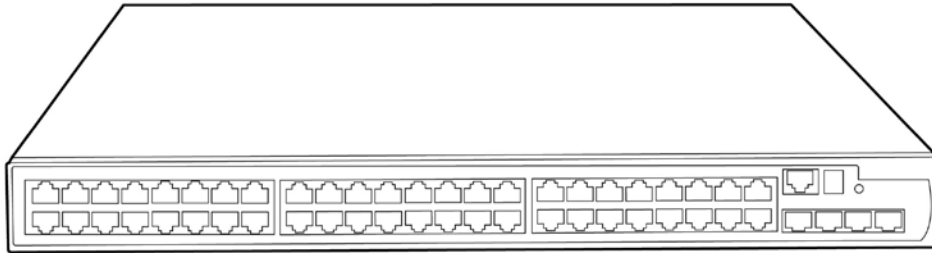
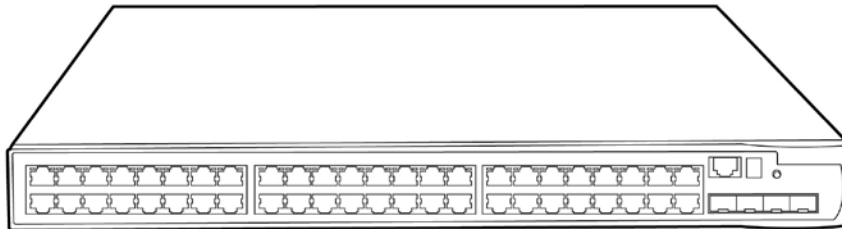


### Overview

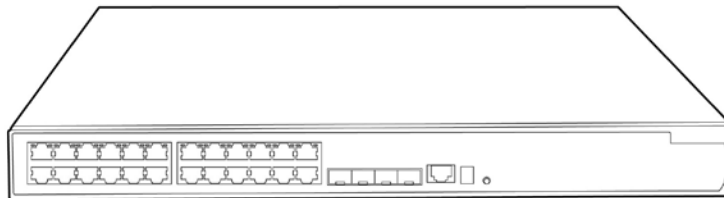
### HPE 5120 EI Switch Series



**HP 5120-48G EI Switch with 2 Interface Slots**

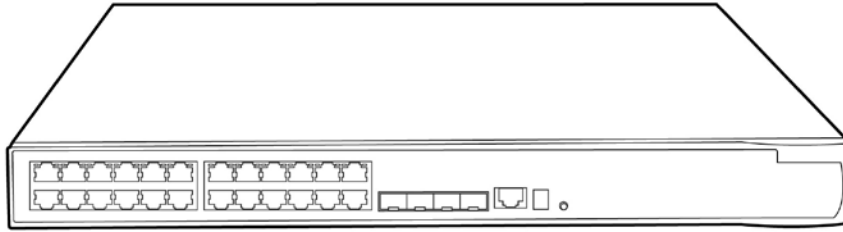


**HP 5120-48G EI Switch**

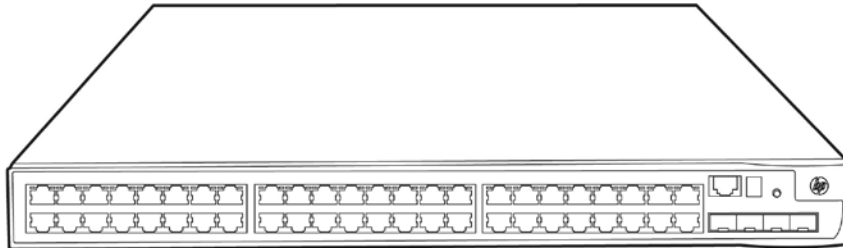


**HP 5120-24G EI Switch with 2 Interface Slots**

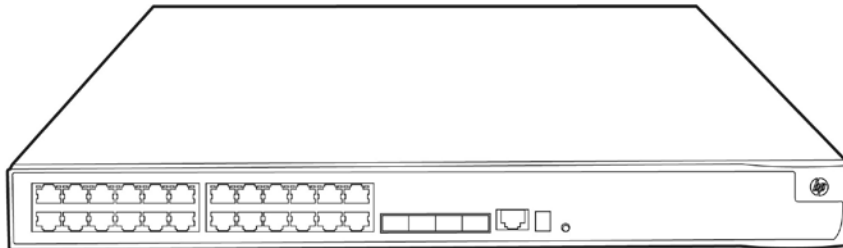
## Overview



**HP 5120-24G EI Switch**



**HP 5120-48G-PoE+ EI Switch with 2 Interface Slots**



**HP 5120-24G-PoE+ EI Switch with 2 Interface Slots**

## Models

HP 5120-48G EI Switch with 2 Interface Slots	JE069A
HP 5120-48G EI Switch	JE067A
HP 5120-24G EI Switch with 2 Interface Slots	JE068A
HP 5120-24G EI Switch	JE066A
HP 5120-48G-PoE+ EI Switch with 2 Interface Slots	JG237A
HP 5120-24G-PoE+ EI Switch with 2 Interface Slots	JG236A

## Key features

## Overview

- High scalability for investment protection
- Support for multiple services
- Comprehensive security control policies
- Diversified Quality of Service (QoS) policies
- Excellent manageability

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## Product overview

The HPE 5120 EI Switch Series is comprised of Gigabit Ethernet switches that support static Layer 3 routing, diversified services, and IPv6 forwarding, as well as provide up to four 10GbE Ethernet extended interfaces. Unique Intelligent Resilient Fabric (IRF) technology creates a virtual fabric by managing several switches as one logical device, which increases network resilience, performance, and availability, while reducing operational complexity. These switches provide Gigabit Ethernet access and can be used at the edge of a network or to connect server clusters in data centers. High scalability provides investment protection with two expansion slots, each of which can support two 10GbE expansion modules. High availability, simplified management, and comprehensive security control policies are among the key features that distinguish this series.

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## Features and benefits

### Quality of Service (QoS)

- **Broadcast control**  
allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic
- **Advanced classifier-based QoS**  
classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a port, VLAN, or whole switch
- **Powerful QoS feature**  
supports the following congestion actions: strict priority (SP) queuing, weighted round robin (WRR), and SP+WRR
- **Traffic policing**  
supports Committed Access Rate (CAR) and line rate

### Management

- **Friendly port names**  
allows assignment of descriptive names to ports
- **Remote configuration and management**  
enables configuration and management through a secure Web browser or a CLI located on a remote device
- **Manager and operator privilege levels**  
provides 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
- **Multiple configuration files**  
stores easily 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

## Overview

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, which prevents 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 enables network problem-solving; virtual cable tests provide visibility into cable problems

## 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
- **High-density connectivity**  
provides up to 48 fixed 10/100/1000BASE-T ports in a Layer 2/Layer 3 switch
- **Optional 10GbE 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
- **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 locatio
- **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 local stacking**  
achieves 12 Gb/s per connection when using local CX4 stacking, allowing for up to 96 Gb/s total stacking bandwidth (full duplex) in a resilient stacking configuration

## Performance

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

## Overview

### Resiliency and high availability

- **Separate data and control paths**  
separates control 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
- **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

