

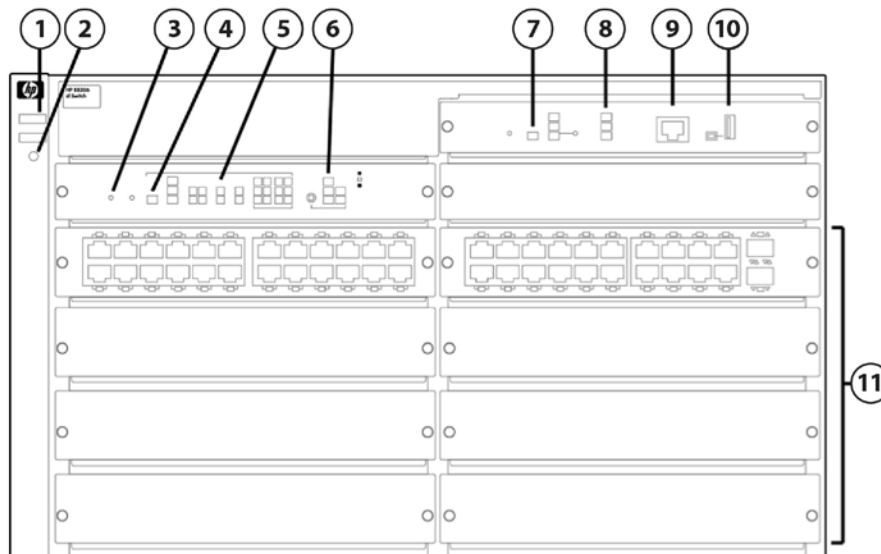
Overview

HPE 8200 zl Switch Series

Product overview

The HPE 8200 zl Switch Series offers high performance, scalability, and a wide range of features in a high-availability platform that dramatically reduces complexity and the total cost of ownership. As part of a unified wired and wireless network infrastructure solution, the 8200 zl Switch Series provides platform technology, system software, system management, application integration, wired and wireless integration, network security, and support that are common across HPE modular and fixed-port switches. Together, these features deliver an agile, cost-effective, high-availability network solution.

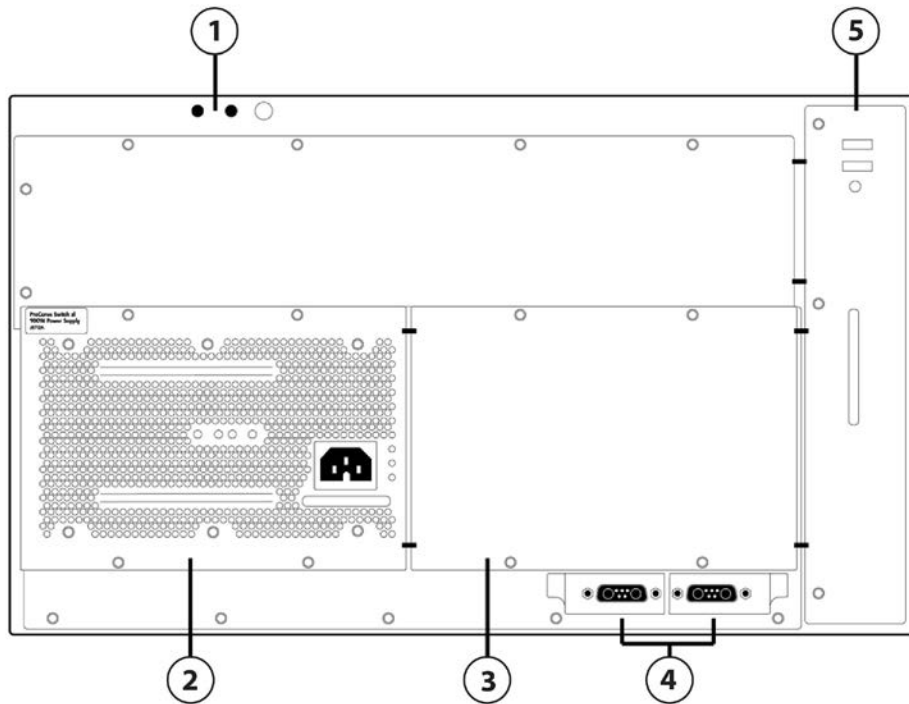
With key technologies to provide solution longevity, the 8200 zl Switch Series delivers long-term investment protection without added complexity for network core, aggregation, and high-availability access layer deployments. In addition to all of these capabilities, this switch series comes with Limited Lifetime Warranty 2.0—making it a compelling switching solution.



Front of 8206 zl Switch J9638A

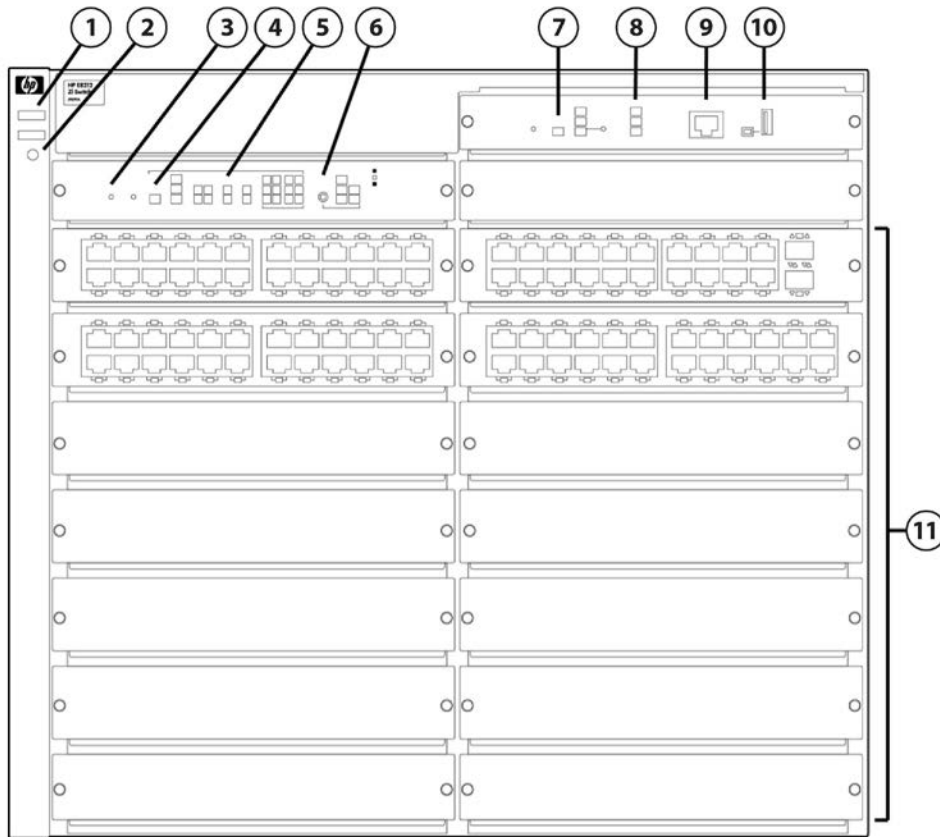
- | | | | |
|---|--|----|---|
| 1 | Power and Fault LEDs | 7 | Management Module Reset button, and Status LEDs |
| 2 | Locator LED | 8 | Component Status LEDs Switch |
| 3 | Reset and Clear buttons | 9 | Console Port |
| 4 | Self-test LED | 10 | Auxiliary Port |
| 5 | Status LEDs for the Fans, Power Supplies, and Switch Modules | 11 | Switch Modules and slots with Link and Mode LEDs for each port located on each module |
| 6 | LED Mode Select button and indicator LEDs | | |

