Overview

HP 3100 EI Switch Series

Models

HP 3100-8 v2 El Switch	JD318B
HP 3100-16 v2 El Switch	JD319B
HP 3100-24 v2 El Switch	JD320B
HP 3100-24-PoE v2 El Switch	JD313B
HP 3100-48 v2 Switch	JG315B

Key features

- Comprehensive security control policies
- High reliability with improved backup redundancy
- Simplified deployment and ease of use
- Highly expandable and highly reliable
- Diversified management modes and maintenance

Product overview

HP 3100 El series switches are Layer 2 Ethernet switches designed for enterprise networks demanding high security and intelligence. They provide 10/100 Mbps downlink and 1000 Mbps uplink Ethernet ports, and serve as access devices for 100 Mbps-to-desktop applications in enterprise networks. In metropolitan area networks or various industry networks, they connect end users or aggregate client devices with 10/100 Mbps connections, converging at a higher-capacity switch with 1000 Mbps interfaces. Features include advanced Quality of Service (QoS), rate limiting, QinQ (virtual LAN [VLAN]/VPN), SSHv2, Multicast VLAN Registration (MVR), Virtual Cable Tester (VCT), HGMP V2, GARP VLAN Registration Protocol (GVRP), access control list (ACL), media access control (MAC)-IP-port binding, Endpoint Admission Defense, voice and protocol-based VLAN, Internet Group Management Protocol snooping, and Power over Ethernet (PoE).

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 per-port or per-VLAN basis
- **Powerful QoS feature** supports the following congestion actions: strict priority queuing (SP), weighted round robin (WRR) queuing, and SP+WRR
- Traffic policing
 supports Committed Access Rate (CAR) and line rate

Management

- Friendly port names: allow assignment of descriptive names to ports
- Remote configuration and management: 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



Overview

- 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 network management applications
- Management VLAN
 segments traffic to and from management interfaces, including CLI/Telnet, a Web browser interface, and SNMP
- Local and Remote Intelligent Mirroring mirror traffic from a switch port to a local or remote switch port anywhere on the network; mirror ACL-selected traffic to a local switch port
- **Device Link Detection Protocol (DLDP)** monitors a cable between two switches and shuts down the ports on both ends if the cable is broken, preventing network problems such as loop
- **Troubleshooting** ingress and egress port monitoring enable network problem solving; virtual cable tests provide visibility into cable problems
- Stacking capability

single IP address management for a stack of up to 16 switches

Connectivity

- **NEW IPv6** (on v2 products):
 - o Telnet v6
 - to allow IPv6 management
 - DNSv6 Client
 - for IPv6 host management
 - o SNMPv6
 - for IPv6 switch management
 - DHCPv6 Client
 - for automatic IPv6 address configuration of a switch
- Auto-MDIX

automatically adjusts for straight-through or crossover cables on all 10/100 and 10/100/1000 ports

- Flow control
- provides back pressure using standard IEEE 802.3x, reducing congestion in heavy traffic situations
- Gigabit Ethernet uplinks

are dual-personality ports for either 10/100/1000 or mini-GBIC SFP connectivity for increased connectivity flexibility

- IEEE 802.3af Power over Ethernet (PoE)
 provides up to 15.4 W per port to IEEE 802.3af-compliant PoE-powered devices such as IP phones, wireless access points,
 and security cameras
- 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

Performance



Overview

- Hardware-based wire-speed access control lists (ACLs) help provide high levels of security and ease of administration without impacting network performance with a featurerich TCAM-based ACL implementation
- Gigabit Ethernet interface
 provides a connection to the network that eliminates the network as a bottleneck

Resiliency and high availability

- Separate data and control paths increase 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
- Port trunking

provides higher switch-to-switch throughput and link-level redundancy, with support for standards-based link aggregation (IEEE 802.3ad); supports up to 13 trunks, each with up to 8 links (ports) per trunk

• Device Link Detection Protocol (DLDP) monitors link connectivity and shuts down ports at both ends if unidirectional traffic is detected, preventing loops in STPbased networks

Layer 2 switching

- NEW PVST+ on v2 products provides greater interoperability
- 8K MAC addresses provide access to many Layer 2 devices
- VLAN support and tagging supports the IEEE 802.1Q, with 4,094 simultaneous VLAN IDs; supports port-based VLANs, MAC-based VLANs, and protocol-based VLANs
- 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 highspeed campus or metro network
- Gigabit Ethernet 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 control and manage the flooding of multicast packets in a Layer 2 network

Layer 3 services

- Address Resolution Protocol (ARP) determines the MAC address of another IP host in the same subnet
- Dynamic Host Configuration Protocol (DHCP) simplifies the management of large IP networks and supports client and server
- Loopback interface address defines an address in Routing Information Protocol (RIP) and Open Standard Path First (OSPF), improving diagnostic capability



Overview

Security

- Access control lists (ACLs)
- provide IP Layer 2 to Layer 4 traffic filtering; support global ACL, VLAN ACL, and IPv6 ACL
- Multiple user authentication methods:
 - IEEE 802.1X

uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards

- Web-based authentication provides a browser-based environment, similar to IEEE 802.1X, to authenticate clients that do not support the IEEE 802.1X supplicant
- MAC-based authentication
 - authenticates the client with the RADIUS server based on the client's MAC address

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 allowing 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
- Dynamic ARP protection
 blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- IP Source Guard filters packets on a per-port basis, which prevents illegal packets from being forwarded
- RADIUS/HWTACACS
 accor cwitch management cocurity administration by using a password authentication of the second sec

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

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



Overview

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

Multicast VLAN

allows multiple VLANs to receive the same IPv4 or IPv6 multicast traffic, lessening network bandwidth demand by reducing or eliminating multiple streams to each VLAN

 IGMP/MLD snooping effectively controls and manages the flooding of multicast packets in a Layer 2 network

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

Flexibility

• Fanless design enables quiet operation for deployment in open spaces (selected models)

Additional information

 Green initiative support provides support for RoHS and WEEE regulations
 Green IT and power

uses the latest advances in silicon development and shuts off unused ports to improve power efficiency

Warranty and support

• Limited Lifetime Warranty

Advance hardware replacement with next-business-day delivery (available in most countries). See www.hp.com/networking/warrantysummary for duration details.

- Electronic and telephone support limited electronic and business-hours telephone support is available from HP for the entire warranty period; to reach our support centers, refer to www.hp.com/networking/contact-support; for details on the duration of support provided with your product purchase, refer to www.hp.com/networking/warrantysummary
- Software releases

to find software for your product, refer to www.hp.com/networking/support; for details on the software releases available with your product purchase, refer to www.hp.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.

