply port

Configuration
NOTE:2, 3, 5

HPE RPS1600 1600W AC Power Supply

- Installs into JG136A only

JG137A
See
Configuration
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

HPE X290 1000 A JD5 2m RPS Cable

JD187A

HPE X290 1000 A JD5 NonPoE 2m RPS Cable

JD188A

HPE X290 1000 B JD5 2m RPS Cable

JD189A

HPE X290 500/800 1m RPS Cable

JD190A

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

Opacity Shield Kit

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

HP 5500/5120 Gig-T EI Opacity Shield Kit

- Supported on JG250A, JG251A

JG557A
See Configuration
NOTE:1

HP 5500/5120 Gig-T PoE EI Opacity Shield Kit

- Supported on JG252A, JG253A

JG559A
See Configuration
NOTE:1

HP 5500-24G-SFP EI Opacity Shield Kit

- Supported on JG249A

JG558A
See Configuration
NOTE:1

Configuration

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)

HPE 12mm x 60mm Tamper Evidence (30) Labels

- Supported on JG557A, JG559A or JG558A

JG585A
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 (JD377A)

I/O ports and slots	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 Supports a maximum of 24 autosensing 10/100/1000 ports										
Additional ports and slots	1 RJ-45 serial console port										
Physical characteristics	<table border="0"> <tr> <td style="vertical-align: top;">Dimensions</td> <td>17.32(w) x 11.81(d) x 1.72(h) in (44 x 30 x 4.36 cm) (1U height)</td> </tr> <tr> <td style="vertical-align: top;">Weight</td> <td>8.82 lb (4 kg)</td> </tr> </table>	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)						
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; Packet buffer size: 2 MB, 32 MB flash										
Mounting	Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included)										
Performance	<table border="0"> <tr> <td style="vertical-align: top;">1000 Mb Latency</td> <td>< 3.2 μs</td> </tr> <tr> <td style="vertical-align: top;">10 Gbps Latency</td> <td>< 2.6 μs</td> </tr> <tr> <td style="vertical-align: top;">Throughput</td> <td>up to 107.2 million pps</td> </tr> <tr> <td style="vertical-align: top;">Routing/Switching capacity</td> <td>144 Gbps</td> </tr> <tr> <td style="vertical-align: top;">Routing table size</td> <td>12000 entries (IPv4)</td> </tr> </table>	1000 Mb Latency	< 3.2 μ s	10 Gbps Latency	< 2.6 μ s	Throughput	up to 107.2 million pps	Routing/Switching capacity	144 Gbps	Routing table size	12000 entries (IPv4)
1000 Mb Latency	< 3.2 μ s										
10 Gbps Latency	< 2.6 μ s										
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Routing/Switching capacity	144 Gbps										
Routing table size	12000 entries (IPv4)										
Environment	<table border="0"> <tr> <td style="vertical-align: top;">Operating temperature</td> <td>32°F to 113°F (0°C to 45°C)</td> </tr> <tr> <td style="vertical-align: top;">Operating relative humidity</td> <td>10% to 90%, noncondensing</td> </tr> <tr> <td style="vertical-align: top;">Nonoperating/Storage temperature</td> <td>-40°F to 158°F (-40°C to 70°C)</td> </tr> <tr> <td style="vertical-align: top;">Nonoperating/Storage relative humidity</td> <td>5% to 95%, noncondensing</td> </tr> <tr> <td style="vertical-align: top;">Acoustic</td> <td>Low-speed fan: 42.6 dB, High-speed fan: 49.7 dB; ISO 7779</td> </tr> </table>	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: 42.6 dB, High-speed fan: 49.7 dB; ISO 7779
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: 42.6 dB, High-speed fan: 49.7 dB; ISO 7779										
Electrical characteristics	<table border="0"> <tr> <td style="vertical-align: top;">Frequency</td> <td>50/60 Hz</td> </tr> <tr> <td style="vertical-align: top;">Maximum heat dissipation</td> <td>375 BTU/hr (395.63 kJ/hr)</td> </tr> <tr> <td style="vertical-align: top;">Voltage</td> <td>100 - 240 VAC, rated</td> </tr> <tr> <td style="vertical-align: top;">Maximum power rating</td> <td>110 W</td> </tr> <tr> <td style="vertical-align: top;">Notes</td> <td>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.</td> </tr> </table>	Frequency	50/60 Hz	Maximum heat dissipation	375 BTU/hr (395.63 kJ/hr)	Voltage	100 - 240 VAC, rated	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.
Frequency	50/60 Hz										
Maximum heat dissipation	375 BTU/hr (395.63 kJ/hr)										
Voltage	100 - 240 VAC, rated										
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 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										