### Layer 2 switching

- **16K MAC address table**  
provides access to many Layer 2 devices
- **VLAN support and tagging**  
supports IEEE 802.1Q with 4,094 simultaneous VLAN IDs
- **GARP VLAN Registration Protocol**  
allows automatic learning and dynamic assignment of VLANs
- **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
- **10GbE 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**  
controls and manages the flooding of multicast packets in a Layer 2 network
- **Per-VLAN Spanning Tree Plus (PVST+)**  
allows each VLAN to build a separate spanning tree to improve link bandwidth usage in network environments with multiple VLANs

### Layer 3 services

- **Address Resolution Protocol (ARP)**  
determines the MAC address of another IP host in the same subnet; supports static ARPs; gratuitous ARP allows detection of duplicate IP addresses; proxy ARP allows normal ARP operation between subnets or when subnets are separated by a Layer 2 network
- **Dynamic Host Configuration Protocol (DHCP)**  
simplifies the management of large IP networks; supports client; DHCP Relay enables DHCP operation across subnets
- **Loopback interface address**  
defines an address that can always be reachable, 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**

## Overview

provide more control during route redistribution; allow filtering and altering of route metrics

### Layer 3 routing

- **Static IP routing**  
provides manually configured routing for both IPv4 and IPv6 networks

### Security

- **Access control lists (ACLs)**  
provides IP Layer 2 to Layer 4 traffic filtering; supports global ACL, VLAN ACL, port ACL, and IPv6 ACL
- **IEEE 802.1X**  
industry-standard method of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server
- **MAC-based authentication**  
client is authenticated with the RADIUS server based on the client's MAC address
- **Identity-driven security and access control**
- **Per-user ACLs**  
permits or denies 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**  
delivers secure encryption of 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 attacks or configuration mistakes
- **DHCP protection**  
blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- **IP source guard**  
helps prevent IP spoofing attacks
- **Dynamic ARP protection**  
blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- **RADIUS/HWTACACS**  
eases switch management security administration by using a password authentication server

### Convergence

- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP)**  
facilitates easy mapping using network management applications with LLDP automated device discovery protocol
- **LLDP-MED**

## Overview

- 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

## 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**  
improves energy efficiency through the use of the latest advances in silicon development; shuts off unused ports and utilizes variable-speed fans, reducing energy costs
- **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.

### Standard Switch Chassis

HP 5120-24G EI Switch	JE066A
<ul style="list-style-type: none"> <li>• 24 RJ-45 autosensing 10/100/1000 ports</li> <li>• 4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP</li> <li>• min=0 \ max=4 SFP Transceivers</li> <li>• 0 port expansion module slots</li> <li>• Power supply included</li> <li>• 1U - Height</li> </ul>	See Configuration <b>NOTE:</b> 1, 3
PDU Cable NA/MEX/TW/JP	JE066A#B2B
<ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JE066A#B2C
<ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (ROW)</li> </ul>	
HP 5120-24G EI Switch with 2 Slots	JE068A
<ul style="list-style-type: none"> <li>• 24 RJ-45 autosensing 10/100/1000 ports</li> <li>• 4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP</li> <li>• min=0 \ max=4 SFP Transceivers</li> <li>• 2 port expansion module slots</li> <li>• Power supply included</li> <li>• 1U - Height</li> </ul>	See Configuration <b>NOTE:</b> 1, 3
PDU Cable NA/MEX/TW/JP	JE068A#B2B
<ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JE068A#B2C
<ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (ROW)</li> </ul>	
HP 5120-24G-PoE+ EI Switch w/2 Intf Slts	JG236A
<ul style="list-style-type: none"> <li>• 24 RJ-45 autosensing 10/100/1000 ports</li> <li>• 4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP</li> <li>• min=0 \ max=4 SFP Transceivers</li> <li>• 2 port expansion module slots</li> <li>• Power supply included</li> <li>• 1U - Height</li> </ul>	See Configuration <b>NOTE:</b> 1, 3



## Configuration

PDU Cable NA/MEX/TW/JP	JG236A#B2B
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JG236A#B2C
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	
HP 5120-48G EI Switch	JE067A
<ul style="list-style-type: none"> <li>48 RJ-45 autosensing 10/100/1000 ports</li> <li>4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP</li> <li>min=0 \ max=4 SFP Transceivers</li> <li>0 port expansion module slots</li> <li>Power supply included</li> <li>1U - Height</li> </ul>	See Configuration <b>NOTE:</b> 1, 3
PDU Cable NA/MEX/TW/JP	JE067A#B2B
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JE067A#B2C
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	
HP 5120-48G EI Switch with 2 Slots	JE069A
<ul style="list-style-type: none"> <li>48 RJ-45 autosensing 10/100/1000 ports</li> <li>4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP</li> <li>min=0 \ max=4 SFP Transceivers</li> <li>2 port expansion module slots</li> <li>Power supply included</li> <li>1U - Height</li> </ul>	See Configuration <b>NOTE:</b> 1, 3
PDU Cable NA/MEX/TW/JP	JE069A#B2B
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JE069A#B2C
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	
HP 5120-48G-PoE+ EI Switch w/2 Intf SIts	JG237A
<ul style="list-style-type: none"> <li>48 RJ-45 autosensing 10/100/1000 ports</li> <li>4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP</li> <li>min=0 \ max=4 SFP Transceivers</li> <li>2 port expansion module slots</li> <li>Power supply included</li> </ul>	See Configuration <b>NOTE:</b> 1, 3

## Configuration

- 1U - Height

PDU Cable NA/MEX/TW/JP

JG237A#B2B

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

PDU Cable ROW

JG237A#B2C

- C15 PDU Jumper Cord (ROW)

Configuration Rules:

Note 1	The following Transceivers install into this Switch	
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP RJ45 T Transceiver	JD089B
	HP X120 1G SFP LC BX 10-U Transceiver	JD098B
	HP X120 1G SFP LC BX 10-D Transceiver	JD099B
	HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
	HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
	HP X125 1G SFP LC LH70 Transceiver	JD063B

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

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)

## Box Level Integration CTO Models

### CTO Solution Sku

HP 51xx CTO Switch Solution

JG706A

- SSP trigger sku

### CTO Switch Chassis

HP 5120-24G EI Switch - CTO

JE066A

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP
- min=0 \ max=4 SFP Transceivers
- 0 port expansion module slots

See  
 Configuration  
**NOTE:** 1, 3, 5, 7

## Configuration

- 1 - Power Supply Included
- 1U - Height

PDU Cable NA/MEX/TW/JP JE066A#B2B

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

PDU Cable ROW JE066A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5120-24G EI Switch with 2 Slots - CTO JE068A

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

See  
Configuration  
**NOTE:** 1, 3, 5,7

PDU Cable NA/MEX/TW/JP JE068A#B2B

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

PDU Cable ROW JE068A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5120-24G-PoE+ EI Switch w/2 Intf Slts - CTO JG236A

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

See  
Configuration  
**NOTE:** 1, 3, 5,7

PDU Cable NA/MEX/TW/JP JG236A#B2B

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

PDU Cable ROW JG236A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5120-48G EI Switch - CTO JE067A

- 48 RJ-45 autosensing 10/100/1000 ports
- 4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP
- min=0 \ max=4 SFP Transceivers