HP 3100-8 v2 El Switch	JD318B
8 autosensing 10/100 ports	See Configuration
• 1 dual-personality port; auto-sensing	Note:1, 3
• 10/100/1000BASE-T or SFP	
 min=0 \ max=1 SFP Transceiver 	
• 1U - Height	
HP 3100-16 v2 El Switch	JD319B
• 16 autosensing 10/100 ports	See Configuration
• 2 dual-personality port; auto-sensing 10/100/1000Base-T or SFP	Note:1, 3
 min=0 \ max=2 SFP Transceivers 	
• 1U - Height	
HP 3100-24-PoE v2 El Switch	JD313B
• 24 autosensing 10/100 PoE ports	See Configuration
• 2 dual-personality port; auto-sensing 10/100/1000Base-T or SFP	Note:1, 3
 min=0 \ max=2 SFP Transceivers 	
• 1U - Height	
HP 3100-24 v2 El Switch	JD320B
• 24 autosensing 10/100 ports	See Configuration
• 2 dual-personality port; auto-sensing 10/100/1000Base-T or SFP	Note:1, 3
 min=0 \ max=2 SFP Transceivers 	
• 1U - Height	
HP 3100-48 v2 Switch	JG315B
• 48 RJ-45 autosensing 10/100 ports	See Configuration
• 2 SFP dual-personality 10/100/1000 ports	Note:4, 5, 6
2 SFP fixed Gigabit Ethernet SFP ports	
 min=0 \ max=4 SFP Transceivers 	
• 1U - Height	
PDU Cable NA/MEX/TW/JP	JG315B#B2B
C15 PDU Jumper Cord (NA/MEX/TW/JP)	
PDU Cable ROW	JG315B#B2C
C15 PDU Jumper Cord (ROW)	
High Volt Switch/Router to Wall Power Cord	JG315B#B2E
NEMA L6-20P Cord (NA/MEX/JP/TW)	JG51551522
Configuration Rules:	
Note 1 The following Transceivers install into this switch:	
HP X115 100M SFP LC BX 10-U Transceiver	JD100A
HP X115 100M SFP LC BX 10-D Transceiver	JD101A
HP X115 100M SFP LC FX Transceiver	JD102B



Configuration

	HP X110 100M SFP LC LX Transceiver	JD120B
	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 SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
Note 3	Localization required. (See Localization Menu for list.)	
Note 4	The following Transceivers install into this switch: (SFP 1000 Mbps ports only)	
	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 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 SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
Note 5	Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord) o #B2E. (See Localization Menu)	r
Note 6	#B2E is Offered only in NA, Mexico, Taiwan and Japan.	
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 3100-48 v2 Switch • 48 RJ-45 autosensing 10/100 ports • 2 SFP dual-personality 10/100/1000 ports • 2 SFP fixed Gigabit Ethernet SFP ports • min=0 \ max=4 SFP Transceivers • 1U - Height	JG315B See Configuration Note:1, 3, 4, 5
 PDU Cable NA/MEX/TW/JP C15 PDU Jumper Cord (NA/MEX/TW/JP) 	JG315B#B2B
 PDU Cable ROW C15 PDU Jumper Cord (ROW) 	JG315B#B2C



Configuration

Configuration Rules:

Note 1	The following Transceivers install into this switch: (SFP 1000 Mbps ports only) HP X125 1G SFP LC LH40 1310nm Transceiver HP X120 1G SFP LC LH40 1550nm Transceiver HP X125 1G SFP LC LH70 Transceiver HP X120 1G SFP RJ45 T Transceiver HP X120 1G SFP LC BX 10-U Transceiver HP X120 1G SFP LC BX 10-D Transceiver HP X120 1G SFP LC SX Transceiver HP X120 1G SFP LC SX Transceiver	JD061A JD062A JD063B JD089B JD098B JD099B JD118B JD119B
Note 3	When Switches are Factory Racked, Then #B2B, or #B2C should be the Defaulted Power Cable option on the Switches.	
Note 4	Localization (Wall Power Cord) required on orders without #B2B, #B2C (PDU Power Cord). (See Localization Menu)	
Note 5	If the CTO Switch Chassis needs to be racked, Then the CTO Base Model needs to integrate (with #0D1) to the HP Network Rack.	
Remarks:		
	Drop down under power supply should offer the following options and results: Switch/Router/Power Supply to PDU Power Cord - #B2B in North America, Mexico, Taiwan, and Japan or #B2C ROW. (Watson Default B2B or B2C for Rack Level CTO) Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)	

Transceivers

SFP Transceivers

HP X125 1G SFP LC LH40 1310nm XCVR	JD061A
HP X120 1G SFP LC LH40 1550nm XCVR	JD062A
HP X125 1G SFP LC LH70 Transceiver	JD063B
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 SX Transceiver	JD118B
HP X120 1G SFP LC LX Transceiver	JD119B
HP X110 100M SFP LC BX 10-U Transceiver	JD100A
HP X110 100M SFP LC BX 10-D Transceiver	JD101A
HP X115 100M SFP LC FX Transceiver	JD102B
HP X110 100M SFP LC LX Transceiver	JD120B

Internal Power Supplies

No Power supplies



Configuration

Cables

Multi-Mode Cables

HP .5m Multi-mode OM3 LC/LC FC Cable HP 1m Multi-mode OM3 LC/LC FC Cable HP 2 m Multimode OM3 LC/LC FC Cable HP 5 m Multimode OM3 LC/LC FC Cable HP 15 m Multimode OM3 LC/LC FC Cable HP 30 m Multimode OM3 LC/LC FC Cable HP 50 m Multimode OM3 LC/LC FC Cable HP Premier Flex LC/LC OM4 2f 1m Cbl HP Premier Flex LC/LC OM4 2f 2m Cbl HP Premier Flex LC/LC OM4 2f 5m Cbl HP Premier Flex LC/LC OM4 2f 30m Cbl HP Premier Flex LC/LC OM4 2f 50m Cbl	AJ833A AJ834A AJ835A AJ836A AJ837A AJ838A AJ839A QK732A QK733A QK735A QK735A QK736A QK737A	
Switch Enclosure Options		
Stacking Cable kit		
HP 3600 Switch SFP Stacking Kit JD324B		
Mounting Kits		
HP 3100/4210-16 Rack Mount Kit	JD321A See Configuration Note:1	
HP 3100/4210-9 Rack Mount Kit	JD322A See Configuration Note:2	
Configuration Rules:		
Note 1 The following switches require this kit when mounting into a rack: HP 3100-16 v2 El Switch	JD319B	
Note 2 The following switches require this kit when mounting into a rack: HP 3100-8 v2 El Switch	JD318B	
Remark:		
The 24 and 48 port devices come with rack mount ears.		
External Redundant Power Supplies		