Overview

**Back of the 8206zl Switch J9638A**

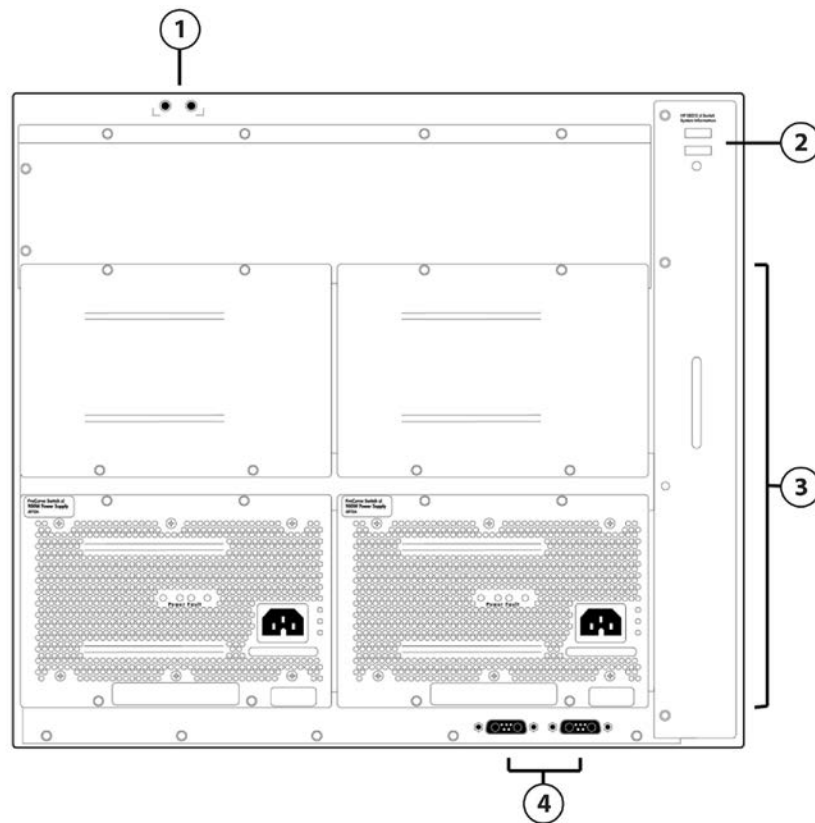
- | | | | |
|---|---------------------------------------|---|------------------------------------|
| 1 | Grounding lug mounting holes External | 4 | External PoE/PoE+ power connectors |
| 2 | Power supply | 5 | Fan Power, Fault and Locator LEDs |
| 3 | Optional redundant power supply | | |

Overview

**Front of 8212 zlSwitch J9639A**

- | | | | |
|---|--|----|---|
| 1 | Power and Fault LEDs | 7 | Management Module Reset button, and Status LEDs |
| 2 | Locator LED | 8 | Component Status LEDs Switch |
| 3 | Reset and Clear buttons | 9 | Console Port |
| 4 | Self-test LED | 10 | Auxiliary Port |
| 5 | Status LEDs for the Fans, Power Supplies, and Switch Modules | 11 | Switch Modules and slots with Link and Mode LEDs for each port located on each module |
| 6 | LED Mode Select button and indicator LEDs | | |

Overview



Rear of 8212 zSwitch J9639A

- | | | | |
|---|---------------------------------------|---|-------------------------------------|
| 1 | Grounding lug mounting holes External | 3 | Slots for installing power supplies |
| 2 | Fan Power, Fault and Locator LEDs | 4 | External PoE/PoE+ power connectors |

Key features

- Core, distribution, mission-critical access layer
- Advanced high-availability switches
- Integration with HPE AllianceONE solutions
- L2-to-L4 intelligent edge feature set
- Enterprise-class performance and security

Features and Benefits

Software-defined networking

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

Overview

Unified Wired and Wireless

- **HTTP redirect function**
supports HPE Intelligent Management Center (IMC) bring your own device (BYOD) solution

Quality of Service (QoS)

- **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
- **Layer 4 prioritization**
enables prioritization based on TCP/UDP port numbers
- **Traffic prioritization**
allows real-time traffic classification into eight priority levels mapped to eight queues
- **Bandwidth shaping**
 - **Port-based rate limiting**
provides per-port ingress-/egress-enforced increased bandwidth
 - **Classifier-based rate limiting**
uses an access control list (ACL) to enforce increased bandwidth for ingress traffic on each port
 - **Reduced bandwidth**
provides per-port, per-queue egress-based reduced bandwidth
- **Class of Service (CoS)**
sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ

HPE AllianceONE integration

- **HPE AllianceONE Services zl Module**
allows you to embed applications directly into the network, either distributed throughout the network at the network edge or centralized in the core or distribution layer; for more information about the HPE AllianceONE solution, visit the Hewlett Packard Enterprise website

Management

- **Remote intelligent mirroring**
mirrors selected ingress/egress traffic based on ACL, port, MAC address, or VLAN to a local or remote HPE 8200 zl, 6600, 6200 yl, 5400 zl, or 3500 Switch anywhere on the network
- **RMON, XRMON, and sFlow v5**
provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- **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
- **Uni-Directional Link Detection (UDLD)**
monitors a cable between two switches and shuts down the ports on both ends if the cable is broken, turning the bidirectional link into a unidirectional one; this prevents network problems such as loops
- **HPE unified core-to-edge device/network management tools**

Overview

provide HPE networking portfolio-common device-level tools (CLI, Web GUI, and Menu) plus seamless integration into HPE

PCM+/Identity Driven Manager (IDM) network management deployments

- **Command authorization**
leverages RADIUS to link a custom list of CLI commands to an individual network administrator's login; an audit trail documents activity
- **Friendly port names**
allow assignment of descriptive names to ports
- **Dual flash images**
provides independent primary and secondary operating system files for backup while upgrading or fine-tuning the switch configuration
- **Multiple configuration files**
can be stored to the flash image
- **HPE unified core-to-edge features**
HPE ProVision portfolio-common feature implementation allows faster solution deployment
- **Comware- CLI**
 - **Comware-compatible CLI:** bridges the experience of Hewlett Packard Enterprise Comware CLI users who are using the ProVision CLI
 - **Display and fundamental Comware CLI commands:** are natively embedded in the switch CLI; display output is formatted as on Comware-based switches; fundamental commands provide Comware-familiar initial switch setup
 - **Configuration Comware CLI commands:** when Comware commands are entered, CLI help is elicited to formulate the correct ProVision software CLI command

Connectivity

- **High-density port connectivity**
provides 12 interface module slots, up to 288 wire-speed 10/100/1000 PoE-enabled ports, or 96 10-GbE ports per system
- **IEEE 802.3az Energy Efficient Ethernet**
lowers power consumption in periods of low-link usage (supported on v2 zl 10/100/1000 and 10/100 modules)
- **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
- **IEEE 802.3at Power Over Ethernet Plus**
provides up to 30 W per port to IEEE 802.3 for PoE-/PoE+-powered devices such as video IP phones, IEEE 802.11n wireless access points, and advanced pan/zoom/tilt security cameras
- **Jumbo frames**
on Gigabit Ethernet and 10-Gigabit Ethernet ports, jumbo frames allow high-performance remote backup and disaster-recovery services
- **HPE unified core-to-edge hardware**
HPE ProVision family-common interface and service modules, Gigabit optics/10 GbE transceivers, and power supplies enable sparing simplicity
- **Prestandard PoE support**
detects and provides power to prestandard PoE devices; see the list of supported devices in the product FAQs at <http://www.hpe.com/networking>
- **Auto-MDIX**
automatically adjusts for straight-through or crossover cables on all 10/100 and 10/100/1000 ports
- **IPv6**
 - **IPv6 host**
enables switches to be managed in an IPv6 network

Overview

- **Dual stack (IPv4 and IPv6)**
transitions from IPv4 to IPv6, supporting connectivity for both protocols
- **MLD snooping**
forwards IPv6 multicast traffic to the appropriate interface
- **IPv6 ACL/QoS**
supports ACL and QoS for IPv6 network traffic
- **IPv6 routing**
supports static and OSPFv3 routing protocols
- **6in4 tunneling**
supports encapsulation of IPv6 traffic in IPv4 packets
- **Security**
provides RA guard, DHCPv6 protection, dynamic IPv6 lockdown

Performance

- **High-speed, high-capacity architecture**
1.12 Tbps crossbar switching fabric provides intra-module and inter-module switching with 739.2 million pps throughput on the purpose-built HPE ProVision ASICs
- **Selectable queue configurations**
allows for increased performance by selecting the number of queues and associated memory buffering that best meet the requirements of the network applications
- **Scalable system design**
chassis architecture/backplane provides built-in performance capacity/headroom to support next-generation high-density/high-speed connectivity

Resiliency and high availability

- **Virtual Router Redundancy Protocol (VRRP)**
allows groups of two routers to dynamically back each other up to create highly available routed environments in IPv4 and IPv6 networks
- **Nonstop switching**
improves network availability to better support critical applications such as unified communication and mobility; interface and fabric modules continue switching traffic during failover from active to standby management module
- **Nonstop routing**
enhances Layer 3 high availability; OSPFv2/v3 and VRRP will continue to operate and route network traffic during failover from an active to a standby management module
- **Redundant management, fabric, and power**
provide enhanced system availability and continuity of operations
- **Distributed trunking**
enables loop-free and redundant network topology without using Spanning Tree Protocol; allows a server or switch to connect to two switches using one logical trunk for redundancy and load sharing
- **IEEE 802.1s Multiple Spanning Tree Protocol**
provides high link availability in multiple VLAN environments by allowing multiple spanning trees; encompasses IEEE 802.1D Spanning Tree Protocol and IEEE 802.1w Rapid Spanning Tree Protocol
- **IEEE 802.3ad Link Aggregation Control Protocol (LACP) and HPE port trunking**
support up to 144 trunks, each with up to eight links (ports) per trunk
- **Proven ASIC and system architecture**
the HPE ProVision ASIC and platform architecture, leveraged from HPE's successful 5400 zl, 3500, 6600, and 6200 yl