Technical Specifications

Services Refer to the Hewlett Packard Enterprise website at <http://www.hpe.com/networking/services> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office

HP 5500-48G EI Switch (JD375A)

I/O ports and slots	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); 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	
	Supports a maximum of 48 autosensing 10/100/1000 ports	
Additional ports and slots	1 RJ-45 serial console port	
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; Packet buffer size: 4 MB, 32 MB flash	
Mounting	Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included)	
Performance	1000 Mb Latency	< 3.2 μ s
	10 Gbps Latency	< 2.6 μ s
	Throughput	up to 142.9 million pps
	Routing/Switching capacity	192 Gbps
	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: 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, rated
	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; 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	

Technical Specifications

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 (JD374A)

I/O ports and slots

24 fixed Gigabit Ethernet SFP ports
8 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP
2 port expansion module slots

Additional ports and 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; Packet buffer size: 2 MB, 32 MB flash

Mounting

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

Performance

1000 Mb Latency < 3.2 μ s
10 Gbps Latency < 2.6 μ s
Throughput up to 107.2 million pps
Routing/Switching capacity 144 Gbps
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, rated
-48 to -60 VDC, rated
(depending on power supply chosen)
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.

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

Technical Specifications

	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)

I/O ports and slots	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 Supports a maximum of 48 autosensing 10/100/1000 ports	
Additional ports and slots	1 RJ-45 serial console port	
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; Packet buffer size: 4 MB, 32 MB flash	
Mounting	Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included)	
Performance	1000 Mb Latency	< 3.2 μ s
	10 Gbps Latency	< 2.6 μ s
	Throughput	up to 142.9 million pps
	Routing/Switching capacity	192 Gbps
	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: 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, rated
	Maximum power rating	661 W
	PoE power	370 W PoE+
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). With AC input, the maximum power consumption is 661 W; PoE is 370 W. With DC input, the maximum power consumption is 930 W; PoE is 740 W.

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
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)

I/O ports and slots	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 Supports a maximum of 24 autosensing 10/100/1000 ports
Additional ports and slots	1 RJ-45 serial console port
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; Packet buffer size: 2 MB, 32 MB flash
Mounting	Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included)
Performance	1000 Mb Latency < 3.2 μ s 10 Gbps Latency < 2.6 μ s Throughput up to 107.2 million pps Routing/Switching capacity 144 Gbps 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: 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, rated Maximum power rating 591 W PoE power 370 W

Technical Specifications

	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). With AC input, the maximum power consumption is 591 W; PoE is 370 W. 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	BGP (applies to all products in series) RFC 1657 Definitions of Managed Objects for BGPv4 RFC 1771 BGPv4 RFC 2858 BGP-4 Multi-Protocol Extensions	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
	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 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	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 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
	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	MIBs RFC 1212 Concise MIB Definitions RFC 1213 MIB II