External Redundant Power Supplies

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



Configuration

HP RPS 800 Redundant Power SupplyJD183A• Height = 1USee Configuration• includes 1 x c13, 800wNote:1, 4			
HP RPS1600 Redundant Power SystemJG136A• Height = 1USee Configur• includes 1 x c13, 1600w and Power Supply portNote:2, 4			
HP RPS1600 1600W AC Power SupplyJG137A• Installs into JG136A onlySee Configura Note:3			
Configuratio	n Rules:		
Note 1	This power supply is support only on the following switches: HP 3100-48 v2 Switch	JG315B	
Note 2	This power supply is support only on the following switches: JD313B - HP 3100-24-PoE v2 EI Switch JG315B - HP 3100-48 v2 Switch		
HP 3100-24-PoE v2 El SwitchJD313BHP 3100-48 v2 SwitchJG315B			
Note 3 If this power supply is selected, The JG136A - HP A-RPS1600 Redundant Power System must be on order or onsite.			
Note 4 Localization required. (See Localization Menu for list.)			
External Redundant Power Cables			
System (std 0 // max 1) User Selection (min 0 / max 1) per RPS			
HP X290 100	HP X290 1000 A JD5 2m RPS Cable JD187A		
HP X290 500	HP X290 500 C 1m RPS Cable JD184A		

Technical Specifications

HP 3100-8 V2 EI Switch (JD318B)