Overview

switch series, reduces technology risk and provides reliable support and flexibility

- **HPE zl family components**
employ market-proven intelligent edge switch interface modules, optics, and power supplies to reduce technology risk and enhance system reliability
- **Hot-swappable modules**
interface, management, and fabric modules as well as mini-GBIC optics and power supplies can be removed, swapped, or added to the system without interrupting ongoing switch operations
- **Redundant, hot-swappable cooling**
redundant fan design and hot-swappable fan tray provide continuity of operation in case of a single fan failure
- **Passive system design**
passive chassis backplane (no traffic-forwarding active componentry) provides system reliability and reduces the impact of a component failure
- **Virtual Route Redundancy Protocol**
allows groups of two routers to dynamically back each other up to create highly available routed environments
- **NEW SmartLink**
provides easy-to-configure link redundancy of active and standby links

Layer 2 switching

- **VLAN support and tagging**
supports the IEEE 802.1Q standard and 2,048 VLANs simultaneously
- **IEEE 802.1v protocol VLANs**
isolate select non-IPv4 protocols automatically into their own VLANs
- **GARP VLAN Registration Protocol**
allows automatic learning and dynamic assignment of VLANs
- **IEEE 802.1ad Q-in-Q**
increases the scalability of an Ethernet network by providing a hierarchical structure; connects multiple LANs on a high-speed campus or metro network
- **MAC-based VLAN**
provides granular control and security; uses RADIUS to map a MAC address/user to specific VLANs (requires v2 modules)
- **Rapid Per-VLAN Spanning Tree (RPVST+)**
allows each VLAN to build a separate spanning tree to improve link bandwidth usage; is compatible with PVST+

Layer 3 services

- **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
- **Loopback interface address**
defines an address in Routing Information Protocol (RIP) and Open Standard Path First (OSPF), improving diagnostic capability
- **Route maps**
provide more control during route redistribution; allow filtering and altering of route metrics
- **DHCP server:**
centralizes and reduces the cost of IPv4 address management

Layer 3 routing

- **Static IP routing**

Overview

provides manually configured routing for both IPv4 and IPv6 networks

- **Routing Information Protocol (RIP)**
provides RIPv1 and RIPv2 routing
- **OSPF**
provides OSPFv2 for IPv4 routing and OSPFv3 for IPv6 routing
- **Policy-based routing**
uses a classifier to select traffic that can be forwarded based on policy set by the network administrator (requires v2 or higher modules)
- **Border Gateway Protocol (BGP)**
provides IPv4 Border Gateway Protocol routing, which is scalable, robust, and flexible

Security

- **Access control lists (ACLs)**
provide filtering based on the IP field, source/destination IP address/subnet, and source/destination TCP/UDP port number on a per-VLAN or per-port basis
- **Multiple user authentication methods**
 - **IEEE 802.1X users per port**
provides authentication of multiple IEEE 802.1X users per port
 - **Web-based authentication**
authenticates from a Web browser for clients that do not support IEEE 802.1X supplicant
 - **MAC-based authentication**
authenticates client with the RADIUS server based on a client's MAC address
 - **Concurrent IEEE 802.1X, Web, and MAC authentication schemes per port**
accepts up to 32 sessions of IEEE 802.1X, Web, and MAC authentications
- **Virus throttling**
detects traffic patterns typical of worm-type viruses and either throttles or entirely prevents the virus from spreading across the routed VLANs or bridged interfaces without requiring external appliances
- **DHCP protection**
blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- **Secure management access**
securely encrypts all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3
- **Management Interface Wizard**
helps secure management interfaces such as SNMP, telnet, SSH, SSL, Web, and USB at the desired level
- **Switch CPU protection**
provides automatic protection against malicious network traffic trying to shut down the switch
- **ICMP throttling**
defeats ICMP denial-of-service attacks by enabling any switch port to automatically throttle ICMP traffic
- **Identity-driven ACL**
enables implementation of a highly granular and flexible access security policy and VLAN assignment specific to each authenticated network user
- **STP BPDU port protection**
blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- **Dynamic IP lockdown**
works with DHCP protection to block traffic from unauthorized hosts, preventing IP source address spoofing
- **Dynamic ARP protection**
blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- **Detection of malicious attacks**

Overview

monitors 10 types of network traffic and sends a warning when an anomaly that potentially can be caused by malicious attacks is detected

- **Port security**
allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **MAC address lockout**
prevents particular configured MAC addresses from connecting to the network
- **Source-port filtering**
allows only specified ports to communicate with each other
- **RADIUS/TACACS+**
eases switch management security administration by using a password authentication server
- **Secure Shell**
encrypts all transmitted data for secure remote CLI access over IP networks
- **Secure Sockets Layer (SSL)**
encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- **Secure FTP**
allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **Switch management logon security**
can require either RADIUS or TACACS+ authentication for secure switch CLI logon
- **Security banner**
displays a customized security policy when users log in to the switch
- **STP Root Guard**
protects the root bridge from malicious attacks or configuration mistakes
- **Integrated Threat Management applications**
includes advanced, scalable, switch-integrated security tools such as stateful firewall, intrusion detection/prevention system (IDS/IPS), and VPN concentrator via the HPE Threat Management Services zl Module

Convergence

- **IP multicast routing**
includes PIM Sparse and Dense modes to route IP multicast traffic
- **IP multicast snooping (data-driven IGMP)**
automatically prevents flooding of IP multicast traffic
- **LLDP-MED (Media Endpoint Discovery)**
is a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones
- **PoE allocations**
support multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user specified) to allocate PoE power for more efficient energy savings
- **Auto VLAN configuration for voice**
 - **RADIUS VLAN**
uses a standard RADIUS attribute and LLDP-MED to automatically configure a VLAN for IP phones
 - **CDPv2**
uses CDPv2 to configure legacy IP phones
- **Local MAC Authentication**
assigns attributes such as VLAN and QoS using locally configured profile that can be a list of MAC prefixes

Overview

Flexibility

- **Unified wired and wireless deployment and management**
employs the MSM765zl mobility controller and offers secure, advanced wireless services with simplified management and unified wired and wireless operation across the network
- **Complete feature set**
provides Gigabit PoE for edge VoIP solutions, scalable 10 GbE for enterprise-class distribution-layer implementations, advanced wireless management for comprehensive mobility solutions, and critical high-availability features for midmarket core network deployments
- **Programmable ASIC design**
allows the seamless addition of new QoS and security features over time without costly hardware upgrades

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 8206 zl Switch with Premium Software	J9640A
<ul style="list-style-type: none"> • 1 Power Supply required • 1 - J9092A - HPE E8200 zl Management Module Included • 2 - J9093A - HPE E8200 zl Fabric Module Included • 1 - J9095A - HPE E8200 zl System Support Module Included • 6U - Height 	
HP 8206-44G-PoE+-2XG v2 zl Switch with Premium Software	J9638A
<ul style="list-style-type: none"> • 44 RJ-45 autosensing 10/100/1000 PoE+ ports • 1 - J9306A - HPE 1500 W PoE+ zl Power Supply Included • 1 - J9092A - HPE E8200 zl Management Module Included • 2 - J9093A - HPE E8200 zl Fabric Module Included • 1 - J9095A - HPE E8200 zl System Support Module Included • 1 - J9534A - HPE 24-port Gig-T PoE+ v2 zl Module Included • 1 - J9536A - HPE 20-port Gig-T PoE+ / 2-port 10-GbE SFP+ v2 zl Module Included (Min 0 // Max 2 SFP+ Transceivers) • 6U - Height 	See Configuration NOTE:1, 2, 5
HP 8206-44G-PoE+-2XG v2 zl Switch with Premium Software	J9638A
<ul style="list-style-type: none"> • C15 PDU Jumper Cord (NA/MEX/TW/JP) 	
HP 8206-44G-PoE+-2XG v2 zl Switch with Premium Software	J9638A
<ul style="list-style-type: none"> • C15 PDU Jumper Cord (ROW) 	
HP 8206-44G-PoE+-2XG v2 zl Switch with Premium Software	J9638A
<ul style="list-style-type: none"> • NEMA L6-20P Cord (NA/MEX/JP/TW) 	
HP 8212 zl Switch with Premium Software	J9641A
<ul style="list-style-type: none"> • 2 Power Supply required • 1 - J9092A - HPE E8200 zl Management Module Included • 2 - J9093A - HPE E8200 zl Fabric Module Included • 1 - J9095A - HPE E8200 zl System Support Module Included • 9U - Height 	