Technical Specifications

IEEE 802.3ad Link Aggregation (LAG)	RFC 1493 Bridge MIB
IEEE 802.3ae 10-Gigabit Ethernet	RFC 1657 BGP-4 MIB
IEEE 802.3af Power over Ethernet	RFC 1724 RIPv2 MIB
IEEE 802.3i 10BASE-T	RFC 1757 Remote Network Monitoring MIB
IEEE 802.3u 100BASE-X	RFC 1850 OSPFv2 MIB
IEEE 802.3x Flow Control	RFC 2012 SNMPv2 MIB for TCP
IEEE 802.3z 1000BASE-X	RFC 2013 SNMPv2 MIB for UDP
RFC 768 UDP	RFC 2233 Interface MIB
RFC 791 IP	RFC 2452 IPV6-TCP-MIB
RFC 792 ICMP	RFC 2454 IPV6-UDP-MIB
RFC 793 TCP	RFC 2465 IPV6 MIB
RFC 854 TELNET	RFC 2466 ICMPv6 MIB
RFC 925 Multi-LAN Address Resolution	RFC 2571 SNMP Framework MIB
RFC 950 Internet Standard Subnetting Procedure	RFC 2572 SNMP-MPD MIB
RFC 951 BOOTP	RFC 2573 SNMP-Target MIB
RFC 1027 Proxy ARP	RFC 2574 SNMP USM MIB
RFC 1058 RIPv1	RFC 2618 RADIUS Authentication Client MIB
RFC 1122 Host Requirements	RFC 2620 RADIUS Accounting Client MIB
RFC 1141 Incremental updating of the Internet checksum	RFC 2665 Ethernet-Like-MIB
RFC 1213 Management Information Base for Network Management of TCP/IP-based internets	RFC 2674 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and Virtual Extensions
RFC 1256 ICMP Router Discovery Protocol (IRDP)	RFC 2737 Entity MIB (Version 2)
RFC 1305 NTPv3	RFC 2787 VRRP MIB
RFC 1350 TFTP Protocol (revision 2)	RFC 2819 RMON MIB
RFC 1519 CIDR	RFC 2925 Ping MIB
RFC 1542 BOOTP Extensions	RFC 3414 SNMP-User based-SM MIB
RFC 1723 RIP v2	RFC 3415 SNMP-View based-ACM MIB
RFC 1812 IPv4 Routing	RFC 4113 UDP MIB
RFC 1887 An Architecture for IPv6 Unicast Address Allocation	
RFC 2131 DHCP	Network management
RFC 2236 IGMP Snooping	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 2338 VRRP	IEEE 802.1D (STP)
RFC 2375 IPv6 Multicast Address Assignments	RFC 1157 SNMPv1
RFC 2616 HTTP Compatibility v1.1	RFC 1212 Concise MIB definitions
RFC 2644 Directed Broadcast Control	RFC 1215 SNMP Generic traps
RFC 2865 Remote Authentication Dial In User Service (RADIUS)	RFC 1757 RMON 4 groups: Stats, History, Alarms and Events
RFC 2866 RADIUS Accounting	RFC 1901 SNMPv2 Introduction
RFC 3246 Expedited Forwarding PHB	RFC 1918 Private Internet Address Allocation
RFC 3410 Applicability Statements for SNMP	RFC 2373 Remote Network Monitoring Management Information Base for High Capacity Networks
RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)	RFC 2571 An Architecture for Describing SNMP Management Frameworks
RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)	RFC 2572 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)
RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)	RFC 2573 SNMP Applications
RFC 3484 Default Address Selection for Internet Protocol version 6 (IPv6)	RFC 2574 SNMPv3 User-based Security Model (USM)
RFC 3493 Basic Socket Interface Extensions for IPv6	RFC 2575 SNMPv3 View-based Access Control Model (VACM)
RFC 3542 Advanced Sockets Application Program	RFC 2576 Coexistence between SNMP versions
	RFC 2578 SMIv2

Technical Specifications

Interface (API) for IPv6	RFC 2581 TCP6
RFC 3587 IPv6 Global Unicast Address Format	RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
RFC 3596 DNS Extensions to Support IP Version 6	RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations
RFC 3623 Graceful OSPF Restart	RFC 3176 sFlow
RFC 3704 Unicast Reverse Path Forwarding (URPF)	RFC 3410 Introduction to Version 3 of the Internet-standard Network Management Framework
RFC 3768 VRRP	RFC 3414 SNMPv3 User-based Security Model (USM)
RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6	RFC 3415 SNMPv3 View-based Access Control Model VACM)
RFC 4113 Management Information Base for the User Datagram Protocol (UDP)	ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
RFC 4213 Basic IPv6 Transition Mechanisms	SNMPv1/v2c/v3
RFC 4443 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6)	
Specification	
802.1r - GARP Proprietary Attribute Registration Protocol (GPRP)	
	OSPF
IP multicast	RFC 1587 OSPF NSSA
RFC 2236 IGMPv2	RFC 1850 OSPFv2 Management Information Base (MIB), traps
RFC 2710 Multicast Listener Discovery (MLD) for IPv6	RFC 2328 OSPFv2
RFC 2858 Multiprotocol Extensions for BGP-4	RFC 2370 OSPF Opaque LSA Option
RFC 3376 IGMPv3	RFC 3623 Graceful OSPF Restart
RFC 3569 An Overview of Source-Specific Multicast (SSM)	
RFC 3618 Multicast Source Discovery Protocol (MSDP)	QoS/CoS
RFC 3973 PIM Dense Mode	IEEE 802.1p (CoS)
RFC 4601 PIM Sparse Mode	RFC 2474 DSCP DiffServ
	RFC 2475 DiffServ Architecture
	RFC 2597 DiffServ Assured Forwarding (AF)
	RFC 2598 DiffServ Expedited Forwarding (EF)
	RFC 4594 Configuration Guidelines for DiffServ Service Classes
IPv6	Security
RFC 1881 IPv6 Address Allocation Management	IEEE 802.1X Port Based Network Access Control
RFC 1887 IPv6 Unicast Address Allocation Architecture	RFC 1492 TACACS+
RFC 1981 IPv6 Path MTU Discovery	RFC 1918 Address Allocation for Private Internets
RFC 2080 RIPng for IPv6	RFC 2865 RADIUS Authentication
RFC 2373 IPv6 Addressing Architecture	RFC 2866 RADIUS Accounting
RFC 2375 IPv6 Multicast Address Assignments	Access Control Lists (ACLs)
RFC 2460 IPv6 Specification	MAC Authentication
RFC 2461 IPv6 Neighbor Discovery	Port Security
RFC 2462 IPv6 Stateless Address Auto-configuration	SSHv2 Secure Shell
RFC 2463 ICMPv6	