See  
Configuration  
**NOTE:** 1, 3, 4,

## Configuration

<ul style="list-style-type: none"> <li>0 - port expansion module slots</li> <li>1 - Power Supply Included</li> <li>1U - Height</li> </ul>	5,7
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	JE067A#B2B
PDU Cable ROW <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	JE067A#B2C
HP 5120-48G EI Switch with 2 Slots - CTO <ul style="list-style-type: none"> <li>48 RJ-45 autosensing 10/100/1000 ports</li> <li>4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP</li> <li>min=0 \ max=4 SFP Transceivers</li> <li>2 - port expansion module slots</li> <li>1 - Power Supply Included</li> <li>1U - Height</li> </ul>	JE069A See Configuration <b>NOTE:</b> 1, 3, 5,7
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	JE069A#B2B
PDU Cable ROW <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	JE069A#B2C
HP 5120-48G-PoE+ EI Switch w/2 Intf Slts - CTO <ul style="list-style-type: none"> <li>48 RJ-45 autosensing 10/100/1000 ports</li> <li>4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP</li> <li>min=0 \ max=4 SFP Transceivers</li> <li>2 - port expansion module slots</li> <li>1 - Power Supply Included</li> <li>1U - Height</li> </ul>	JG237A See Configuration <b>NOTE:</b> 1, 3, 5,7
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	JG237A#B2B
PDU Cable ROW <ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	JG237A#B2C

### Configuration Rules:

Note 1 The following Transceivers install into this Switch: (Use #OD1 if switch is CTO)

## Configuration

HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X125 1G SFP LC LH70 Transceiver	JD063B

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

Note 5 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 #OD1 to be integrated to the CTO Chassis.

Note 7 If the Switch Chassis is to be Box Level Factory Integrated (CTO), Then the #OD1 is required on the Switch Chassis and integrated to the JG706A - HP 51xx CTO Enablement. (Min 1/Max 1 Switch per SSP)

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)

## Rack Level Integration CTO Models

### Switch Chassis

HP 5120-24G EI Switch JE066A  
 • 24 RJ-45 autosensing 10/100/1000 ports See  
 • 4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP Configuration  
 • min=0 \ max=4 SFP Transceivers **NOTE:** 1, 3, 10  
 • 0 port expansion module slots  
 • Power supply included  
 • 1U - Height

PDU Cable NA/MEX/TW/JP JE066A#B2B  
 • C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW JE066A#B2C  
 • C15 PDU Jumper Cord (ROW)

HP 5120-24G EI Switch with 2 Slots JE068A  
 • 24 RJ-45 autosensing 10/100/1000 ports See  
 • 4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP Configuration  
 • min=0 \ max=4 SFP Transceivers **NOTE:** 1, 3, 10

## Configuration

- 2 port expansion module slots
- Power supply included
- 1U - Height

PDU Cable NA/MEX/TW/JP JE068A#B2B

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

PDU Cable ROW JE068A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5120-24G-PoE+ EI Switch w/2 Intf Slts JG236A

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

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

PDU Cable NA/MEX/TW/JP JG236A#B2B

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

PDU Cable ROW JG236A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5120-48G EI Switch JE067A

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

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

PDU Cable NA/MEX/TW/JP JE067A#B2B

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

PDU Cable ROW JE067A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5120-48G EI Switch with 2 Slots JE069A

- 48 RJ-45 autosensing 10/100/1000 ports
- 4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SFP

See  
Configuration

## Configuration

- min=0 \ max=4 SFP Transceivers
- 2 port expansion module slots
- Power supply included
- 1U - Height

**NOTE:** 1, 3, 10

PDU Cable NA/MEX/TW/JP

JE069A#B2B

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

PDU Cable ROW

JE069A#B2C

- C15 PDU Jumper Cord (ROW)

HP 5120-48G-PoE+ EI Switch w/2 Intf Slts

JG237A

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

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

PDU Cable NA/MEX/TW/JP

JG237A#B2B

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

PDU Cable ROW

JG237A#B2C

- C15 PDU Jumper Cord (ROW)

### Configuration Rules:

Note 1 The following Transceivers install into this Switch:

HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X125 1G SFP LC LH70 Transceiver	JD063B

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

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

## Configuration

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)

## Switch Enclosure Options

### External/Redundant Power Supplies

HP RPS 800 Redundant Power Supply JD183A  
 • Height = 1U See  
 • includes 1 x c13, 800w Configuration  
**NOTE:** 2, 3

HP RPS1600 Redundant Power System JG136A  
 • Height = 1U See  
 • includes 1 x c13, 1600w and Power Supply port Configuration  
**NOTE:** 2, 3

HP RPS1600 1600W AC Power Supply JG137A  
 • Installs into JG136A only See  
Configuration  
**NOTE:** 1

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. (See Localization Menu for list.)

Note 3 Only 1 JD183A or JG136A can be connected per switch.

### External/Redundant Power Cables

HP X290 1000 A JD5 2m RPS Cable JD187A

HP X290 500/800 1m RPS Cable JD190A

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

## Modules

(Switch JE066x and JE067x ) No Modules supported

(All other Switches ) System (std 0 // max 2) User Selection (min 0 // max 2)

HP 5500 2-port 10GbE XFP Module JD359B



## Configuration

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

### Configuration Rules:

Note 1	The following Transceivers install into this Module: (Use #0D1 if switch is CTO)	
	HP X130 10G SFP+ LC ER 40km Transceiver	JG234A
	HP X130 10G SFP+ LC SR Transceiver	JD092B
	HP X130 10G SFP+ LC LRM Transceiver	JD093B
	HP X130 10G SFP+ LC LR Transceiver	JD094B
	HP X240 10G SFP+ to SFP+ 0.65m Direct Attach Copper Cable	JD095C
	HP X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
	HP X240 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	JD097C
	HP X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
	HP X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
	HP X240 10G SFP+ SFP+ 7m Direct Attach Copper Cable	JC784C
Note 2	The following Transceivers install into this Module: (Use #0D1 if switch is CTO)	
	HP X135 10G XFP LC ER Transceiver	JD121A
	HP X130 10G XFP LC LR Single Mode 10km 1310nm Transceiver	JD108B
	HP X130 10G XFP LC SR Transceiver	JD117B
Note 3	The following Transceivers install into this Module: (Use #0D1 if switch is CTO)	
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP RJ45 T Transceiver	JD089B
	HP X120 1G SFP LC BX 10-U Transceiver	JD098B
	HP X120 1G SFP LC BX 10-D Transceiver	JD099B

## Configuration

HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X120 1G SFP LC LH40 1550nm Transceiver	JD062A
HP X125 1G SFP LC LH70 Transceiver	JD063B

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

HP X230 Local Connect 50cm CX4 Cable	JD363B
HP X230 Local Connect 100cm CX4 Cable	JD364B
HP X230 CX4 to CX4 3m Cable	JD365A

**NOTE:** Two JD365A - HP X230 CX4 to CX4 3m Cable should be added by default if Module is selected.

Note 5 If factory intergrated into the switch, This Module must be ordered as #OD1 when the switch is not Factory Racked

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

## Transceivers

### SFP Transceivers

HP X120 1G SFP LC SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X120 1G SFP RJ45 T Transceiver	JD089B
HP X120 1G SFP LC BX 10-U Transceiver	JD098B
HP X120 1G SFP LC BX 10-D Transceiver	JD099B
HP X120 1G SFP LC LH40 1550nm XCVR	JD062A
HP X125 1G SFP LC LH40 1310nm Transceiver	JD061A
HP X125 1G SFP LC LH70 Transceiver	JD063B