I/O ports and slots B autosensing 10/100 ports (IEEE 802.3 Type 108ASE-T, IEEE 802.3 u Type 1008ASE-TX); Duplex: half or full 1 dual-personality port; auto-sensing 10/100/10008ase-T or SFP 1 RJ-45 serial console port Additional ports and slots 1 RJ-45 serial console port Physical characteristics 1 RJ-45 serial console port Physical characteristics 2 Requires angle mounting set (Far Size: 394 KB, 16 MB flash) Mounting and enclosure Requires angle mounting set (Far Size: 394 KB, 16 MB flash) Performance 100 Mb Latency < 5 (s) (64-byte packets) 100 Mb Latency < 5 (s) (64-byte packets) Routing/Switching 3.6 (bps capacity 6 contris (IPv4) MAC address table size 16 entries (IPv4) MAC address table size 16 entries (IPv4) MAC address table size 10 * 10 * 05%, noncondensing Haltive humidity 5% to 95%, noncondensing Haltive humidity 100 - 24				
Additional ports and lots 1RJ-45 serial console port Physical characteristics physical characteristics Immession 9.06(w) x 6.3(d) x 1.72(h) in (23.01 x 16 x 4.37 cm) (1U height) Performance Immession 9.06(w) x 6.3(d) x 1.72(h) in (23.01 x 16 x 4.37 cm) (1U height) Performance IZM MS SDRAN; Packets buffersize: 384 KB, 16 MB flash Performance 100 Mb Latency < 5 (s (64-byte packets)) Throughput u to 2.6 Mpps Routing/Soutching rapacity 3.6 Gbps Routing/Soutching rapacity 3.6 Gbps Routing/Soutching rapacity 3.20° (13.4° (14.4	I/O ports and slots			
Additional ports and lots 1RJ-45 serial console port Physical characteristics physical characteristics Immession 9.06(w) x 6.3(d) x 1.72(h) in (23.01 x 16 x 4.37 cm) (1U height) Performance Immession 9.06(w) x 6.3(d) x 1.72(h) in (23.01 x 16 x 4.37 cm) (1U height) Performance IZM MS SDRAN; Packets buffersize: 384 KB, 16 MB flash Performance 100 Mb Latency < 5 (s (64-byte packets)) Throughput u to 2.6 Mpps Routing/Soutching rapacity 3.6 Gbps Routing/Soutching rapacity 3.6 Gbps Routing/Soutching rapacity 3.20° (13.4° (14.4		1 dual-personality port; auto-sensing 10/100/1000Base-T or SFP		
slots Physical characteristics Dimensions Physical characteristics Dimensions Physical characteristics Dimensions Performance 128 MB SDRAM; Packet buffer size: 384 KB, 16 MB flash Mounting and enclosure Requires angle mounting set if rack mounted (not included) Performance 100 Mb Latency < G is (G4-byte packets) 100 Mb Latency				
Physical characteristics Dimensions 9.06(w) x 6.3(d) x 1.72(h) in (23.01 x 15 x 4.37 cm) (1U height) Weinyt 3.97 1b (1.8 kg) 3.97 1b (1.8 kg) Memory and processor 128 MB SDRAM; Packet buffer size: 384 KB, 16 MB flash Mounting and enclosure Requires angle mounting set if rack mounted (not included) Performance 100 Mb Latency < 6 µs (64-byte packets) 100 Mb Latency < 6 µs (64-byte packets) Throughput up to 2.6 Mpps Routing family Switching 3.6 Gbps capacity Routing family set is 28 Routing family set is 28 16 entries (IPv4) MAC address table size 8192 entries Environment Operating temperature 327 Fto 113°F (0°C to 45°C) Operating relative 10% to 95%, noncondensing relative humidity Nonoperating/Storage relative humidity S% to 55%, noncondensing Kettrical characteristics Maximum power rating and 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; IE C60950-1; CAN/CSA-2	Additional ports and	1 RJ-45 serial console port		
Weight 3.97 lb (1.8 kg) Memory and processor 128 MB SDRAM; Packet buffer size: 384 KB, 16 MB flash Mounting and enclosure Fequires angle mounting set if rack mounted (not included) Performance 100 Mb Latency < 5 µs (64-byte packets) 1000 Mb Latency < 5 µs (64-byte packets) Throughput up to 2.6 Mpps Routing/Switching 3.6 Gbps capacity 3.6 Gbps Routing/Switching 3.2 F to 113°F (0°C to 45°C) Operating table size 192 entries MAC address table size 3.97 b 13°F (-40°C to 70°C) Upgrating flative humidity 7.00% to 90%, noncondensing Nonoperating/Storage 5% to 55%, noncondensing relative humidity Nonoperating on power supply chosen) Maximum power rating on power supply chosen) Maximum power rating and maximum neat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PDE (ff equipped). 100% traffic, all ports plugged in, and all modules populated. Subchapter J; MON; ROBES UNCSA-1; EN 60825-1; EN 60825-1; EN 60825-1; EN 60825-1; EN 60825-1; EN 60950-1/A11; ED A 210; EN 6002-4-2; EN 61000-4-2; EN 61000-	slots			
Memory and processor 128 MB SDRAM; Packet buffer size: 384 KB, 16 MB flash Mounting and enclosure Requires angle mounting set if rack mounted (not included) Performance 100 Mb Latency < 6 µs (64-byte packets) Throughput up to 2.6 Mpps Routing/Switching 3.6 Gbps capacity Routing table size 16 entries (IPv4) MAC address table size 18 92 entries Environment Operating temperature 32°F to 113°F (0°C to 45°C) Operating formerature 32°F to 113°F (0°C to 70°C) temperature -40°F to 158°F (-40°C to 70°C) temperature 5% to 95%, noncondensing numidity S% to 95%, noncondensing relative humidity N/A (fanless) Electrical characteristics 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; ANICS	Physical characteristics	Dimensions	9.06(w) x 6.3(d) x 1.72(h) in (23.01 x 16 x 4.37 cm) (1U height)	
Mounting and enclosureRequires angle mounting set if rack mounted (not included)Performance100 Mb Latency< G (G4-byte packets)1000 Mb Latency< S (G4-byte packets)1000 Mb Latency< S (G4-byte packets)1000 Mb Latency< S (G4-byte packets)Throughputup to 2.6 MppsRouting/Switching3.6 GbpsCapacityBotting table sizeRouting table size16 entries (IPv4)MAC address table size8192 entriesEnvironmentOperating relativeNonoperating/Storage-40°F to 158°F (-40°C to 70°C)temperature30 fb%, noncondensingNonoperating/Storage-40°F to 158°F (-40°C to 70°C)temperature100 - 240 VAC, rateddissipation100 - 240 VAC, rateddissipation100 - 240 VAC, rateddissipation9 WFrequency50/60 HzNotesMaximum power ratingMaximu power rating9 WFrequency50/60 HzNotesMaximum power rating and maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.SafetyUL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; EE 60950-1; CAN/CSA-C22 > No 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR 2003; ETSI EN 300 386 VI.3.3; A/N/XS CISPR 22 Class A; ICSF 003 Class A; ANSI C63.42003; ETSI EN 300 386 VI.3.3; A/N/XS CISPR 22 Class A; ICSF 003 Class A; ANSI C63.42004; ETSI EN 300 386 VI.3.3; A/N/XS CISPR 22 Class A; ICSF 003 Class A; ANSI C63		Weight	3.97 lb (1.8 kg)	
Performance 100 Mb Latency < 6 µs (64-byte packets) 100 Mb Latency < 5µs (64-byte packets) 100 Mb Latency < 5µs (64-byte packets) Throughput up to 2.6 Mpps Routing/Switching 3.6 Gbps capacity 16 entries (IPv4) Routing table size 16 entries (IPv4) MAC address table size 16 entries Environment Operating temperature 32°F to 113°F (0°C to 45°C) Operating temperature 32°F to 113°F (°C to 45°C) Nonoperating/Storage -40°F to 158°F (-40°C to 70°C) temperature 5% to 95%, noncondensing Nonoperating/Storage -40°F to 158°F (-40°C to 70°C) relative humidity N/A (fanless) Electrical characteristics Maximum heat dissipation 100 - 240 VAC, rated Voltage 100 - 240 VAC, rated dissipation 9 W Frequency 50/60 Hz Notes Maximum power rating and maximum heat dissipation are the worst-case brootted Hooresto: Artel quipped), 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/A11; FDA 21 CFR Subchapter J; NOM; SAGS-22 Z Nos 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR <th>Memory and processor</th> <th>128 MB SDRAM; Packet buf</th> <th>ffer size: 384 KB, 16 MB flash</th>	Memory and processor	128 MB SDRAM; Packet buf	ffer size: 384 KB, 16 MB flash	
1000 Mb Latency< 5µs (64-byte packets)	Mounting and enclosure	Requires angle mounting s	et if rack mounted (not included)	
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Maximum power rating 9 W Frequency 50/60 Hz Notes Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. 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 Emissions FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-2; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-5; EN 61000-4-11; EN 61000-3-2; 2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A Management IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager Services Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please	Electrical characteristics		31 BTU/hr	
Frequency50/60 HzNotesMaximum 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.SafetyUL 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 ComplianceEmissionsFCC 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 61000-3-2; EN 61000-3-2; 2006; EN 611000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class AManagementIMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please		Voltage	•	
NotesMaximum 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.SafetyUL 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 ComplianceEmissionsFCC 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 61000-3-2; 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 AManagementIMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please		Maximum power rating	9 W	
theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.SafetyUL 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 ComplianceEmissionsFCC 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 61000-3-2; 2006; EN 61000-3-3:1995 +A1:2001 +A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class AManagementIMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please		Frequency	50/60 Hz	
IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS ComplianceEmissionsFCC 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 AManagementIMC - Intelligent Management Center; command-line interface; Web browser; SNMP ManagerServicesRefer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please		Notes	theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and	
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 AManagementIMC - Intelligent Management Center; command-line interface; Web browser; SNMP ManagerServicesRefer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please	Safety	IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR		
ServicesRefer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please	Emissions	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		
descriptions and product numbers. For details about services and response times in your area, please	Management	IMC - Intelligent Manageme	ent Center; command-line interface; Web browser; SNMP Manager	
	Services	descriptions and product numbers. For details about services and response times in your area, please		



Technical Specifications

HP 3100-16 V2 EI Switch (JD319B)		
Ports	16 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full		
	2 dual-personality ports; a	auto-sensing 10/100/1000Base-T or SFP	
	1 RJ-45 serial console por	t	
Physical characteristics	Dimensions	14.17(w) x 6.3(d) x 1.72(h) in (35.99 x 16 x 4.37 cm) (1U height)	
	Weight	5.51 lb (2.5 kg)	
Memory and processor	128 MB SDRAM, 16 MB flag	sh; packet buffer size: 384 KB	
Mounting	Requires angle mounting	set if rack mounted (not included)	
Performance	100 Mb Latency	< 6 µs (64-byte packets)	
	1000 Mb Latency	< 5µs (64-byte packets)	
	Throughput	up to 5.3 million pps	
	Routing/Switching capacity	7.2 Gbps	
	Routing table size	16 entries	
	MAC address table size	8192 entries	
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	N/A (fanless)	
Electrical characteristics	Maximum heat dissipation	41 BTU/hr	
	Voltage	100-240 VAC	
	Maximum power rating	12 W	
	Frequency	50/60 Hz	
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	
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		
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A		
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager		
Services	Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.		