Accessories

HPE 5500 EI Switch Series accessories

Modules

HPE 5500 2-port 10GbE XFP Module	JD359B
HPE 5500 2-port 10GbE Local Connect Module	JD360B
HPE 5500 1-port 10GbE XFP Module	JD361B
HPE FlexNetwork 5500/4800 2-port GbE SFP Module	JD367A
HPE FlexNetwork 5500/5120 2-port 10GbE SFP+ Module	JD368B
HPE FlexNetwork 5500/5120 2-port 10GBASE-T Module	JG535A
HPE FlexNetwork 5130/5510 10GBASE-T 2p Module	JH156A

Transceivers

HPE X115 100M SFP LC FX Transceiver	JD102B
HPE X110 100M SFP LC LX Transceiver	JD120B
HPE X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HPE X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HPE X125 1G SFP LC LH70 Transceiver	JD063B
HPE X120 1G SFP RJ45 T Transceiver	JD089B
HPE X120 1G SFP LC BX 10-U Transceiver	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X120 1G SFP LC SX Transceiver	JD118B
HPE X120 1G SFP LC LX Transceiver	JD119B
HPE X130 10G SFP+ LC SR Transceiver	JD092B
HPE X130 10G SFP+ LC LRM Transceiver	JD093B
HPE X130 10G SFP+ LC LR Transceiver	JD094B
HPE X130 10G SFP+ LC ER 40km Transceiver	JG234A
HPE X130 10G XFP LC LR Single Mode 10km 1310nm Transceiver	JD108B
HPE X130 10G XFP LC SR Transceiver	JD117B
HPE X135 10G XFP LC ER Transceiver	JD121A
HPE FlexNetwork X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HPE FlexNetwork X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HPE FlexNetwork X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C

Cables

HPE X230 Local Connect 100cm CX4 Cable	JD364B
HPE X230 CX4 to CX4 3m Cable	JD365A
HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
HPE LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A

Accessories

HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A
HPE X230 Local Connect 50cm CX4 Cable	JD363B

Power Supply

HPE RPS 800 Redundant Power Supply ¹	JD183A
HPE RPS1600 Redundant Power System ¹	JG136A
HPE RPS1600 1600W AC Power Supply ¹	JG137A

Power Cords and Adapters

HPE X290 1000 A JD5 2m RPS Cable	JD187A
HPE X290 1000 A JD5 NonPoE 2m RPS Cable	JD188A
HPE X290 1000 B JD5 2m RPS Cable	JD189A
HPE X290 500/800 1m RPS Cable	JD190A

HP 5500-24G-SFP EI Switch (JD374A)

HPE 5500 150WAC Power Supply ¹	JD362A
HPE FlexNetwork 5500 150WDC Power Supply ¹	JD366A
HPE X361 150W 100-240VAC to 12VDC Power Supply	JD362B
HPE X361 150W 48-60VDC to 12VDC Power Supply	JD366B

¹ Products covered by 1 year warranty. See details at <http://www.hpe.com/networking/warrantyquickref>

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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 Services	2 XFP 10-GbE ports; Duplex: full only 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 Services	1 XFP 10-GbE port; Duplex: full only Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office
HPE FlexNetwork 5500/4800 2-port GbE SFP Module (JD367A)	Ports Services	2 SFP 1000 Mbps ports Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office
HPE X125 1G SFP LC LH40 1310nm Transceiver (JD061A)	Ports Connectivity Physical characteristics Electrical characteristics Cabling	1 LC 1000Base-LH port (no IEEE standard exists for 1550 nm optics) Connector type LC Wavelength 1310 nm 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) Power consumption typical 0.8 W Power consumption maximum 1.0 W Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: <ul style="list-style-type: none"> 40km distance Fiber type Single Mode Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office
HPE X120 1G SFP LC LH40 1550nm Transceiver (JD062A)	Ports Connectivity	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics) Connector type LC Wavelength 1550 nm