Configuration

HP 8212-92G-PoE+-2XG v2 zl Switch with Premium Software	J9639A
<ul style="list-style-type: none"> • 92 RJ-45 autosensing 10/100/1000 PoE+ ports • 2 - J9306A - HPE 1500 W PoE+ zl Power Supply Included • 1 - J9092A - HPE E8200 zl Management Module Included • 2 - J9093A - HPE E8200 zl Fabric Module Included • 1 - J9095A - HPE E8200 zl System Support Module Included • 3 - J9534A - HPE 24-port Gig-T PoE+ v2 zl Module Included • 1 - J9536A - HPE 20-port Gig-T PoE+ / 2-port 10-GbE SFP+ v2 zl Module Included (Min 0 // Max 2 SFP+ Transceivers) • 9U - Height 	See Configuration NOTE:1, 2, 5
HP 8212-92G-PoE+-2XG v2 zl Switch with Premium Software	J9639A
<ul style="list-style-type: none"> • C15 PDU Jumper Cord (NA/MEX/TW/JP) 	
HP 8212-92G-PoE+-2XG v2 zl Switch with Premium Software	J9639A
<ul style="list-style-type: none"> • C15 PDU Jumper Cord (ROW) 	
HP 8212-92G-PoE+-2XG v2 zl Switch with Premium Software	J9639A
<ul style="list-style-type: none"> • NEMA L6-20P Cord (NA/MEX/JP/TW) 	

Note 1 The following Transceivers install into this Chassis:

HPE X121 1G SFP LC SX Transceiver	J4858C
HPE X121 1G SFP LC LX Transceiver	J4859C
HPE X121 1G SFP LC LH Transceiver	J4860C
HPE X121 1G SFP RJ45 T Transceiver	J8177C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HPE X132 10G SFP+ LC ER Transceiver	J9153A
HPE X132 10G SFP+ LC LR Transceiver	J9151A
HPE X132 10G SFP+ LC LRM Transceiver	J9152A
HPE X132 10G SFP+ LC SR Transceiver	J9150A
HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A
HP X242 10G SFP+ to SFP+ 10m Direct Attach Copper Cable	J9286B
HP X242 10G SFP+ to SFP+ 15m Direct Attach Copper Cable	J9287B

Note 2 Localization required. (See Localization Menu for list.)

Configuration

Note 5 If #B2E is selected Then replace Localized option with #B2E for power supply and with #B2E for switch . (Offered only in North America, Mexico Taiwan, and Japan)

Box Level Integration CTO Models

CTO Solution SKU

HPE 82xx CTO Switch Solution J9849A

- SSP trigger SKU

CTO Base SKU

HP 8206 zl Switch with Premium Software J9640A

- 1 Power Supply required See Configuration
- 1 - J9092A - HPE E8200 zl Management Module Included **NOTE:9**
- 2 - J9093A - HPE E8200 zl Fabric Module Included
- 1 - J9095A - HPE E8200 zl System Support Module Included
- 6U - Height

HP 8206-44G-PoE+-2XG v2 zl Switch with Premium Software J9638A

- 44 RJ-45 autosensing 10/100/1000 PoE+ ports See Configuration
- 1 - J9306A - HPE 1500 W PoE+ zl Power Supply Included **NOTE:1, 2, 5, 8, 9**
- 1 - J9092A - HPE E8200 zl Management Module Included
- 2 - J9093A - HPE E8200 zl Fabric Module Included
- 1 - J9095A - HPE E8200 zl System Support Module Included
- 1 - J9534A - HPE 24-port Gig-T PoE+ v2 zl Module Included
- 1 - J9536A - HPE 20-port Gig-T PoE+ / 2-port 10-GbE SFP+ v2 zl Module Included (Min 0 // Max 2 SFP+ Transceivers)
- 6U - Height

PDU CABLE NA/MEX/TW/JP #B2B

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

PDU CABLE ROW #B2C

- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord #B2E

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

Configuration

HP 8212 zl Switch with Premium Software

- 2 Power Supply required
- 1 - J9092A - HPE E8200 zl Management Module Included
- 2 - J9093A - HPE E8200 zl Fabric Module Included
- 1 - J9095A - HPE E8200 zl System Support Module Included
- 9U - Height

J9641A
See Configuration

NOTE:9

HP 8212-92G-PoE+-2XG v2 zl Switch with Premium Software

- 92 RJ-45 autosensing 10/100/1000 PoE+ ports
- 2 - J9306A - HPE 1500 W PoE+ zl Power Supply Included
- 1 - J9092A - HPE E8200 zl Management Module Included
- 2 - J9093A - HPE E8200 zl Fabric Module Included
- 1 - J9095A - HPE E8200 zl System Support Module Included
- 3 - J9534A - HPE 24-port Gig-T PoE+ v2 zl Module Included
- 1 - J9536A - HPE 20-port Gig-T PoE+ / 2-port 10-GbE SFP+ v2 zl Module Included (Min 0 // Max 2 SFP+ Transceivers)
- 9U - Height

J9639A
See Configuration

NOTE:1, 2, 5, 8, 9

PDU CABLE NA/MEX/TW/JP

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

#B2B

PDU CABLE ROW

- C15 PDU Jumper Cord (ROW)

#B2C

High Volt Switch to Wall Power Cord

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

#B2E

Note 1 **The following Transceivers install into this Chassis : (Use #0D1 or #B01 quoted to switch if switch is CTO) - if applicable**

HPE X121 1G SFP LC SX Transceiver	J4858C
HPE X121 1G SFP LC LX Transceiver	J4859C
HPE X121 1G SFP LC LH Transceiver	J4860C
HPE X121 1G SFP RJ45 T Transceiver	J8177C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HPE X132 10G SFP+ LC ER Transceiver	J9153A
HPE X132 10G SFP+ LC LR Transceiver	J9151A
HPE X132 10G SFP+ LC LRM Transceiver	J9152A
HPE X132 10G SFP+ LC SR Transceiver	J9150A
HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B

Configuration

HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A
HP X242 10G SFP+ to SFP+ 10m Direct Attach Copper Cable	J9286B
HP X242 10G SFP+ to SFP+ 15m Direct Attach Copper Cable	J9287B

Note 2 Localization required (See Localization Menu)

Note 5 If #B2E is selected Then replace Localized option with #B2E for power supply and with #B2E for switch . (Offered only in North America, Mexico Taiwan, and Japan)

Note 8 If this Switch is selected, Then a Minimum of 1 factory integrated accessory must be ordered and integrated to CTO chassis. See Menu below, option must have a #0D1 to be integrated to the CTO Chassis.

Note 9 If the Switch Chassis is to be Box Level Factory Integrated (CTO), Then the #0D1 is required on the Switch Chassis and integrated to the J9849A - HPE 82xx CTO Enablement. (Min 1/Max 1 Switch per SSP)

Rack Level Integration CTO Models

HP 8206 zl Switch with Premium Software J9640A

- 1 Power Supply required
- 1 - J9092A - HPE E8200 zl Management Module Included
- 2 - J9093A - HPE E8200 zl Fabric Module Included
- 1 - J9095A - HPE E8200 zl System Support Module Included
- 6U - Height

HP 8206-44G-PoE+-2XG v2 zl Switch with Premium Software

J9638A

- 44 RJ-45 autosensing 10/100/1000 PoE+ ports
- 1 - J9306A - HPE 1500 W PoE+ zl Power Supply Included
- 1 - J9092A - HPE E8200 zl Management Module Included
- 2 - J9093A - HPE E8200 zl Fabric Module Included
- 1 - J9095A - HPE E8200 zl System Support Module Included
- 1 - J9534A - HPE 24-port Gig-T PoE+ v2 zl Module Included
- 1 - J9536A - HPE 20-port Gig-T PoE+ / 2-port 10-GbE SFP+ v2 zl Module Included (Min 0 // Max 2 SFP+ Transceivers)
- 6U - Height

See Configuration

NOTE:1, 9

PDU CABLE NA/MEX/TW/JP

#B2B

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

PDU CABLE ROW

#B2C

- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord

#B2E

Configuration

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

HP 8212 zl Switch with Premium Software

J9641A

- 2 Power Supply required
- 1 - J9092A - HPE E8200 zl Management Module Included
- 2 - J9093A - HPE E8200 zl Fabric Module Included
- 1 - J9095A - HPE E8200 zl System Support Module Included
- 9U - Height

HP 8212-92G-PoE+-2XG v2 zl Switch with Premium Software

J9639A

See Configuration

NOTE:1, 9

- 92 RJ-45 autosensing 10/100/1000 PoE+ ports
- 2 - J9306A - HPE 1500 W PoE+ zl Power Supply Included
- 1 - J9092A - HPE E8200 zl Management Module Included
- 2 - J9093A - HPE E8200 zl Fabric Module Included
- 1 - J9095A - HPE E8200 zl System Support Module Included
- 3 - J9534A - HPE 24-port Gig-T PoE+ v2 zl Module Included
- 1 - J9536A - HPE 20-port Gig-T PoE+ / 2-port 10-GbE SFP+ v2 zl Module Included (Min 0 // Max 2 SFP+ Transceivers)
- 9U - Height