HP 3100-24 V2 EI Switch (JD320B)

I/O ports and slots	24 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half
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Technical Specifications

	or full	
	2 dual-personality ports; auto-sensing 10/100/1000BASE-T or SFP	
Additional ports and slots	1 RJ-45 serial console port	
Physical characteristics	Dimensions	17.32(w) x 6.3(d) x 1.72(h) in (43.99 x 16 x 4.37 cm) (1U height)
	Weight	7.72 lb (3.5 kg)
Memory and processor	128 MB SDRAM; Packet bu	iffer size: 384 KB, 16 MB flash
Mounting and enclosure	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)	
Performance	1000 Mb Latency	< 6 µs (64-byte packets)
	10 Gbps Latency	< 5 µs (64-byte packets)
	Throughput	up to 6.5 Mpps
	Routing/Switching capacity	8.8 Gbps
	Routing table size	16 entries (IPv4)
	MAC address table size	8192 entries
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	N/A (fanless)
Electrical characteristics	Maximum heat dissipation	44 BTU/hr
	Voltage	100 - 240 VAC, rated
		(depending on power supply chosen
	Maximum power rating	13 W
	Frequency	50/60 Hz
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	UL 60950; NOM-019-SCFI Mexico; EN 60950: 2000, ZB and ZC Deviations; IEC 60950: 1999, Corr Feb 2000, all national deviations; AS/NZS 60950: 2000 Australia, Russian GOST Safety Approval	
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	
Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	

HP 3100-24-PoE v2 El Switch (JD313B)

I/O ports and slots

and slots 24 autosensing 10/100 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3af PoE); Duplex: half or full

2 dual-personality ports; auto-sensing 10/100/1000BASE-T or SFP



Technical Specifications

Additional ports and slots	1 RJ-45 serial console port		
Physical characteristics	Dimensions	17.32(w) x 16.54(d) x 1.72(h) in (44 x 42 x 4.36 cm) (1U height)	
	Weight	14.33 lb. (6.5 kg)	
Memory and processor	128 MB SDRAM; Packet bu	ffer size: 384 KB, 16 MB flash	
Mounting and enclosure	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)		
Performance	100 Mb Latency	< 6 µs (64-byte packets)	
	1000 Mb Latency	< 5 µs (64-byte packets)	
	Throughput	up to 6.5 Mpps	
	Routing/Switching capacity	8.8 Gbps	
	MAC address table size	8192 entries	
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: 42.2 dB, High-speed fan: 51.5 dB	
Electrical characteristics	Maximum heat dissipation	1586 BTU/hr (1673.23 kJ/hr)	
	Voltage	100 - 240 VAC, rated (depending on power supply chosen)	
	Maximum power rating	465 W	
	PoE power	370 W PoE	
	Frequency	50/60 Hz	
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. 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 DC input, the maximum power is 400 W; PoE power is 370 W.	
Safety	UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; ROHS Compliance		
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A		
Management	IMC – Intelligent Managem	ent Center; command-line interface; Web browser; SNMP Manager	
Services	Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.		

HP 3100-48 V2 Switch (JG315B)

I/O ports and slots	48 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX);
	Duplex: half or full



Technical Specifications

	2 SFP dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE- TX, IEEE 802.3ab Type 1000BASE-T)		
	4 SFP fixed Gigabit Ethernet SFP ports		
Additional ports and	1 RJ-45 serial console port		
slots	·		
Physical characteristics	Dimensions	17.32(w) x 10.24(d) x 1.72(h) in (43.99 x 26.01 x 4.37 cm) (1U height)	
	Weight	7.72 lb (3.5 kg)	
Memory and processor	256 MB SDRAM, 128 MB fla	ash; Packet buffer size: 4 MB	
Mounting and enclosure	Mounts in an EIA-standard	19 in. telco rack or equipment cabinet (hardware included)	
Performance	100 Mb Latency	< 6 µs (64-byte packets)	
	1000 Mb Latency	< 5 µs (64-byte packets)	
	Throughput	up to 13.1 Mpps	
	Routing/Switching capacity	17.6 Gbps	
	Routing table size	32 entries (IPv4)	
	MAC address table size	32000 entries	
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: 43.2 dB, High-speed fan: 50.0 dB	
Electrical characteristics	Maximum heat dissipation	140 BTU/hr	
	Voltage	100 - 240 VAC, rated (depending on power supply chosen)	
	Maximum power rating	41 W	
	Frequency	50/60 Hz	
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	
Safety	UL 60950; NOM-019-SCFI Mexico; EN 60950: 2000, ZB and ZC Deviations; IEC 60950: 1999, Corr Feb 2000, all national deviations; AS/NZS 60950: 2000 Australia, Russian GOST Safety Approval		
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A		
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager		
Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptins and product numbers. For details about services and response times in your area, please contact your local HP sales office.		
Standards and protocols (applies to all products in series)	General protocols IEEE 802.1ad Q-in-Q IEEE 802.1ag Service Laye IEEE 802.1D MAC Bridges IEEE 802.1p Priority	r OAM	



Technical Specifications

IEEE 802.10 VLANs IEEE 802.1s (MSTP) IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.1X PAE IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3af Power over Ethernet IEEE 802.3i 10BASE-T IEEE 802.3u 100BASE-X IEEE 802.3x Flow Control IEEE 802.3z 1000BASE-X **RFC 768 UDP** RFC 783 TFTP Protocol (revision 2) **RFC 791 IP** RFC 792 ICMP **RFC 793 TCP** RFC 826 ARP **RFC 854 TELNET RFC 951 BOOTP** RFC 959 File Transfer Protocol (FTP)

MIBs

IEEE 8021-PAE-MIB IEEE 8023-LAG-MIB RFC 1213 MIB II RFC 1493 Bridge MIB RFC 2011 SNMPv2 MIB for IP RFC 2013 SNMPv2 MIB for UDP RFC 2233 Interface MIB **RFC 2273 SNMP-NOTIFICATION-MIB** RFC 2571 SNMP Framework MIB RFC 2572 SNMP-MPD MIB **RFC 2573 SNMP-Notification MIB RFC 2618 RADIUS Authentication Client MIB RFC 2620 RADIUS Accounting Client MIB** RFC 2665 Ethernet-Like-MIB RFC 2674 802.1p and IEEE 802.1Q Bridge MIB RFC 2819 RMON MIB RFC 2925 Ping MIB RFC 3414 SNMP-User based-SM MIB RFC 3418 MIB for SNMPv3 **RFC 3621 Power Ethernet MIB** RFC 3826 AES for SNMP's USM MIB RFC 4133 Entity MIB (Version 3) LLDP-EXT-DOT1-MIB LLDP-EXT-DOT3-MIB LLDP-MIB