Accessory Product Details

<p>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.</p>	<p>Physical characteristics</p> <p>Electrical characteristics</p> <p>Cabling</p>	<p>Dimensions 2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)</p> <p>Full configuration weight 0.04 lb. (0.02 kg)</p> <p>Power consumption typical 0.8 W</p> <p>Power consumption maximum 1.0 W</p> <p>Cable type: Single-mode fiber optic, complying with ITU-T G.652;</p> <p>Maximum distance:</p> <ul style="list-style-type: none"> 40km distance
<p>HPE X125 1G SFP LC LH70 Transceiver (JD063B)</p>	<p>Ports</p> <p>Connectivity</p> <p>Physical characteristics</p> <p>Electrical characteristics</p> <p>Cabling</p>	<p>1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics)</p> <p>Connector type LC</p> <p>Wavelength 1550 nm</p> <p>Dimensions 2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)</p> <p>Full configuration weight 0.04 lb. (0.02 kg)</p> <p>Power consumption typical 0.8 W</p> <p>Power consumption maximum 1.0 W</p> <p>Cable type: Single-mode fiber optic, complying with ITU-T G.652;</p> <p>Maximum distance:</p> <ul style="list-style-type: none"> 70km <p>Fiber type Single Mode</p>
<p>A small form-factor pluggable (SFP) Gigabit LH70 transceiver that provides a full-duplex Gigabit solution up to 70km on a single-mode fiber.</p>	<p>Services</p>	<p>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</p>
<p>HPE X120 1G SFP LC BX 10-U Transceiver (JD098B)</p>	<p>Ports</p> <p>Connectivity</p> <p>Physical characteristics</p> <p>Electrical characteristics</p>	<p>1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-U); Duplex: full only</p> <p>Connector type LC</p> <p>Dimensions 2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)</p> <p>Full configuration weight 0.04 lb. (0.02 kg)</p> <p>Power consumption typical 0.8 W</p> <p>Power consumption maximum 1.0 W</p>
<p>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</p>		

Accessory Product Details

cable.		maximum	
	Cabling	Maximum distance:	
		• 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	

HPE X120 1G SFP LC BX 10-D Transceiver (JD099B)	Ports	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-D); Duplex: full only	
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.	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:	
		• 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	

HPE X120 1G SFP LC SX Transceiver (JD118B)	Ports	1 LC 1000BASE-SX port	
A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550m on a Multimode fiber.	Connectivity	Connector type	LC
		Wavelength	850 nm
	Physical characteristics	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	Power consumption typical	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Maximum distance:	
		• FDDI Grade distance = 220m	
		• OM1 = 275m	
		• OM2 = 500m	
	• OM3 = Not Specified by standard		
	Cable length	up to 550m	
	Fiber type	Multi Mode	
Services	Refer to the Hewlett Packard Enterprise website at		

Accessory Product Details

<http://www.hpe.com/networking/services> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office

HPE X120 1G SFP LC LX Transceiver (JD119B)	Ports	1 SFP 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX)	
	Connectivity	Connector type	LC
A small form-factor pluggable (SFP) Gigabit LX transceiver that provides a full duplex Gigabit solution up to 550m on MMF or 10Km on SMF	Physical characteristics	Wavelength	1300 nm
		Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
	Electrical characteristics	Full configuration weight	0.04 lb. (0.02 kg)
		Power consumption typical	0.8 W
	Cabling	Power consumption maximum	1.0 W
		Cable type: Either single mode or multimode;	
	Services	Maximum distance: <ul style="list-style-type: none"> • 550m for Multimode • 10km for Singlemode 	
		Fiber type	Both
Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office			

HPE X120 1G SFP RJ45 T Transceiver (JD089B)	Ports	1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T)	
	Connectivity	Connector type	RJ-45
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: 1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;	
		Maximum distance: <ul style="list-style-type: none"> • 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			

HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	Cabling	Cable type: 50/125 μm (core/cladding) diameter, multimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for
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Accessory Product Details

(AJ833A)

distances of up to 300 m

Notes

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

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

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

Services

Refer to the Hewlett Packard Enterprise website at

<http://www.hpe.com/networking/services> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office

HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable
(AJ834A)

Cabling

Cable type:

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

Notes

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

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

- Dimensions: Core diameter: $50 \pm 3.0\mu\text{m}$ Cladding diameter: $125 \pm 2.0\mu\text{m}$ Coating diameter: $245 \pm 10\mu\text{m}$
- Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.
- Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links.
- CABLE: The cable is duplex zipcord graded index 50/125 μ m

Accessory Product Details

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

HPE LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable (AJ835A)

Cabling

Cable type:

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

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

Notes

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

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

Services

Refer to the Hewlett Packard Enterprise website at <http://www.hpe.com/networking/services> for details on the service-level descriptions and product numbers. For details about services and response

Accessory Product Details

times in your area, please contact your local Hewlett Packard Enterprise sales office

HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable (AJ836A)

Cabling

Cable type:

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

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

Notes

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

- Dimensions: Core diameter: $50 \pm 3.0\mu\text{m}$ Cladding diameter: $125 \pm 2.0\mu\text{m}$ Coating diameter: $245 \pm 10\mu\text{m}$
- Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.
- Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links.
- CABLE: The cable is duplex zipcord graded index 50/125 μm 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

HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable (AJ837A)

Cabling

Cable type:

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

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

Notes

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

- Dimensions: Core diameter: $50 \pm 3.0\mu\text{m}$ Cladding diameter: $125 \pm$

Accessory Product Details

- 2.0um Coating diameter: $245 \pm 10\mu\text{m}$
- Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.
- Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links.
- CABLE: The cable is duplex zipcord graded index 50/125um 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

HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable (AJ838A)

Cabling

Cable type:

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

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

Notes

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

- Dimensions: Core diameter: $50 \pm 3.0\mu\text{m}$ Cladding diameter: $125 \pm 2.0\mu\text{m}$ Coating diameter: $245 \pm 10\mu\text{m}$
- Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.
- Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links.
- CABLE: The cable is duplex zipcord graded index 50/125um 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 @

Accessory Product Details

- 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

HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable (AJ839A)

Cabling

Cable type:

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

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

Notes

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

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

Services

Refer to the Hewlett Packard Enterprise website at <http://www.hpe.com/networking/services> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office

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

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

- Core Diameter: 50 μ m \pm 3 μ m, Cladding diameter: 125 μ m \pm 2 μ m; Coating diameter: 245 \pm 10 μ m
- Bandwidth: 3000 MHz-km @ 850nm (Laser)

Accessory Product Details

- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths > 30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

Services

Refer to the Hewlett Packard Enterprise website at <http://www.hpe.com/networking/services> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office

HPE Premier Flex LC/LC Notes Multi-mode OM4 2 fiber 2m Cable (QK733A)

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

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

Services

Refer to the Hewlett Packard Enterprise website at <http://www.hpe.com/networking/services> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office

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

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

- Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: 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.

Accessory Product Details

Services

- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

Refer to the Hewlett Packard Enterprise website at

<http://www.hpe.com/networking/services> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office

HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable (QK735A) Notes

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

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

Services

Refer to the Hewlett Packard Enterprise website at

<http://www.hpe.com/networking/services> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office

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

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

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

Services

Refer to the Hewlett Packard Enterprise website at

<http://www.hpe.com/networking/services> for details on the service-level descriptions and product numbers. For details about services and response

Accessory Product Details

times in your area, please contact your local Hewlett Packard Enterprise sales office

HPE Premier Flex LC/LC Notes Multi-mode OM4 2 fiber 50m Cable (QK737A)

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

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

Services

Refer to the Hewlett Packard Enterprise website at <http://www.hpe.com/networking/services> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office

HPE RPS1600 Redundant Power System (JG136A)

Ports

8 redundant power supply ports
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

Idle power 38 W

Maximum power rating 3550 W

RPS power 3200 W

PoE power 2800 W

RPS -55 V

PoE -55 V

Accessory Product Details

		Frequency	50/60 Hz
		Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. 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
HPE 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)
		Operating temperature	14°F to 122°F (-10°C to 50°C)
	Environment	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 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:
03-Oct-2016	From Version 35 to 36	Added	SKUs added: JD362B, JD366B
		Changed	Technical Specifications updated
01-Aug-2016	From Version 34 to 35	Changed	Product descriptions updated.
			Configuration section and Accessories were updated
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.
			Features and Benefits was revised.
			Product overview was revised.
30-Sep-2013	From Version 21 to 22	Changed	Configuration was revised.
			Features and Benefits was revised.
			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
			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

Summary of Changes

			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.
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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