PDU CABLE NA/MEX/TW/JP

#B2B

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

PDU CABLE ROW

#B2C

- C15 to C14 Jumper Cord (ROW)

High Volt Switch to Wall Power Cord

#B2E

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

Configuration rules

Note 1 **The following Transceivers install into this Chassis : (Use #0D1 or #B01 quoted to switch if switch is CTO) - if applicable**

HPE X121 1G SFP LC SX Transceiver	J4858C
HPE X121 1G SFP LC LX Transceiver	J4859C
HPE X121 1G SFP LC LH Transceiver	J4860C
HPE X121 1G SFP RJ45 T Transceiver	J8177C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HPE X132 10G SFP+ LC ER Transceiver	J9153A
HPE X132 10G SFP+ LC LR Transceiver	J9151A

Configuration

HPE X132 10G SFP+ LC LRM Transceiver	J9152A
HPE X132 10G SFP+ LC SR Transceiver	J9150A
HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A
HP X242 10G SFP+ to SFP+ 10m Direct Attach Copper Cable	J9286B
HP X242 10G SFP+ to SFP+ 15m Direct Attach Copper Cable	J9287B

Note 2 **Localization required (See Localization Menu)**

Note 9 **Localization required on orders without #B2B or #B2C options.**

Internal Power Supplies

J9640x only - System (std 0 // max=2) User Selection (min 1 / max=2) per Chassis

J9638x only - System (std 1 // max=2) User Selection (min 0 / max=1) per Chassis

J9641x only - System (std 0 // max=4) User Selection (min 2 / max=4) per Chassis

J9639x only - System (std 2 // max=4) User Selection (min 0 / max=2) per Chassis

HPE 1500W PoE+ zl Power Supply

- C15 Outlet

J9306A
See Configuration
NOTE:1, 2, 6

PDU CABLE NA/MEX/TW/JP

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

J9306A#B2B

PDU CABLE ROW

- C15 PDU Jumper Cord (ROW)

J9306A#B2C

High Volt Switch to Wall Power Cord

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

J9306A#B2E

HPE 875W zl Power Supply

- C15 Outlet

J8712A#0D1
See Configuration
NOTE:1, 2, 5, 6

PDU CABLE NA/MEX/TW/JP

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

J8712A#B2B

PDU CABLE ROW

J8712A#B2C

Configuration

- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord

J8712A#B2E

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

HPE 1500W zI Power Supply

J8713A

- C20 Outlet

See Configuration

NOTE:1, 2, 5, 6

C19 PDU WW

J8713A#B2D

- C19 to C20 Jumper Cord

High Volt Switch to Wall Power Cord

J8713A#B2E

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

Note 1 Power Supplies cannot be mixed for a switch enclosure

Note 2 Localization required on orders without #B2B, #B2C, or #B2E options.

Note 5 This power supply is not supported on the J9638x and J9639x switches.

Note 6 If #B2E is selected Then replace Localized option with #B2E for power supply and with #B2E for switch . (Offered only in North America, 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)"

Modules

Interface Modules

J9640x only - System (std 0 // max=6) User Selection (min 0 / max=6) per Chassis

J9641x only - System (std 0 // max=12) User Selection (min 0 / max=12) per Chassis

Configuration

J9638x only - System (std 2 // max=6) User Selection (min 0 / max=4) per Chassis
 J9639x only - System (std 4 // max=12) User Selection (min 0 / max=8) per Chassis

HPE 20-port GT PoE+/4-port SFP v2 zl Mod	J9535A
<ul style="list-style-type: none"> min=0 \ max=4 SFP Transceivers 	See Configuration NOTE:1
HPE 24-port SFP v2 zl Module	J9537A
<ul style="list-style-type: none"> min=0 \ max=24 SFP Transceivers 	See Configuration NOTE:1
HPE 12p Gig-T PoE+/12p SFP v2 zl Mod	J9637A
<ul style="list-style-type: none"> min=0 \ max=12 SFP Transceivers 	See Configuration NOTE:1
HPE 20-port Gig-T / 4-port SFP v2 zl Mod	J9549A
<ul style="list-style-type: none"> min=0 \ max=4 SFP Transceivers 	See Configuration NOTE:1
HPE 4-port 10GbE SFP+ zl Module	J9309A
<ul style="list-style-type: none"> min=0 \ max=4 SFP+ Transceivers 	See Configuration NOTE:2
HPE 8-port 10 GbE SFP+ v2 zl Module	J9538A
<ul style="list-style-type: none"> min=0 \ max=8 SFP+ Transceivers 	See Configuration NOTE:5
HPE 20p GT PoE+ / 2p SFP+ v2 zl Module	J9536A
<ul style="list-style-type: none"> min=0 \ max=2 SFP+ Transceivers 	See Configuration NOTE:5
HPE 20-port Gig-T / 2-port SFP+ v2 zl Mod	J9548A
<ul style="list-style-type: none"> min=0 \ max=2 SFP+ Transceivers 	See Configuration NOTE:5
HPE 4-Port 10 GbE X2 zl Module	J8707A
<ul style="list-style-type: none"> min=0 \ max=4 X2 Transceivers 	See Configuration NOTE:3
HPE 4-Port 10 GbE CX4 zl Module	J8708A
<ul style="list-style-type: none"> min=0 \ max=4 CX4 Media Converter 	
HPE 8-port 10GBase-T v2 zl Module	J9546A
<ul style="list-style-type: none"> No Transceivers 	

Configuration

HPE 24-Port 10/100/1000 PoE zl Module	J8702A
<ul style="list-style-type: none"> No Transceivers 	
HPE 20p 10/100/1000 PoE+/4p MGBIC zl Mod	J9308A
<ul style="list-style-type: none"> min=0 \ max=4 SFP Transceivers 	See Configuration NOTE:1
HPE 20-Port Gig-T/4-Port Mini-GBIC zl Module	J8705A
<ul style="list-style-type: none"> min=0 \ max=4 SFP Transceivers 	See Configuration NOTE:11
HPE 24-Port Mini-GBIC zl Module	J8706A
<ul style="list-style-type: none"> min=0 \ max=24 SFP Transceivers 	See Configuration NOTE:11
HPE 24-Port 10/100/1000 PoE+ zl Module	J9307A
<ul style="list-style-type: none"> No Transceivers 	
HPE 24-port Gig-T PoE+ v2 zl Module	J9534A
<ul style="list-style-type: none"> No Transceivers 	
HPE 24-Port 10/100 PoE+ zl Module	J9478A
<ul style="list-style-type: none"> No Transceivers 	
HPE 24-port 10/100 PoE+ v2 zl Module	J9547A
<ul style="list-style-type: none"> No Transceivers 	
HPE 24-port Gig-T v2 zl Module	J9550A
<ul style="list-style-type: none"> No Transceivers 	
HPE MSM765 zl Mobility Controller	J9370A
<ul style="list-style-type: none"> No Transceivers 	See Configuration NOTE:6, 7
HPE MSM775 zl Premium Controller Module	J9840A
<ul style="list-style-type: none"> No Transceivers 	See Configuration NOTE:9
HPE Surv Brch Com zl Mod pwrby Msft Lync	J9485A

Configuration

- No Transceivers.
- Double Height Module, takes up 2 Vertical slots*

See Configuration
NOTE: 6, 7, 8

HPE Svc zIMod f/AvayaSBC pwrby AcmePacket

J9486A

- No Transceivers.
- Double Height Module, takes up 2 Vertical slots*

See Configuration
NOTE:6, 7, 8

HPE Advanced Services v2 zl Module w/ HDD

J9857A

- No Transceivers

See Configuration
NOTE:10

HPE Advanced Services v2 zl Module w/ SSD

J9858A

- No Transceivers

See Configuration
NOTE:10

HPE Adv Srvs zl Mod w/XenServer Platform

J9747A

- No Transceivers

See Configuration
NOTE:6, 7

HPE Adv Srvs zl Mod w/vSphere Platform

J9748A

- No Transceivers

See Configuration
NOTE:6, 7

Configuration NOTES:

Note 1 **The following Transceivers install into this Module: (Use #0D1 quoted to switch if switch is CTO)**

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

Note 2 **The following Transceivers install into this Module: (Use #0D1 or #B01 quoted to switch if switch is CTO)**

HPE X132 10G SFP+ LC ER Transceiver	J9153A
HPE X132 10G SFP+ LC LR Transceiver	J9151A
HPE X132 10G SFP+ LC LRM Transceiver	J9152A
HPE X132 10G SFP+ LC SR Transceiver	J9150A
HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B