### SFP+ Transceivers

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

## Configuration

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

## XFP Transceivers

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

## Cables

### Local Connect Cables

HP X230 Local Connect 50cm CX4 Cable	JD363B
HP X230 Local Connect 100cm CX4 Cable	JD364B
HP X230 CX4 to CX4 3m Cable	JD365A
HP X230 Local Connect 50cm CX4 Cable	JD363B
HP X230 Local Connect 100cm CX4 Cable	JD364B
HP X230 CX4 to CX4 3m Cable	JD365A

### Multi-Mode Cables

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

## Configuration

HP 50 m Multimode OM3 LC/LC FC Cable	AJ839A
HP Premier Flex LC/LC OM4 2f 1m Cbl	QK732A
HP Premier Flex LC/LC OM4 2f 2m Cbl	QK733A
HP Premier Flex LC/LC OM4 2f 5m Cbl	QK734A
HP Premier Flex LC/LC OM4 2f 15m Cbl	QK735A
HP Premier Flex LC/LC OM4 2f 30m Cbl	QK736A
HP Premier Flex LC/LC OM4 2f 50m Cbl	QK737A

## Opacity Shield Kit

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

HP 5500/5120 Gig-T EI Opcty Shld Kit	JG557A
<ul style="list-style-type: none"> <li>Supported on JG245A, JG246A</li> </ul>	See Configuration <b>NOTE: 1</b>

HP 5500/5120 Gig-T PoE EI Opcty Shld Kit	JG559A
<ul style="list-style-type: none"> <li>Supported on JG247A, JG248A</li> </ul>	See Configuration <b>NOTE: 1</b>

Configuration Rules:

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

## Tamper Evidence Labels

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

HP 12mm x 60mm Tmpr-Evidence (30) Lbl	JG585A
<ul style="list-style-type: none"> <li>Supported on JG557A or JG559A</li> </ul>	See Configuration <b>NOTE: 1</b>

Configuration Rules:

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

Remarks: Each JG557A or JG559A would use 1 of JG585A

## Technical Specifications

### HP 5120-48G EI Switch with 2 Interface Slots (JE069A)

<b>Ports</b>	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP 2 port expansion module slots 1 RJ-45 serial console port Supports a maximum of 48 autosensing 10/100/1000 ports												
<b>Physical characteristics</b>	<table border="0"> <tr> <td style="vertical-align: top;"><b>Dimensions</b></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;"><b>Weight</b></td> <td>11.02 lb. (5 kg)</td> </tr> </table>	<b>Dimensions</b>	17.32(w) x 11.81(d) x 1.72(h) in (44 x 30 x 4.36 cm) (1U height)	<b>Weight</b>	11.02 lb. (5 kg)								
<b>Dimensions</b>	17.32(w) x 11.81(d) x 1.72(h) in (44 x 30 x 4.36 cm) (1U height)												
<b>Weight</b>	11.02 lb. (5 kg)												
<b>Memory and processor</b>	128 MB SDRAM; Packet buffer size: 4 MB, 16 MB flash												
<b>Mounting</b>	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)												
<b>Performance</b>	<table border="0"> <tr> <td style="vertical-align: top;"><b>1000 Mb Latency</b></td> <td>&lt; 3.2 <math>\mu</math>s</td> </tr> <tr> <td style="vertical-align: top;"><b>10 Gbps Latency</b></td> <td>&lt; 2.6 <math>\mu</math>s</td> </tr> <tr> <td style="vertical-align: top;"><b>Throughput</b></td> <td>142.9 million pps</td> </tr> <tr> <td style="vertical-align: top;"><b>Routing/Switching capacity</b></td> <td>192 Gbps</td> </tr> <tr> <td style="vertical-align: top;"><b>Routing table size</b></td> <td>32 entries (IPv4)</td> </tr> </table>	<b>1000 Mb Latency</b>	< 3.2 $\mu$ s	<b>10 Gbps Latency</b>	< 2.6 $\mu$ s	<b>Throughput</b>	142.9 million pps	<b>Routing/Switching capacity</b>	192 Gbps	<b>Routing table size</b>	32 entries (IPv4)		
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<b>Electrical characteristics</b>	<table border="0"> <tr> <td style="vertical-align: top;"><b>Maximum heat dissipation</b></td> <td>495 BTU/hr (522.23 kJ/hr)</td> </tr> <tr> <td style="vertical-align: top;"><b>Voltage</b></td> <td>100 - 240 VAC, rated (depending on power supply chosen)</td> </tr> <tr> <td style="vertical-align: top;"><b>Idle power</b></td> <td>55 W</td> </tr> <tr> <td style="vertical-align: top;"><b>Maximum power rating</b></td> <td>145 W</td> </tr> <tr> <td style="vertical-align: top;"><b>Frequency</b></td> <td>50/60 Hz</td> </tr> <tr> <td style="vertical-align: top;"><b>Notes</b></td> <td>Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.</td> </tr> </table>	<b>Maximum heat dissipation</b>	495 BTU/hr (522.23 kJ/hr)	<b>Voltage</b>	100 - 240 VAC, rated (depending on power supply chosen)	<b>Idle power</b>	55 W	<b>Maximum power rating</b>	145 W	<b>Frequency</b>	50/60 Hz	<b>Notes</b>	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.
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<b>Notes</b>	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.												
<b>Safety</b>	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; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance												
<b>Emissions</b>	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-												

## Technical Specifications

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

### 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 5120-48G EI Switch (JE067A)

#### Ports

48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only

4 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP

1 RJ-45 serial console port

Supports a maximum of 48 autosensing 10/100/1000 ports

#### Physical characteristics

**Dimensions** 17.32(w) x 11.81(d) x 1.72(h) in (44 x 30 x 4.37 cm) (1U height)

**Weight** 11.02 lb. (5 kg)

#### Memory and processor

128 MB SRAM; Packet buffer size: 4 MB, 16 MB flash

#### Mounting

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

#### Performance

**1000 Mb Latency** < 3.2  $\mu$ s

**Throughput** 71.4 million pps

**Routing/Switching capacity** 96 Gbps

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

**10 Gbps Latency** < 2.6  $\mu$ s

#### 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

**Maximum heat dissipation** 375 BTU/hr (395.63 kJ/hr)

**Voltage** 100 - 240 VAC, rated  
(depending on power supply chosen)

**Idle power** 54 W

**Maximum power rating** 110 W

**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.

#### 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; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance

## Technical Specifications

<b>Emissions</b>	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
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

### HP 5120-24G EI Switch with 2 Interface Slots (JE068A)

<b>Ports</b>	24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP 2 port expansion module slots 1 RJ-45 serial console port
<b>Physical characteristics</b>	<b>Dimensions</b> 17.32(w) x 11.81(d) x 1.72(h) in (44 x 30 x 4.37 cm) (1U height) <b>Weight</b> 9.92 lb. (4.5 kg)
<b>Memory and processor</b>	128 MB SDRAM; Packet buffer size: 2 MB, 16 MB flash
<b>Mounting</b>	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
<b>Performance</b>	<b>1000 Mb Latency</b> < 3.2 $\mu$ s <b>10 Gbps Latency</b> < 2.6 $\mu$ s <b>Throughput</b> 107.2 million pps <b>Routing/Switching capacity</b> 144 Gbps <b>Routing table size</b> 32 entries (IPv4)
<b>Environment</b>	<b>Operating temperature</b> 32°F to 113°F (0°C to 45°C) <b>Operating relative humidity</b> 10% to 90%, noncondensing <b>Nonoperating/Storage temperature</b> -40°F to 158°F (-40°C to 70°C) <b>Nonoperating/Storage relative humidity</b> 5% to 95%, noncondensing <b>Acoustic</b> Low-speed fan: 42.6 dB, High-speed fan: 49.7 dB; ISO 7779
<b>Electrical characteristics</b>	<b>Maximum heat dissipation</b> 351 BTU/hr (370.3 kJ/hr) <b>Voltage</b> 100 - 240 VAC, rated (depending on power supply chosen) <b>Idle power</b> 36 W <b>Maximum power rating</b> 103 W <b>Frequency</b> 50/60 Hz <b>Notes</b> 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.