IPv6

RFC 1881 IPv6 Address Allocation Management (v2 models only) RFC 1887 IPv6 Unicast Address Allocation Architecture (v2 models only) RFC 1981 IPv6 Path MTU Discovery (v2 models only) RFC 2080 RIPng for IPv6 (v2 models only) RFC 2373 IPv6 Addressing Architecture (v2 models only) RFC 2375 IPv6 Multicast Address Assignments (v2 models only) RFC 2460 IPv6 Specification (v2 models only) RFC 2461 IPv6 Neighbor Discovery (v2 models only)



Technical Specifications

RFC 2462 IPv6 Stateless Address Auto-configuration (v2 models only) RFC 2463 ICMPv6 (v2 models onlv) RFC 2464 Transmission of IPv6 over Ethernet Networks (v2 models only) RFC 2475 IPv6 DiffServ Architecture (v2 models only) RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers (v2 models only) RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only) (v2 models only) RFC 2925 Remote Operations MIB (Ping only) (v2 models only) RFC 3056 Connection of IPv6 Domains via IPv4 Clouds (v2 models only) RFC 3162 RADIUS and IPv6 (v2 models only) RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses (v2 models only) RFC 3307 IPv6 Multicast Address Allocation (v2 models only) RFC 3315 DHCPv6 (client and relay) (v2 models only) RFC 3484 Default Address Selection for IPv6 (v2 models only) RFC 3493 Basic Socket Interface Extensions for IPv6 (v2 models only) RFC 3513 IPv6 Addressing Architecture (v2 models only) RFC 3542 Advanced Sockets API for IPv6 (v2 models only) RFC 3587 IPv6 Global Unicast Address Format (v2 models only) RFC 3596 DNS Extension for IPv6 (v2 models only) RFC 4113 MIB for UDP (v2 models only) RFC 4443 ICMPv6 (v2 models only)

MIBs

IEEE 8021-PAE-MIB IEEE 8023-LAG-MIB RFC 1213 MIB II RFC 1493 Bridge MIB RFC 2011 SNMPv2 MIB for IP RFC 2013 SNMPv2 MIB for UDP RFC 2233 Interface MIB **RFC 2273 SNMP-NOTIFICATION-MIB RFC 2571 SNMP Framework MIB** RFC 2572 SNMP-MPD MIB RFC 2573 SNMP-Notification MIB RFC 2618 RADIUS Authentication Client MIB **RFC 2620 RADIUS Accounting Client MIB** RFC 2665 Ethernet-Like-MIB RFC 2674 802.1p and IEEE 802.10 Bridge MIB RFC 2819 RMON MIB RFC 2925 Ping MIB RFC 3414 SNMP-User based-SM MIB RFC 3418 MIB for SNMPv3 RFC 3621 Power Ethernet MIB RFC 3826 AES for SNMP's USM MIB RFC 4133 Entity MIB (Version 3) LLDP-EXT-DOT1-MIB LLDP-EXT-DOT3-MIB LLDP-MIB

Network management

IEEE 802.1AB Link Layer Discovery Protocol (LLDP) RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events) ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED) SNMPv1/v2c/v3



Technical Specifications

QoS/CoS IEEE 802.1P (CoS) RFC 2474 DSCP DiffServ



Accessories

HP 3100 El Switch Series	Transceivers	
accessories	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 SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X120 1G SFP RJ45 T Transceiver	JD089B
	Cables	
	HP 3600 Switch SFP Stacking Kit	JD324B
	HP LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
	HP LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
	HP LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
	HP LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
	HP LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
	HP LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
	HP LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A
	Power Supply	
	HP RPS1600 Redundant Power System	JG136A
	HP RPS1600 1600W AC Power Supply	JG137A
	Mounting Kit	
	HP 3100/4210-16 Rack Mount Kit	JD321A
	HP 3100/4210-9 Rack Mount Kit	JD322A
	HP 3100/4210-16/-8 PoE Rack Mount Kit	JD323A
	Power cords	
	HP X290 500 C 1 m RPS Cable	JD184A
	HP X290 1000 A JD5 2m RPS Cable	JD187A
	HP 3100-24-PoE v2 El Switch (JD313B)	
	HP X115 100M SFP LC FX Transceiver	JD102B
	HP X110 100M SFP LC LX Transceiver	JD120B
	HP 3100-48 V2 Switch (JG315B)	
	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 RJ45 T Transceiver	JD089B



HP X120 1G SFP LC BX 10- U Transceiver (JD098B)	Ports	1 LC 1000BASE-BX10 port full only	(IEEE 802.3ah Type 1000BASE-BX10-U); Duplex:
	Connectivity	Connector type	LC
A small form-factor pluggable (SFP) Gigabit LX-BX10-U transceiver	Physical characteristics	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
that provides a full duplex		Full configuration weight	0.04 lb. (0.02 kg)
Gigabit solution up to 10km on a single mode	Electrical characteristics	Power consumption typical	0.8 W
cable.		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • 10km	
		Fiber type	Single Mode
	Notes	TX 1310nm RX 1490nm	
	Services	on the service-level descrip	www.hp.com/networking/services for details ptions and product numbers. For details about as in your area, please contact your local HP
HP X120 1G SFP LC BX 10- D Transceiver (JD099B)	Ports	1 LC 1000BASE-BX10 port full only	(IEEE 802.3ah Type 1000BASE-BX10-D); Duplex:
	Connectivity	Connector type	LC
A small form-factor pluggable (SFP) Gigabit LX-BX10-D transceiver	Physical characteristics	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
that provides a full duplex		Full configuration weight	0.04 lb. (0.02 kg)
Gigabit solution up to 10km on a single mode	Electrical characteristics	Power consumption typical	0.8 W
cable.		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • Up to 10km	
		Fiber type	Single Mode
	Notes	TX 1490nm RX 1310nm	
	Services	the service-level description	www.hp.com/networking/services for details on ons and product numbers. For details about es in your area, please contact your local HP
HP X120 1G SFP LC SX	Ports	1 LC 1000BASE-SX port	
Transceiver (JD118B)	Connectivity	Connector type	LC
A small form-factor		Wavelength	850 nm
pluggable (SFP) Gigabit SX transceiver that provides	Physical characteristics	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
a full-duplex Gigabit		Full configuration weight	_
solution up to 550m on a	Electrical characteristics	Power consumption typical	0.8 W