Configuration

HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A
HP X242 10G SFP+ to SFP+ 10m Direct Attach Copper Cable	J9286B
HP X242 10G SFP+ to SFP+ 15m Direct Attach Copper Cable	J9287B

Note 3 **The following Transceivers install into this Module: (Use #0D1 quoted to switch if switch is CTO)**

HPE X131 10G X2 SC SR Transceiver	J8436A
HP X131 10G X2 SC LR Transceiver	J8437A
HP X131 10G X2 SC ER Transceiver	J8438A
HP X131 10G X2 CX4 Transceiver	J8440C
HP X131 10G X2 SC LRM Transceiver	J9144A

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

HPE X121 1G SFP LC LH Transceiver	J4860C
HPE X121 1G SFP LC SX Transceiver	J4858C
HPE X121 1G SFP LC LX Transceiver	J4859C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HPE X121 1G SFP RJ45 T Transceiver	J8177C
HPE X132 10G SFP+ LC ER Transceiver	J9153A
HPE X132 10G SFP+ LC LR Transceiver	J9151A
HPE X132 10G SFP+ LC LRM Transceiver	J9152A
HPE X132 10G SFP+ LC SR Transceiver	J9150A
HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A
ProCurve 10-GbE SFP+ 10m Direct Attach Cable	J9286A
HPE X242 10G SFP+ 15m DAC Cable	J9287A

Note 6 **If this module is selected, Then:**

J9641A, J9639A Max = 4 Modules of any combination or pairing of the following modules: J9517A, J9485A, J9486A, J9289A, J9483A, J9666A, J9747A, J9748A. Double Height Modules occupy 2 vertical slots.

J9640A, J9638A Max = 2 Slots for Modules of any combination or pairing of the following modules: J9517A, J9485A, J9486A, J9289A, J9483A, J9666A, J9747A, J9748A. Double Height Modules occupy 2 vertical slots.

Note 7 **If this module is selected, Then show following message - For all OA modules, it is preferred that they be populated on the left side of the Chassis as it gets better airflow.**

Configuration

- Note 8** This module occupies 2 Vertical Slots.
- Note 9** Maximum of this Module per Chassis:
 J9638x min=0\max= 4 per Chassis
 J9640x min=0\max=5 per Chassis
 J9639x, J9641x min=0\max=6 per Chassis
 There are no restrictions on which slots these modules may go in.
- Note 10** Maximum of this Module per Chassis:
 J9638x, J9640x min=0\max=3 per Chassis
 J9639x, J9641x min=0\max=6 per Chassis
 There are no restrictions on which slots these modules may go in.

Management Modules

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

HP 8200 zl Management Module J9092A

Fabric Modules

System (std 2 // max 2) User Selection (min 0 / max 0)

HP 8200 zl Fabric Module J9093A

Order for Spares only.

System Support Modules

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

HP 8200 zl System Support Module J9095A

Order for Spares only.

Transceivers

SFP Transceivers

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

SFP+ Transceivers

HPE X132 10G SFP+ LC ER Transceiver	J9153A
HPE X132 10G SFP+ LC LR Transceiver	J9151A
HPE X132 10G SFP+ LC LRM Transceiver	J9152A
HPE X132 10G SFP+ LC SR Transceiver	J9150A

Configuration

HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
HP X242 10G SFP+ to SFP+ 10m Direct Attach Copper Cable	J9286B
HP X242 10G SFP+ to SFP+ 15m Direct Attach Copper Cable	J9287B
HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A

X2 Transceivers

HP X131 10G X2 SC ER Transceiver	J8438A
HP X131 10G X2 SC LR Transceiver	J8437A
HP X131 10G X2 SC LRM Transceiver	J9144A
HP X131 10G X2 SC SR Transceiver	J8436A

Cables

Multi-Mode Cables

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

Switch Enclosure Options

License

HP 8200 zl Switch Premium License	J9474A
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Fan Trays

HP 8212 zl Fan Tray	J9094A
HP 8206 zl Switch Fan Tray	J9476A

Survivable Branch Communication Upgrades

Configuration

Sangoma 2-port T1/E1/J1 Telephony Card	J9488A
Sangoma 4-port T1/E1/J1 Telephony Card	J9489A
Sangoma 4-port FXO Telephony Card	J9516A
Sangoma 4-port FXS Telephony Card	J9482A
Sangoma 2-p FXO / 2-p FXS Telephony Card	J9518A
Sangoma 1-port T1/E1/J1 Telephony Card	J9487A

US Federal Government certifications

HP z1 Chassis FIPS 10K Rack Mounting Kit	J9708A See Configuration NOTE:1
HPE 16mm x 32mm Tmpr-Evidence (20) Labels	J9740A See Configuration NOTE:1
HPE 16mm x 32mm Tmpr-Evidence (120) Label	J9709A See Configuration NOTE:1
HP 8206 z1 FIPS Opacity Shield Kit	J9712A See Configuration NOTE:1
HP 8212 z1 FIPS Opacity Shield Kit	J9713A See Configuration NOTE:1
HP 8206 z1 High Performance Fan Tray	J9723A See Configuration NOTE:1
HP 8212 z1 High Performance Fan Tray	J9724A See Configuration NOTE:1

Note 1 Do not display in Watson.

Technical Specifications

HP 8206 zl Switch with Premium Software (J9640A)	Included accessories	1 HPE 8200 zl Management Module (J9092A) 2 HPE 8200 zl Fabric Module (J9093A) 1 HPE 8200 zl System Support Module (J9095A)
	I/O ports and slots	6 open module slots Supports a maximum of 144 autosensing 10/100/1000 ports or 48 10-GbE ports or 144 mini-GBICs, or a combination
	Power supplies	2 power supply slots 1 minimum power supply required (ordered separately)
Physical characteristics	Dimensions	17.42(w) x 17.49(d) x 10.35(h) in (44.25 x 44.42 x 26.29 cm) (6U height)
	Weight	48.1 lb (21.82 kg)
	Memory and processor	
	Gigabit Module	ARM9 @ 200 MHz; packet buffer size: 144 Mb QDR SDRAM
	10G Module	ARM9 @ 200 MHz; packet buffer size: 36 Mb QDR SDRAM
	Management Module	Freescale PowerPC 8540 @ 666 MHz, 4 MB flash, 128 MB compact flash, 256 MB DDR SDRAM
Mounting and enclosure	Mounts in an EIA-standard 19 in telco rack/equipment cabinet (hardware included); horizontal surface mounting only. An optional 4-post cabinet rail is available (see ordering guide).	
Performance	1000 Mb Latency	< 3.7 μ s (FIFO 64-byte packets)
	10 Gbps Latency	< 2.1 μ s (FIFO 64-byte packets)
	Throughput	up to 369.6 Mpps
	Routing/Switching capacity	496.8 Gbps
	Switch fabric speed	561.6 Gbps
	Routing table size	10000 entries (IPv4)
	MAC address table size	64000 entries
Environment	Operating temperature	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 95% @ 149°F (65°C), noncondensing
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 60.0 dB, Pressure: 41.3 dB; ISO 7779, ISO 9296
	Electrical characteristics	Achieved Miercom Certified Green Award

Technical Specifications

	Frequency	50/60 Hz
	Description	Chassis ships without power supplies. Two power supply slots are available; three different power supplies are available. See power supply products for additional specifications.
	Maximum heat dissipation	2450 BTU/hr (2584.75 kJ/hr), (max. non-PoE); 3700 BTU/hr (3903 kJ/hr) (max. PoE)
	AC voltage	100-127/200-240 VAC
Safety		CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950; IEC 60825
Emissions		FCC Class A; FCC part 15 Class A; ICE-003, Canadian Radio Interface Regulation; VCCI Class A; EN 55022/CISPR 22 Class A
Immunity	EN	EN 55024, CISPR 24
	ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD
	Radiated	IEC 61000-4-3; 3 V/m
	EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
	Surge	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted	IEC 61000-4-6; 3 V
	Power frequency magnetic field	IEC 61000-4-8; 1 A/m, 50 or 60 Hz
	Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management		HPE PCM+; HPE PCM (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)
Notes		Interface/Service modules, power supplies, and redundant management module must be ordered separately. RS-232C console port via an RJ-45 connector. Supported 1G SFP transceivers are revision "B" or later (product number ends with the letter "B" or later; for example, J9142B, J8177C).
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 8212 zl Switch with Premium Software (J9641A)

Included accessories	1 HPE 8200 zl Management Module (J9092A)
	2 HPE 8200 zl Fabric Module (J9093A)
	1 HPE 8200 zl System Support Module (J9095A)
	1 HPE 8200 zl Switch Premium License (J9474A)

I/O ports and slots

12 open module slots

Supports a maximum of 288 autosensing 10/100/1000 ports or 96 10-GbE ports or 288 mini-GBICs, or a combination