## Technical Specifications

<b>Safety</b>	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; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance
<b>Emissions</b>	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
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

### HP 5120-24G EI Switch (JE066A)

<b>Ports</b>	24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 dual-personality ports; auto-sensing 10/100/1000Base-T or SFP 1 RJ-45 serial console port
<b>Physical characteristics</b>	<b>Dimensions</b> 17.32(w) x 11.81(d) x 1.72(h) in (44 x 30 x 4.36 cm) (1U height) <b>Weight</b> 9.92 lb. (4.5 kg)
<b>Memory and processor</b>	128 MB SDRAM; Packet buffer size: 2 MB, 16 MB flash
<b>Mounting</b>	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
<b>Performance</b>	<b>1000 Mb Latency</b> < 3.2 $\mu$ s <b>Throughput</b> 35.7 million pps <b>Routing/Switching capacity</b> 48 Gbps <b>Routing table size</b> 32 entries (IPv4) <b>10 Gbps Latency</b> < 2.6 $\mu$ s
<b>Environment</b>	<b>Operating temperature</b> 32°F to 113°F (0°C to 45°C) <b>Operating relative humidity</b> 10% to 90%, noncondensing <b>Nonoperating/Storage temperature</b> -40°F to 158°F (-40°C to 70°C) <b>Nonoperating/Storage relative humidity</b> 5% to 95%, noncondensing <b>Acoustic</b> Low-speed fan: 42.6 dB, High-speed fan: 49.7 dB; ISO 7779
<b>Electrical characteristics</b>	<b>Maximum heat dissipation</b> 212 BTU/hr (223.66 kJ/hr) <b>Voltage</b> 100 - 240 VAC, rated (depending on power supply chosen) <b>Idle power</b> 35 W <b>Maximum power rating</b> 62 W <b>Frequency</b> 50/60 Hz <b>Notes</b> 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



## Technical Specifications

with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.

<b>Safety</b>	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; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance
<b>Emissions</b>	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
<b>Management</b>	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

### HP 5120-48G-PoE+ EI Switch with 2 Interface Slots (JG237A)

<b>Ports</b>	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; PoE auto-sensing 10/100/1000Base-T or SFP 2 port expansion module slots 1 RJ-45 serial console port Supports a maximum of 48 autosensing 10/100/1000 ports
<b>Physical characteristics</b>	<b>Dimensions</b> 17.32(w) x 16.54(d) x 1.72(h) in (43.99 x 42.01 x 4.37 cm) (1U height) <b>Weight</b> 16.53 lb. (7.5 kg)
<b>Memory and processor</b>	128 MB SDRAM; Packet buffer size: 4 MB, 16 MB flash
<b>Mounting</b>	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
<b>Performance</b>	<b>1000 Mb Latency</b> < 3.2 $\mu$ s <b>10 Gbps Latency</b> < 2.6 $\mu$ s <b>Throughput</b> 142.9 million pps <b>Routing/Switching capacity</b> 192 Gbps <b>Routing table size</b> 32 entries (IPv4)
<b>Environment</b>	<b>Operating temperature</b> 32°F to 113°F (0°C to 45°C) <b>Operating relative humidity</b> 10% to 90%, noncondensing <b>Nonoperating/Storage temperature</b> -40°F to 158°F (-40°C to 70°C) <b>Nonoperating/Storage relative humidity</b> 10% to 90%, noncondensing <b>Acoustic</b> Low-speed fan: 49.5 dB, High-speed fan: 54.1 dB; ISO 7779
<b>Electrical characteristics</b>	<b>Maximum heat dissipation</b> 2221 BTU/hr (2343.15 kJ/hr), Max heat dissipation for AC is 2221 BTU/hr and 3142 BTU/hr for RPS (Redundant Power Supply). <b>Voltage</b> 100 - 240 VAC, rated (depending on power supply chosen) <b>Idle power</b> 90 W <b>Maximum power rating</b> 651 W <b>PoE power</b> 370 W PoE+

## Technical Specifications

	<b>Frequency</b>	50/60 Hz
	<b>Notes</b>	<p>Idle power is the actual power consumption of the device with no ports connected.</p> <p>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.</p> <p>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).</p> <p>With AC input, the Max power consumption is 550 W (370 W for PoE).</p>
<b>Safety</b>		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; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance
<b>Emissions</b>		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
<b>Management Services</b>		IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

### HP 5120-24G-PoE+ EI Switch with 2 Interface Slots (JG236A)

<b>Ports</b>		<p>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+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only</p> <p>4 dual-personality ports; PoE auto-sensing 10/100/1000Base-T or SPF</p> <p>2 port expansion module slots</p> <p>1 RJ-45 serial console port</p>
<b>Physical characteristics</b>	<b>Dimensions</b>	17.32(w) x 16.54(d) x 1.72(h) in (43.99 x 42.01 x 4.37 cm) (1U height)
	<b>Weight</b>	15.43 lb. (7 kg)
<b>Memory and processor</b>		128 MB SDRAM; Packet buffer size: 2 MB, 16 MB flash
<b>Mounting</b>		Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
<b>Performance</b>	<b>1000 Mb Latency</b>	< 3.2 $\mu$ s
	<b>10 Gbps Latency</b>	< 2.6 $\mu$ s
	<b>Throughput</b>	107.2 million pps
	<b>Routing/Switching capacity</b>	144 Gbps
	<b>Routing table size</b>	32 entries (IPv4)
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C)
	<b>Operating relative humidity</b>	10% to 90%, noncondensing
	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Nonoperating/Storage relative humidity</b>	5% to 95%, noncondensing
	<b>Acoustic</b>	Low-speed fan: 4.1.5 dB, High-speed fan: 51.1 dB; ISO 7779