Multimode fiber.		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • FDDI Grade distance = 22 • OM1 = 275m • OM2 = 500m • OM3 = Not Specified by s	
		Cable length	up to 550m
		Fiber type	Multi Mode
	Services	on the service-level descri	: www.hp.com/networking/services for details iptions and product numbers. For details about es in your area, please contact your local HP
HP X120 1G SFP LC LX	Ports	1 SFP 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX)
Transceiver (JD119B)	Connectivity	Connector type	LC
		Wavelength	1300 nm
A small form-factor pluggable (SFP) Gigabig LX transceiver that	Physical characteristics	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
provides a full duplex		Full configuration weight	t 0.04 lb. (0.02 kg)
Gigabit solution up to 550m on MMF or 10Km on	Electrical characteristics	Power consumption typical	0.8 W
SMF		Power consumption maximum	1.0 W
	Cabling	Cable type: Either single mode or mult	timode;
		Maximum distance: • 550m for Multimode • 10km for Singlemode	
		Fiber type	Both
	Services	on the service-level descri	:: www.hp.com/networking/services for details iptions and product numbers. For details about es in your area, please contact your local HP
HP 0.5 m Multimode OM3 CablingCable type:LC/LC Optical Cable50/125 μm (core/cladding) diameter, mulitimode(AJ833A)modal bandwidth of 2000 MHz/km as detailed in distances of up to 300 m) diameter, mulitimode fiber optic, with effective MHz/km as detailed in TIA-492AAAC for	
		Maximum distance : 10Gbps Transfer Rate (Eth	nernet): 300m
	Notes		ed duplex fiber optic multimode OM3 50/125 um met assembly with LC duplex connectors on one tors on other end.
		2.0um Coating dia	e diameter: 50 ± 3.0um Cladding diameter: 125 ± ameter: 245 ± 10um ndwidth: For LED sources: 1500/500 MHz-km



		 Optical glass: Bandwidth: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber and designed to work in both the 850 and 1300 nm wavelength windows. BULK CABLE & CABLE ASSEMBLY CONFIGURATION: Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. Jacket Color: Aqua for OM3 multimode per TIA 598 Boot Color: White Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)	Cabling	Cable type : 50/125 μ m (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m
		Maximum distance : 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.
		 Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. BULK CABLE & CABLE ASSEMBLY CONFIGURATION: Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. Jacket Color: Aqua for OM3 multimode per TIA 598 Boot Color: White Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46.



Accessory Product [Details		
		• Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg	
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	
HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)	Cabling	Cable type : 50/125 µm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;	
		Maximum distance : 10Gbps Transfer Rate (Ethernet): 300m	
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.	
		 Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. BULK CABLE & CABLE ASSEMBLY CONFIGURATION: Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. Jacket Color: Aqua for OM3 multimode per TIA 598 Boot Color: White Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg 	
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	
HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)	Cabling	Cable type : 50/125 μm core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;	
		Maximum distance : 10Gbps Transfer Rate (Ethernet): 300m	
	Notes	Cable Specs: This specification defines the detail requirements for a tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable	



and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.

		 Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. BULK CABLE & CABLE ASSEMBLY CONFIGURATION: Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. Jacket Color: Aqua for OM3 multimode per TIA 598 Boot Color: White Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)	Cabling	Cable type : 50/125 μm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;
		Maximum distance : 10Gbps Transfer Rate (Ethernet): 300m
	Notes	Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.
		 Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. BULK CABLE & CABLE ASSEMBLY CONFIGURATION: Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.



Accessory Product D	Details	
		 Jacket Color: Aqua for OM3 multimode per TIA 598 Boot Color: White Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)	Cabling	Cable type : 50/125 μm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m;
		Maximum distance:
	Notes	10Gbps Transfer Rate (Ethernet): 300m Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.
		 Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. BULK CABLE & CABLE ASSEMBLY CONFIGURATION: Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. Jacket Color: Aqua for OM3 multimode per TIA 598 Boot Color: White Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)	Cabling	Cable type : 50/125 μm (core/cladding) diameter, mulitimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for



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 um fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.
		 Dimensions: Core diameter: 50 ± 3.0um Cladding diameter: 125 ± 2.0um Coating diameter: 245 ± 10um Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm. Optical Glass: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: Shall achieve 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links. CABLE: The cable is duplex zipcord graded index 50/125um multimode optical fiber. The cable is designed to work in both the 850 and 1300 nm wavelength windows. BULK CABLE & CABLE ASSEMBLY CONFIGURATION: Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic. Jacket Color: Aqua for OM3 multimode per TIA 598 Boot Color: White Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters. Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46. Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable (QK732A)	Notes	Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.
		 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 @



Accessory Product	Details		
		1310nm @ 23°C as tested in accordance with EIA 455-45	
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable (QK733A)	Notes	Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.	
		 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 0M3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable. Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45 	
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	
HP Premier Flex LC/LC Notes Multi-mode OM4 2 fiber 5m Cable (QK734A)		Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.	
		 Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um Bandwidth: 3000 MHz-km @ 850nm (Laser) Jacket Color: Blue Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic Boot Color: White Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable. Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45 	
	Services	Refer to the HP website at www.hp.com/networking/services for details on	



		the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.		
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable (QK735A)	Notes	Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connecto on each end.		
		 Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um Bandwidth: 3000 MHz-km @ 850nm (Laser) Jacket Color: Blue Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic Boot Color: White Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable. Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45 		
	Services	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.		
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable (QK736A)	Notes	Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.		
		 Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um Bandwidth: 3000 MHz-km @ 850nm (Laser) Jacket Color: Blue Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic Boot Color: White Outer Jacket Print: HP PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable. Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45 		
	Services	Refer to the HP website at www.hp.com/networking/services for details or the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.		