Technical Specifications

Power supplies	4 power supply slots 2 minimum power supplies required (ordered separately)	
Physical characteristics	Dimensions	17.5(w) x 18.7(d) x 15.6(h) in (44.45 x 47.5 x 39.62 cm) (9U height)
	Weight	50.44 lb (22.88 kg)
Memory and processor	Gigabit Module	ARM9 @ 200 MHz; packet buffer size: 144 Mb QDR SDRAM
	10G Module	ARM9 @ 200 MHz; packet buffer size: 36 Mb QDR SDRAM
	Management Module	Freescale PowerPC 8540 @ 666 MHz, 4 MB flash, 128 MB compact flash, 256 MB DDR SDRAM
Mounting and enclosure	Mounts in an EIA-standard 19 in telco rack or equipment cabinet (hardware included); horizontal surface mounting only. An optional 4-post cabinet rail is available (see ordering guide).	
Performance	1000 Mb Latency	< 3.7 μ s (FIFO 64-byte packets)
	10 Gbps Latency	< 2.1 μ s (FIFO 64-byte packets)
	Throughput	up to 739 Mpps
	Routing/Switching capacity	993.6 Gbps
	Switch fabric speed	1.1 Tbps
	Routing table size	10000 entries (IPv4)
	MAC address table size	64000 entries
Environment	Operating temperature	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 95% @ 149°F (65°C), noncondensing
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 63.0 dB, Pressure: 47.8 dB; ISO 7779, ISO 9296
Electrical characteristics	Achieved Miercom Certified Green Award	
	Frequency	50/60 Hz
	Description	Chassis ships without power supplies. Four power supply slots are available; three different power supplies are available. See power supply products for additional specifications.
	Maximum heat dissipation	4900 BTU/hr (5170 kJ/hr), (max. non-PoE); 7400 BTU/hr (7807 kJ/hr) (max. PoE)
	AC voltage	100-127/200-240 VAC
Safety	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950; IEC 60825	

Technical Specifications

Emissions	FCC Class A; FCC part 15 Class A; ICE-003, Canadian Radio Interface Regulation; VCCI Class A; EN 55022/CISPR 22 Class A
Immunity	<p>EN EN 55024, CISPR 24</p> <p>ESD IEC 61000-4-2; 4 kV CD, 8 kV AD</p> <p>Radiated IEC 61000-4-3; 3 V/m</p> <p>EFT/Burst IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)</p> <p>Surge IEC 61000-4-5; 1 kV/2 kV AC</p> <p>Conducted IEC 61000-4-6; 3 V</p> <p>Power frequency magnetic field IEC 61000-4-8; 1 A/m, 50 or 60 Hz</p> <p>Voltage dips and interruptions IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods</p> <p>Harmonics EN 61000-3-2, IEC 61000-3-2</p> <p>Flicker EN 61000-3-3, IEC 61000-3-3</p>
Management	HPE PCM+; HPE PCM (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)
Notes	Interface/Service modules, power supplies, and redundant management module must be ordered separately. RS-232C console port via an RJ-45 connector. Supported 1G SFP transceivers are revision "B" or later (product number ends with the letter "B" or later; for example, J9142B, J8177C).
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 8206-44G-PoE+-2XG Included accessories v2 zl Switch with Premium Software (J9638A)

	1 HPE 8200 zl Management Module (J9092A)
	2 HPE 8200 zl Fabric Module (J9093A)
	1 HPE 8200 zl System Support Module (J9095A)
	1 HPE 1500W PoE+ zl Power Supply (J9306A)
	1 HPE 24-port Gig-T PoE+ v2 zl Module (J9534A)
	1 HPE 20-port Gig-T PoE+ / 2-port 10GbE SFP+ v2 zl Module (J9536A)
	1 HPE 8200 zl Switch Premium License (J9474A)
I/O ports and slots	44 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
	2 SFP+ 10-GbE ports; Duplex: full only
	4 open module slots
	Supports a maximum of 144 autosensing 10/100/1000 ports or 48 10-GbE ports or 144 mini-GBICs, or a combination

Technical Specifications

Power supplies	2 power supply slots 1 minimum power supply required includes: 1 x J9306A (HPE 1500W PoE+ zl Power Supply)	
Physical characteristics	Dimensions	17.42(w) x 17.49(d) x 10.35(h) in (44.25 x 44.42 x 26.29 cm) (6U height)
	Weight	61.49 lb (27.89 kg)
Memory and processor	Gigabit Module	ARM9 @ 200 MHz; packet buffer size: 144 Mb QDR SDRAM
	10G Module	ARM9 @ 200 MHz; packet buffer size: 36 Mb QDR SDRAM
	Management Module	Freescall PowerPC 8540 @ 666 MHz, 4 MB flash, 128 MB compact flash, 256 MB DDR SDRAM
Mounting and enclosure	Mounts in an EIA-standard 19 in telco rack/equipment cabinet (hardware included); horizontal surface mounting only. An optional 4-post cabinet rail is available (see ordering guide).	
Performance	1000 Mb Latency	< 3.7 μ s (FIFO 64-byte packets)
	10 Gbps Latency	< 2.1 μ s (FIFO 64-byte packets)
	Throughput	up to 369.6 Mpps
	Routing/Switching capacity	496.8 Gbps
	Switch fabric speed	561.6 Gbps
	Routing table size	10000 entries (IPv4)
	MAC address table size	64000 entries
Environment	Operating temperature	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 95% @ 149°F (65°C), noncondensing
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 60.0 dB, Pressure: 41.3 dB; ISO 7779, ISO 9296
Electrical characteristics	Achieved Miercom Certified Green Award	
	Frequency	50/60 Hz
	Description	Chassis ships without power supplies. Two power supply slots are available; three different power supplies are available. See power supply products for additional specifications.
	Maximum heat dissipation	2450 BTU/hr (2584.75 kJ/hr), (max. non-PoE); 3700 BTU/hr (3903 kJ/hr) (max. PoE)
	AC voltage	100-127/200-240 VAC

Technical Specifications

Safety	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950; IEC 60825
Emissions	FCC Class A; FCC part 15 Class A; ICE-003, Canadian Radio Interface Regulation; VCCI Class A; EN 55022/CISPR 22 Class A
Immunity	<p>EN EN 55024, CISPR 24</p> <p>ESD IEC 61000-4-2; 4 kV CD, 8 kV AD</p> <p>Radiated IEC 61000-4-3; 3 V/m</p> <p>EFT/Burst IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)</p> <p>Surge IEC 61000-4-5; 1 kV/2 kV AC</p> <p>Conducted IEC 61000-4-6; 3 V</p> <p>Power frequency magnetic field IEC 61000-4-8; 1 A/m, 50 or 60 Hz</p> <p>Voltage dips and interruptions IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods</p> <p>Harmonics EN 61000-3-2, IEC 61000-3-2</p> <p>Flicker EN 61000-3-3, IEC 61000-3-3</p>
Management	HPE PCM+; HPE PCM (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)
Notes	Interface/Service modules, power supplies, and redundant management module must be ordered separately. RS-232C console port via an RJ-45 connector. Supported 1G SFP transceivers are revision "B" or later (product number ends with the letter "B" or later; for example, J9142B, J8177C).
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 8212-92G-PoE+-2XG Included accessories v2 zl Switch with Premium Software (J9639A)

I/O ports and slots	<p>1 HPE 8200 zl Management Module (J9092A)</p> <p>2 HPE 8200 zl Fabric Module (J9093A)</p> <p>1 HPE 8200 zl System Support Module (J9095A)</p> <p>1 HPE 8200 zl Switch Premium License (J9474A)</p> <p>2 HPE 1500W PoE+ zl Power Supply (J9306A)</p> <p>3 HPE 24-port Gig-T PoE+ v2 zl Module (J9534A)</p> <p>1 HPE 20-port Gig-T PoE+ / 2-port 10GbE SFP+ v2 zl Module (J9536A)</p> <p>92 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</p> <p>2 SFP+ 10-GbE ports; Duplex: full only</p> <p>8 open module slots</p> <p>Supports a maximum of 288 autosensing 10/100/1000 ports or 96 10-GbE</p>
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Technical Specifications