## Technical Specifications

<b>Electrical characteristics</b>	<p><b>Maximum heat dissipation</b> 1996 BTU/hr (2105.78 kJ/hr), Max heat dissipation for AC is 1996 BTU/hr and 1675 BTU/hr for RPS (Redundant Power Supply).</p> <p><b>Voltage</b> 100 - 240 VAC, rated (depending on power supply chosen)</p> <p><b>Idle power</b> 65 W</p> <p><b>Maximum power rating</b> 585 W</p> <p><b>PoE power</b> 370 W</p> <p><b>Frequency</b> 50/60 Hz</p> <p><b>Notes</b> 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.&amp;lt;br&gt;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 585W; 215W for system, 370W for PoE. With DC input, the maximum power consumption is 491W; 121W for system, 370W for PoE.</p>																																								
<b>Safety</b>	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; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance																																								
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<b>Standards and protocols</b> (applies to all products in series)	<table border="0"> <tr> <td style="vertical-align: top;"><b>Device management</b></td> <td style="vertical-align: top;"><b>IPv6</b></td> </tr> <tr> <td>RFC 1157 SNMPv1/v2c</td> <td>RFC 2461 IPv6 Neighbor Discovery</td> </tr> <tr> <td>RFC 1305 NTPv3</td> <td>RFC 2463 ICMPv6</td> </tr> <tr> <td>RFC 2573 (SNMPv3 Applications)</td> <td>RFC 3162 RADIUS and IPv6</td> </tr> <tr> <td>RFC 2819 (RMON groups Alarm, Event, History and Statistics only)</td> <td>RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses</td> </tr> <tr> <td>RFC 3416 (SNMP Protocol Operations v2)</td> <td>RFC 3315 DHCPv6 (client and relay)</td> </tr> <tr> <td>HTML and telnet management</td> <td></td> </tr> <tr> <td>Multiple Configuration Files</td> <td style="vertical-align: top;"><b>MIBs</b></td> </tr> <tr> <td>SNMP v3 and RMON RFC support</td> <td>RFC 1212 Concise MIB Definitions</td> </tr> <tr> <td>SSHv1/SSHv2 Secure Shell</td> <td>RFC 1213 MIB II</td> </tr> <tr> <td>TACACS/TACACS+</td> <td>RFC 1493 Bridge MIB</td> </tr> <tr> <td>Web UI</td> <td>RFC 1757 Remote Network Monitoring MIB</td> </tr> <tr> <td></td> <td>RFC 2096 IP Forwarding Table MIB</td> </tr> <tr> <td style="vertical-align: top;"><b>General protocols</b></td> <td>RFC 2233 Interface MIB</td> </tr> <tr> <td>IEEE 802.1ad Q-in-Q</td> <td>RFC 2571 SNMP Framework MIB</td> </tr> <tr> <td>IEEE 802.1D MAC Bridges</td> <td>RFC 2572 SNMP-MPD MIB</td> </tr> <tr> <td>IEEE 802.1p Priority</td> <td>RFC 2573 SNMP-Notification MIB</td> </tr> <tr> <td>IEEE 802.1Q VLANs</td> <td>RFC 2573 SNMP-Target MIB</td> </tr> <tr> <td>IEEE 802.1s Multiple Spanning Trees</td> <td>RFC 2574 SNMP USM MIB</td> </tr> <tr> <td>IEEE 802.1w Rapid Reconfiguration of Spanning</td> <td>RFC 2618 RADIUS Authentication Client MIB</td> </tr> </table>	<b>Device management</b>	<b>IPv6</b>	RFC 1157 SNMPv1/v2c	RFC 2461 IPv6 Neighbor Discovery	RFC 1305 NTPv3	RFC 2463 ICMPv6	RFC 2573 (SNMPv3 Applications)	RFC 3162 RADIUS and IPv6	RFC 2819 (RMON groups Alarm, Event, History and Statistics only)	RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses	RFC 3416 (SNMP Protocol Operations v2)	RFC 3315 DHCPv6 (client and relay)	HTML and telnet management		Multiple Configuration Files	<b>MIBs</b>	SNMP v3 and RMON RFC support	RFC 1212 Concise MIB Definitions	SSHv1/SSHv2 Secure Shell	RFC 1213 MIB II	TACACS/TACACS+	RFC 1493 Bridge MIB	Web UI	RFC 1757 Remote Network Monitoring MIB		RFC 2096 IP Forwarding Table MIB	<b>General protocols</b>	RFC 2233 Interface MIB	IEEE 802.1ad Q-in-Q	RFC 2571 SNMP Framework MIB	IEEE 802.1D MAC Bridges	RFC 2572 SNMP-MPD MIB	IEEE 802.1p Priority	RFC 2573 SNMP-Notification MIB	IEEE 802.1Q VLANs	RFC 2573 SNMP-Target MIB	IEEE 802.1s Multiple Spanning Trees	RFC 2574 SNMP USM MIB	IEEE 802.1w Rapid Reconfiguration of Spanning	RFC 2618 RADIUS Authentication Client MIB
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## Technical Specifications

Tree	RFC 2620 RADIUS Accounting Client MIB
IEEE 802.1X PAE	RFC 2665 Ethernet-Like-MIB
IEEE 802.3 Type 10BASE-T	RFC 2668 802.3 MAU MIB
IEEE 802.3ab 1000BASE-T	RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
IEEE 802.3ad Link Aggregation Control Protocol (LACP)	RFC 2737 Entity MIB (Version 2)
IEEE 802.3ae 10-Gigabit Ethernet	RFC 2819 RMON MIB
IEEE 802.3af Power over Ethernet	RFC 2863 The Interfaces Group MIB
IEEE 802.3i 10BASE-T	RFC 2925 Ping MIB
IEEE 802.3u 100BASE-X	RFC 3414 SNMP-User based-SM MIB
IEEE 802.3x Flow Control	RFC 3415 SNMP-View based-ACM MIB
IEEE 802.3z 1000BASE-X	RFC 3418 MIB for SNMPv3
RFC 768 UDP	RFC 3621 Power Ethernet MIB
RFC 783 TFTP Protocol (revision 2)	
RFC 791 IP	<b>Network management</b>
RFC 792 ICMP	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 793 TCP	RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
RFC 826 ARP	ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
RFC 854 TELNET	SNMPv1/v2c/v3
RFC 951 BOOTP	
RFC 1213 Management Information Base for Network Management of TCP/IP-based internets	<b>Security</b>
RFC 1305 NTPv3	IEEE 802.1X Port Based Network Access Control
RFC 1350 TFTP Protocol (revision 2)	RFC 1492 TACACS+
RFC 1519 CIDR	RFC 2138 RADIUS Authentication
RFC 1812 IPv4 Routing	RFC 2139 RADIUS Accounting
RFC 1866 Hypertext Markup Language - 2.0	RFC 2865 RADIUS (client only)
RFC 2131 DHCP	RFC 2866 RADIUS Accounting
RFC 2236 IGMP Snooping	Secure Sockets Layer (SSL)
RFC 2616 HTTP Compatibility v1.1	SSHv2 Secure Shell
RFC 2665 Definitions of Managed Objects for the Ethernet-like Interface Types	
RFC 2668 Definitions of Managed Objects for IEEE 802.3 Medium Attachment Units (MAUs)	
RFC 2865 Remote Authentication Dial In User Service (RADIUS)	
RFC 2866 RADIUS Accounting	
RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)	
RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)	
RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)	
RFC 4213 Basic IPv6 Transition Mechanisms	
802.1r - GARP Proprietary Attribute Registration Protocol (GPRP)	

## Accessories

### HPE 5120 EI Switch Series accessories

#### Modules

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

#### Transceivers

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

#### Cables

HP X230 CX4 to CX4 3m Cable	JD365A
HP 0.5 m Multimode OM3 LC/LC Optical Cable	AJ833A
HP 1 m Multimode OM3 LC/LC Optical Cable	AJ834A
HP 2 m Multimode OM3 LC/LC Optical Cable	AJ835A
HP 5 m Multimode OM3 LC/LC Optical Cable	AJ836A
HP 15 m Multimode OM3 LC/LC Optical Cable	AJ837A
HP 30 m Multimode OM3 LC/LC Optical Cable	AJ838A
HP 50 m Multimode OM3 LC/LC Optical Cable	AJ839A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A
HP X230 Local Connect 50cm CX4 Cable	JD363B