HP 3100 EI Switch Series

HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable (QK737A)	Notes	Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.	
	Services	 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 Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	
HP RPS1600 Redundant Power System (JG136A)	Ports	8 redundant power supply ports Restrictions: two -56V/25A DC(PoE); six -56V/8A DC(non-PoE)	
•	Physical characteristics	Dimensions	15.63(d) x 17.32(w) x 1.74(h) in. (39.7 x 44 x 4.42 cm)
		Weight	14.11 lb. (6.4 kg)
		Full configuration weight	-
	Environment	Operating temperature	14°F to 122°F (-10°C to 50°C)
		Operating relative humidity	5% to 95%
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	5% to 95%
		Altitude	up to 13,123 ft. (4 km)
		Acoustic	Pressure: 53 dB; ISO 7779, ISO 9296
	Electrical characteristics	Voltage	100-120/200-240 VAC
		Current	30/60 A
		Idle power	38 W
		Maximum power rating	3550 W
		RPS power	3200 W
	PoE power		2800 W
		RPS	-55 V
		PoE	-55 V
		Frequency	50/60 Hz



Accessory Product I	Details		
		Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. With one RPS1600 Power Supply, the PRS1600 Redundant Power System can provide 1600W power output; With two PRS1600 Power Supplies, the output power is 3200W.
	Safety		EC 60950-1; ICES-003; FCC Part 15, Subpart B; EU 0-1/A11; C-Tick; VCCI Class A; ROHS Compliance;
	Services	the service-level descripti	:: www.hp.com/networking/services for details on ons and product numbers. For details about les in your area, please contact your local HP
HP RPS1600 1600W AC Power Supply (JG137A)	Physical characteristics	Dimensions	8.19(d) x 4.96(w) x 1.63(h) in. (20.8 x 12.6 x 4.15 cm)
		Weight	3.02 lb. (1.37 kg)
	Environment	Operating temperature	14°F to 122°F (-10°C to 50°C)
		Operating relative humidity	5% to 95%
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	5% to 95%
	Electrical characteristics	Voltage	100-120/200-240 VAC
		Current	15/30 A
		Maximum power rating	1600 W
		Frequency	50/60 Hz
		Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
	Services	Refer to the HP website at: www.hp.com/networking/services for the service-level descriptions and product numbers. For details ab services and response times in your area, please contact your loca sales office.	
HP X125 1G SFP LC LH40	Ports	1 LC 1000Base-LH port (no	o IEEE standard exists for 1550 nm optics)
1310nm Transceiver	Connectivity	Connector type	
(JD061A)	-	Wavelength	1310 nm
A small form-factor	Physical characteristics	Dimensions	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
pluggable SFP Gigabit		Full configuration weight	0.04 lb. (0.02 kg)



provides a full duplex Gigabit Solution up to 40km on a single-mode fiber. Cabling Cabli	LH40 transceiver that	Electrical characteristics	•	0.8 W	
fiber. Cabling Cable type: Single-mode fiber optic, complying with ITU-T 6.652; Maximum distance: - 40km distance: - 40km distance: <th></th> <th></th> <th>Power consumption</th> <th>1.0 W</th>			Power consumption	1.0 W	
Lowery Contextury Contextury Single-mode fiber optic, complying with ITU-T 6.652; Maximum distance: • 40km distance • 40km distance • 40km distance Single Mode Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office. HP X120 16 SFP LC LH40 Ports 1 LC 1000BASE-LH port (no LEEE standard exists for 1550 nm optics) Connectivity Connectivity Connectivity UD062A) Physical characteristics Full configuration weight 0.04 lb. (0.02 kg) Physical characteristics Power consumption 0.04 lb. (0.02 kg) Power consumption 0.04 lb. 0.04 lb. (0.02 kg) Power consumption 0.04 lb. 0.04 lb. 0.04 lb. King Cabling Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum Cable type: Single Mode Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details abut service-level descriptions and product numbers. For details on the service-level descriptions and product numbers. For details on the service-level descriptions and product numbers. For details abut service-level descriptions and product numbe	_	Califica a			
HP X120 16 SFP LC LH0 UD062A) Ports Connectivity 1 LC 1000BASE-LH port (no LEEE standard exists for 1550 nm optics) Connectivity A small form-factor pluggable (SFP) Gigabit LH40 transceiver that solution up to 40 km on a single mode fiber. Ports Connectivity 1 LC 1000BASE-LH port (no LEEE standard exists for 1550 nm optics) Connectivity A small form-factor pluggable (SFP) Gigabit LH40 transceiver that provides a full-duplex Physical characteristics Power consumption consumption transceiver that provides a full-duplex Publical characteristics Power consumption transceiver that provides a full-duplex Single Mode Power consumption transceiver that provides a full-duplex HP X125 16 SFP LC LH70 Gigabit Solution up to A km on a single-mode fiber. Ports Publical 1 LC 1000BASE-LH port (no LEEE standard exists for 1550 nm optics) Connectivity HP X125 16 SFP LC LH70 Fransceiver (LD0638) Ports Publical characteristics 1 LC 1000BASE-LH port (no LEEE standard exists for 1550 nm optics) Connectivity A small form-factor pluggable (SFP) Gigabit Transceiver full consective that provides a full-duplex Ports Publical characteristics 1 LC 1000BASE-LH port (no LEEE standard exists for 1550 nm optics) A small form-factor pluggable (SFP) Gigabit TH70 transceiver full consective that provides a full-duplex Pover consumption Publical characteristics	nder.	Cabling		mplying with ITU-T G.652;	
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Summary of Changes

Date	Version History	Action	Description of Change:
29-May-2015	From Version 14 to 15	Changed	Configuration menu updated
20-Apr-2015	From Version 13 to	Added	Added Configuration section
	14	Changed	Updated Features and benefits, Technical Specifications
			and Accessories
			Updated model JG315A to JG315B
01-Dec-2014	From Version 12 to 13	Changed	Warranty and support updated
10-Jun-2013	From Version 10 to 11	Added	OM4 cables were added.
25-0ct-2012	From Version 9 to 10	Removed	Removed the information for two models.
18-0ct-2012	From Version 8 to 9	Changed	Updated Features and Benefits and also added the Mac address table size to the specifications for several
			models.
30-Jul-2012	From Version 7 to 8	Changed	Minor updates were made to the specifications for each model, the list of models supported in the series and Accessories.
22-Jun-2012	From Version 6 to 7	Changed	Updated the models (JD313B), Introduction, Features and
22-Juli-2012		Changeu	Benefits, Specifications (for JD313B) and Accessories
			(also for JD313B).
04-Apr-2012	From Version 5 to 6	Changed	Updated the ports for JG315A.
26-Mar-2012	From Version 4 to 5	Changed	The document was revised throughout, including adding some new models.
07-Nov-2011	From Version 3 to 4	Changed	The product name was updated throughout the document.
28-Sep-2011	From Version 2 to 3	Added	Accessory Product Details was added.
16-Mar-2011	From Version 1 to 2	Changed	Specifications were revised.

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