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**Accessories****Power Supply**

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

**Power Cords**

HP X290 1000 A JD5 2m RPS Cable	JD187A
HP X290 500/800 1m RPS Cable	JD190A

## Accessory Product Details

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

<b>HP 5500 2-port 10GbE XFP Module</b> (JD359B)	<b>Ports</b> <b>Services</b>	2 XFP 10-GbE ports; Duplex: full only Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
<b>HP 5500 1-port 10GbE XFP Module</b> (JD361B)	<b>Ports</b> <b>Services</b>	1 XFP 10-GbE port; Duplex: full only Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
<b>HP 5500/4800 2-port GbE SFP Module</b> (JD367A)	<b>Ports</b> <b>Services</b>	2 SFP 1000 Mbps ports Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
<b>HP X125 1G SFP LC LH40 1310nm Transceiver</b> (JD061A)	<b>Ports</b> <b>Connectivity</b> <b>Physical characteristics</b> <b>Electrical characteristics</b> <b>Cabling</b>	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"><li>40km distance</li></ul> Fiber type Single Mode Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
<b>HP X120 1G SFP LC LH40 1550nm Transceiver</b> (JD062A)	<b>Ports</b> <b>Connectivity</b>	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics) Connector type LC Wavelength 1550 nm

## Accessory Product Details

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.	<b>Physical characteristics</b>	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)
	<b>Electrical characteristics</b>	Power consumption typical	0.8 W
		Power consumption maximum	1.0 W
	<b>Cabling</b>	Cable type:	Single-mode fiber optic, complying with ITU-T G.652;
		Maximum distance:	<ul style="list-style-type: none"> <li>• 40km distance</li> </ul>
	<b>Services</b>	Fiber type	Single Mode
		Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

<b>HP X125 1G SFP LC LH70 Transceiver</b> (JD063B)  A small form-factor pluggable (SFP) Gigabit LH70 transceiver that provides a full-duplex Gigabit solution up to 70km on a single-mode fiber.	<b>Ports</b>	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics)	
	<b>Connectivity</b>	<b>Connector type</b>	LC
		<b>Wavelength</b>	1550 nm
	<b>Physical characteristics</b>	<b>Dimensions</b>	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		<b>Full configuration weight</b>	0.04 lb. (0.02 kg)
	<b>Electrical characteristics</b>	<b>Power consumption typical</b>	0.8 W
		<b>Power consumption maximum</b>	1.0 W
<b>Cabling</b>	Cable type:	Single-mode fiber optic, complying with ITU-T G.652;	
		Maximum distance:	<ul style="list-style-type: none"> <li>• 70km</li> </ul>
	<b>Services</b>	Fiber type	Single Mode
		Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

<b>HP X120 1G SFP LC SX Transceiver</b> (JD118B)  A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550m on a Multimode	<b>Ports</b>	1 LC 1000BASE-SX port	
	<b>Connectivity</b>	<b>Connector type</b>	LC
		<b>Wavelength</b>	850 nm
	<b>Physical characteristics</b>	<b>Dimensions</b>	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		<b>Full configuration weight</b>	0.04 lb. (0.02 kg)
	<b>Electrical characteristics</b>	<b>Power consumption typical</b>	0.8 W



## Accessory Product Details

fiber.		<b>Power consumption maximum</b>	1.0 W
	<b>Cabling</b>	Maximum distance:	
		• FDDI Grade distance = 220m	
		• OM1 = 275m	
		• OM2 = 500m	
		• OM3 = Not Specified by standard	
		Cable length	up to 550m
		Fiber type	Multi Mode
	<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

<b>HP X120 1G SFP LC LX Transceiver (JD119B)</b>  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	<b>Ports</b>	1 SFP 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX)	
	<b>Connectivity</b>	<b>Connector type</b>	LC
		<b>Wavelength</b>	1300 nm
	<b>Physical characteristics</b>	<b>Dimensions</b>	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		<b>Full configuration weight</b>	0.04 lb. (0.02 kg)
	<b>Electrical characteristics</b>	<b>Power consumption typical</b>	0.8 W
		<b>Power consumption maximum</b>	1.0 W
	<b>Cabling</b>	Cable type:	Either single mode or multimode;
		Maximum distance:	
		• 550m for Multimode	
	• 10km for Singlemode		
	Fiber type	Both	
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.		

<b>HP X120 1G SFP LC BX 10-U Transceiver (JD098B)</b>  A small form-factor pluggable (SFP) Gigabit LX-BX10-U transceiver that provides a full duplex Gigabit solution up to 10km on a single mode cable.	<b>Ports</b>	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-U); Duplex: full only		
	<b>Connectivity</b>	<b>Connector type</b>	LC	
	<b>Physical characteristics</b>	<b>Dimensions</b>	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)	
		<b>Full configuration weight</b>	0.04 lb. (0.02 kg)	
	<b>Electrical characteristics</b>	<b>Power consumption typical</b>	0.8 W	
		<b>Power consumption maximum</b>	1.0 W	
	<b>Cabling</b>	Maximum distance:		
		• 10km		

## Accessory Product Details

	<b>Notes</b>	Fiber type	Single Mode
	<b>Services</b>	TX 1310nm RX 1490nm	
		Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	
<b>HP X120 1G SFP LC BX 10-D Transceiver</b> (JD099B)	<b>Ports</b>	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-D); Duplex: full only	
	<b>Connectivity</b>	<b>Connector type</b>	LC
	<b>Physical characteristics</b>	<b>Dimensions</b>	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		<b>Full configuration weight</b>	0.04 lb. (0.02 kg)
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.	<b>Electrical characteristics</b>	<b>Power consumption typical</b>	0.8 W
		<b>Power consumption maximum</b>	1.0 W
	<b>Cabling</b>	Maximum distance: • Up to 10km	
		Fiber type	Single Mode
	<b>Notes</b>	TX 1490nm RX 1310nm	
	<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	
<b>HP X125 1G SFP RJ45 T Transceiver</b> (JD089B)	<b>Ports</b>	1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T)	
	<b>Connectivity</b>	<b>Connector type</b>	RJ-45
	<b>Physical characteristics</b>	<b>Dimensions</b>	2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm)
		<b>Full configuration weight</b>	0.07 lb. (0.03 kg)
	<b>Electrical characteristics</b>	<b>Power consumption typical</b>	0.8 W
		<b>Power consumption maximum</b>	1.0 W
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.	<b>Cabling</b>	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: • 100m	
	<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	
<b>HP 0.5 m Multimode OM3 LC/LC Optical Cable</b> (AJ833A)	<b>Cabling</b>	<b>Cable type:</b>	50/125 μm (core/cladding) diameter, multimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for

## Accessory Product Details

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  $\mu$ m fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.

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

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

#### Cable type:

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

#### Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

### Notes

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

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

## 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.

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

#### Cable type:

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

#### Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

### Notes

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

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

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

#### Notes

#### Cable type:

50/125  $\mu\text{m}$  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

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

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

#### Services

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

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

#### Notes

#### Cable type:

50/125  $\mu\text{m}$  (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

Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125  $\mu\text{m}$  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:  $125 \pm$

## Accessory Product Details

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

### Services

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

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

### Cabling

#### Cable type:

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

#### Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

### Notes

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

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

## 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.

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

### Cabling

#### Cable type:

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

#### Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

### Notes

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

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

### Services

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

### HP 0.5 m PremierFlex OM3+ LC/LC Optical Cable (BK837A)

### Notes

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

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

## Accessory Product Details

		<ul style="list-style-type: none"> <li>• Jacket Color: Blue</li> <li>• Jacket Material: Riser Grade - Low Smoke Zero Halogen (LSZH) thermoplastic.</li> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46</li> </ul>
	<p><b>Services</b></p>	<p>Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>
<p><b>HP 1 m PremierFlex OM3+ LC/LC Optical Cable</b> (BK838A)</p>	<p><b>Notes</b></p>	<p>Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.</p> <ul style="list-style-type: none"> <li>• Core Diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>• Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>• Jacket Color: Blue</li> <li>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul> <p><b>Services</b></p> <p>Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>
<p><b>HP 2 m PremierFlex OM3+ LC/LC Optical Cable</b> (BK839A)</p>	<p><b>Notes</b></p>	<p>Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.</p> <ul style="list-style-type: none"> <li>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>• Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>• Jacket Color: Blue</li> <li>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> </ul>



## Accessory Product Details

	<p><b>Services</b></p>	<ul style="list-style-type: none"> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul> <p>Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>
<p><b>HP 5 m PremierFlex OM3+ LC/LC Optical Cable (BK840A)</b></p>	<p><b>Notes</b></p> <p><b>Services</b></p>	<p>Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.</p> <ul style="list-style-type: none"> <li>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>• Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>• Jacket Color: Blue</li> <li>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul> <p>Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>
<p><b>HP 15 m PremierFlex OM3+ LC/LC Optical Cable (BK841A)</b></p>	<p><b>Notes</b></p> <p><b>Services</b></p>	<p>Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.</p> <ul style="list-style-type: none"> <li>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>• Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>• Jacket Color: Blue</li> <li>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul> <p>Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response</p>

## Accessory Product Details

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

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

#### Notes

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

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

#### Services

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

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

#### Notes

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

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

#### Services

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

### HP RPS1600 Redundant Ports Power System (JG136A)

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)

## Accessory Product Details

	<b>Weight</b>	14.11 lb. (6.4 kg)
	<b>Full configuration weight</b>	16.75 lb. (7.6 kg)
<b>Environment</b>	<b>Operating temperature</b>	14°F to 122°F (-10°C to 50°C)
	<b>Operating relative humidity</b>	5% to 95%
	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C)
	<b>Nonoperating/Storage relative humidity</b>	5% to 95%
	<b>Altitude</b>	up to 13,123 ft. (4 km)
	<b>Acoustic</b>	Pressure: 53 dB; ISO 7779, ISO 9296
<b>Electrical characteristics</b>	<b>Voltage</b>	100-120/200-240 VAC
	<b>Current</b>	30/60 A
	<b>Idle power</b>	38 W
	<b>Maximum power rating</b>	3550 W
	<b>RPS power</b>	3200 W
	<b>PoE power</b>	2800 W
	<b>RPS</b>	-55 V
	<b>PoE</b>	-55 V
	<b>Frequency</b>	50/60 Hz
	<b>Notes</b>	<p>Idle power is the actual power consumption of the device with no ports connected.</p> <p>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.</p> <p>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.</p>
<b>Safety</b>	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	
<b>Services</b>	<p>Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>	

<b>HP RPS1600 1600W AC Power Supply (JG137A)</b>	<b>Physical characteristics</b>	<b>Dimensions</b>	8.19(d) x 4.96(w) x 1.63(h) in. (20.8 x 12.6 x 4.15 cm)
	<b>Environment</b>	<b>Weight</b>	3.02 lb. (1.37 kg)
<b>Operating temperature</b>		14°F to 122°F (-10°C to 50°C)	
<b>Operating relative humidity</b>		5% to 95%	
		<b>Nonoperating/Storage</b>	-40°F to 158°F (-40°C to 70°C)

## Accessory Product Details

	<b>temperature</b>	
	<b>Nonoperating/Storage relative humidity</b>	5% to 95%
<b>Electrical characteristics</b>	<b>Voltage</b>	100-120/200-240 VAC
	<b>Current</b>	15/30 A
	<b>Maximum power rating</b>	1600 W
	<b>Frequency</b>	50/60 Hz
	<b>Notes</b>	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

## Summary of Changes

Date	Version History	Action	Description of Change
11-Dec-2015	From Version 30 to 31	Changed	Overview and Technical Specifications updated
12-Dec-2014	From Version 29 to 30	Changed	Fixed minor error on the Accessories section
01-Dec-2014	From Version 28 to 29	Changed	Warranty and support updated
03-Jul-2014	From Version 27 to 28	Changed	Configuration menu updated.
10-Jun-2014	From Version 26 to 27	Added	Added Opacity Shield Kit and Tamper Evidence Labels to Configuration.
15-Apr-2014	From Version 25 to 26	Changed	Notes section in Modules was revised in Configuration.
17-Feb-2014	From Version 24 to 25	Changed	Transceivers and Cables were revised.
17-Dec-2013	From Version 23 to 24	Changed	Modules were revised in Configuration.
09-Dec-2013	From Version 22 to 23	Changed	Notes were revised in Modules.
08-Nov-2013	From Version 21 to 22	Changed	Standard Switch Chassis, Box Level Integration CTO Models, Rack Level Integration Models, and Modules were revised in Configuration.
09-Oct-2013	From Version 20 to 21	Removed	HP X110 100M SFP LC FX Dual Mode Transceiver and HP X110 SFP LC LX10 Transceiver were removed.
30-Sep-2013	From Version 18 to 20	Changed	Notes sections were revised in Configuration HP 5500/5120 2p 10GBASE-T Module was added to Modules
19-Aug-2013	From Version 17 to 18	Changed	Notes section was revised in Box Level Integration CTO Models.
12-Jul-2013	From Version 16 to 17	Added	Acoustic was added to Technical Specifications.
05-Jul-2013	From Version 14 to 16	Added	Configuration Modules were added. Accessories section was added.
21-Jun-2013	From Version 13 to 14	Added	Per-VLAN Spanning Tree Plus was added to Layer 2 Switching RFC 2138 RADIUS Authentication and RFC 2139 RADIUS Accounting were added to Standards and Protocols
10-Jun-2013	From Version 12 to 13	Changed	Overview and Configuration were revised.
22-Apr-2013	From Version 11 to 12	Added	Overview: Added images.
25-Mar-2013	From Version 10 to 11	Added	Overview: Added Build to Order and Models to the Features and benefits section.
		Removed	Overview: Removed products from the Models section Completely removed the Accessories section from QS
07-Dec-2012	From Version 8 to 9	Changed	A PDF formatting issue was corrected.
14-May-2012	From Version 7 to 8	Changed	Features and Benefits, Accessories, and the weight and dimensions for each spec were revised.
26-Sep-2011	From Version 3 to 7	Changed	Model descriptions were revised.
30-Aug-2011	From Version 2 to 3	Added	New models were added.
14-Mar-2011	From Version 1 to 2	Changed	Updated the accessories section.

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## Summary of Changes



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