		ports or 288 mini-GBICs, or a combination
Power supplies		4 power supply slots 2 minimum power supplies required includes: 2 x J9306A (HPE 1500W PoE+ zl Power Supply)
Physical characteristics	Dimensions	17.5(w) x 18.7(d) x 15.6(h) in (44.45 x 47.5 x 39.62 cm) (9U height)
	Weight	102.76 lb (46.61 kg)
Memory and processor	Gigabit Module	ARM9 @ 200 MHz; packet buffer size: 144 Mb QDR SDRAM
	10G Module	ARM9 @ 200 MHz; packet buffer size: 36 Mb QDR SDRAM
	Management Module	Freescale PowerPC 8540 @ 666 MHz, 4 MB flash, 128 MB compact flash, 256 MB DDR SDRAM
Mounting and enclosure	Mounts in an EIA-standard 19 in telco rack or equipment cabinet (hardware included); horizontal surface mounting only. An optional 4-post cabinet rail is available (see ordering guide).	
Performance	1000 Mb Latency	< 3.7 μ s (FIFO 64-byte packets)
	10 Gbps Latency	< 2.1 μ s (FIFO 64-byte packets)
	Throughput	up to 739 Mpps
	Routing/Switching capacity	993.6 Gbps
	Switch fabric speed	1.1 Tbps
	Routing table size	10000 entries (IPv4)
	MAC address table size	64000 entries
Environment	Operating temperature	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 95% @ 149°F (65°C), noncondensing
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 63.0 dB, Pressure: 47.8 dB; ISO 7779, ISO 9296
Electrical characteristics	Achieved Miercom Certified Green Award	
	Frequency	50/60 Hz
	Description	Chassis ships without power supplies. Four power supply slots are available; three different power supplies are available. See power supply products for additional specifications.
	Maximum heat dissipation	4900 BTU/hr (5170 kJ/hr), (max. non-PoE); 7400 BTU/hr (7807 kJ/hr) (max. PoE)

Technical Specifications

	AC voltage	100-127/200-240 VAC
Safety		CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950; IEC 60825
Emissions		FCC Class A; FCC part 15 Class A; ICE-003, Canadian Radio Interface Regulation; VCCI Class A; EN 55022/CISPR 22 Class A
Immunity	EN	EN 55024, CISPR 24
	ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD
	Radiated	IEC 61000-4-3; 3 V/m
	EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
	Surge	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted	IEC 61000-4-6; 3 V
	Power frequency magnetic field	IEC 61000-4-8; 1 A/m, 50 or 60 Hz
	Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management		HPE PCM+; HPE PCM (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)
Notes		Interface/Service modules, power supplies, and redundant management module must be ordered separately. RS-232C console port via an RJ-45 connector. Supported 1G SFP transceivers are revision "B" or later (product number ends with the letter "B" or later; for example, J9142B, J8177C).
Services		Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services : _ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
Standards and protocols	BGP	RFC 1997 BGP Communities Attribute RFC 2918 Route Refresh Capability RFC 4271 A Border Gateway Protocol 4 (BGP-4) RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP) RFC 4724 Graceful Restart Mechanism for BGP RFC 5492 Capabilities Advertisement with BGP-4
(applies to all products in series)		
	Denial of service protection	CPU DoS Protection
	Device management	RFC 1591 DNS (client) HTML and telnet management
	General protocols	IEEE 802.1ad Q-in-Q IEEE 802.1AX-2008 Link Aggregation

Technical Specifications

IEEE 802.1D MAC Bridges
 IEEE 802.1p Priority
 IEEE 802.1Q VLANs
 IEEE 802.1s Multiple Spanning Trees
 IEEE 802.1v VLAN classification by Protocol and Port
 IEEE 802.1w Rapid Reconfiguration of Spanning Tree
 IEEE 802.3ad Link Aggregation Control Protocol (LACP)
 IEEE 802.3af Power over Ethernet
 IEEE 802.3x Flow Control
 RFC 768 UDP
 RFC 783 TFTP Protocol (revision 2)
 RFC 792 ICMP
 RFC 793 TCP
 RFC 826 ARP
 RFC 854 TELNET
 RFC 868 Time Protocol
 RFC 951 BOOTP
 RFC 1058 RIPv1
 RFC 1350 TFTP Protocol (revision 2)
 RFC 1519 CIDR
 RFC 1542 BOOTP Extensions
 RFC 1918 Address Allocation for Private Internet
 RFC 2030 Simple Network Time Protocol (SNTP) v4
 RFC 2131 DHCP
 RFC 2453 RIPv2
 RFC 2548 (MS-RAS-Vendor only)
 RFC 3046 DHCP Relay Agent Information Option
 RFC 3576 Ext to RADIUS (CoA only)
 RFC 3768 VRRP
 RFC 4675 RADIUS VLAN & Priority
 RFC 5798 VRRP (exclude Accept Mode and sub-sec timer)
 UDLD (Uni-directional Link Detection)
 RFC 3376 IGMPv3 (host joins only)
 RFC 3973 PIM Dense Mode
 RFC 4601 PIM Sparse Mode
 RFC 1981 IPv6 Path MTU Discovery
 RFC 2375 IPv6 Multicast Address Assignments
 RFC 2460 IPv6 Specification
 RFC 2464 Transmission of IPv6 over Ethernet Networks
 RFC 2710 Multicast Listener Discovery (MLD) for IPv6

IP multicast

IPv6

Technical Specifications

RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)
 RFC 3019 MLDv1 MIB
 RFC 3315 DHCPv6 (client and relay)
 RFC 3484 Default Address Selection for IPv6
 RFC 3587 IPv6 Global Unicast Address Format
 RFC 3596 DNS Extension for IPv6
 RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6
 RFC 4022 MIB for TCP
 RFC 4087 IP Tunnel MIB
 RFC 4113 MIB for UDP
 RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers
 RFC 4251 SSHv6 Architecture
 RFC 4252 SSHv6 Authentication
 RFC 4253 SSHv6 Transport Layer
 RFC 4254 SSHv6 Connection
 RFC 4291 IP Version 6 Addressing Architecture
 RFC 4293 MIB for IP
 RFC 4294 IPv6 Node Requirements
 RFC 4419 Key Exchange for SSH
 RFC 4443 ICMPv6
 RFC 4541 IGMP & MLD Snooping Switch
 RFC 4861 IPv6 Neighbor Discovery
 RFC 4862 IPv6 Stateless Address Auto-configuration
 RFC 5095 Deprecation of Type 0 Routing Headers in IPv6
 RFC 5340 OSPFv3 for IPv6
 RFC 5453 Reserved IPv6 Interface Identifiers
 RFC 5519 Multicast Group Membership Discovery MIB (MLDv2 only)
 RFC 5722 Handling of Overlapping IPv6 Fragments
 IEEE 802.1ap (MSTP and STP MIB's only)
 RFC 1155 Structure & ID of Mgmt Info for TCP/IP Internets
 RFC 1213 MIB II
 RFC 1493 Bridge MIB
 RFC 1724 RIPv2 MIB
 RFC 1850 OSPFv2 MIB
 RFC 2021 RMONv2 MIB

MIBs

Technical Specifications

	RFC 2096 IP Forwarding Table MIB
	RFC 2578 Structure of Management Information Version 2 (SMIv2)
	RFC 2613 SMON MIB
	RFC 2618 RADIUS Client MIB
	RFC 2620 RADIUS Accounting MIB
	RFC 2665 Ethernet-Like-MIB
	RFC 2668 802.3 MAU MIB
	RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
	RFC 2737 Entity MIB (Version 2)
	RFC 2787 VRRP MIB
	RFC 2863 The Interfaces Group MIB
	RFC 2925 Ping MIB
	RFC 2932 IP (Multicast Routing MIB)
	RFC 2933 IGMP MIB
	RFC 4836 Managed Objects for 802.3 Medium Attachment Units (MAU)
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)
	RFC 3176 sFlow
	RFC 5424 Syslog Protocol
	ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
	SNMPv1/v2c/v3
	XRMON
OSPF	RFC 2328 OSPFv2
	RFC 3101 OSPF NSSA
	RFC 3623 Graceful OSPF Restart (Unplanned Outages only)
	RFC 5340 OSPFv3 for IPv6
QoS/CoS	RFC 2474 DiffServ Precedence, including 8 queues/port
	RFC 2597 DiffServ Assured Forwarding (AF)
	RFC 2598 DiffServ Expedited Forwarding (EF)
Security	IEEE 802.1X Port Based Network Access Control
	RFC 1492 TACACS+
	RFC 2865 RADIUS (client only)
	RFC 2866 RADIUS Accounting
	RFC 3579 RADIUS Support For Extensible Authentication Protocol (EAP)
	Secure Sockets Layer (SSL)
	SSHv2 Secure Shell

Accessories

HPE 8200 zl Switch Series accessories

Modules

HPE 8-port 10GbE SFP+ v2 zl Module	J9546A
HPE 8-port 10GbE SFP+ v2 zl Module	J9538A
HP 4-port 10GbE CX4 zl Module	J8708A
HP 4-port 10GbE X2 zl Module	J8707A
HP 4-port 10GbE SFP+ zl Module	J9309A
HPE 20-port Gig-T PoE+/2-port 10GbE SFP+ v2 zl Module	J9536A
HPE 20-port Gig-T/2-port 10GbE SFP+ v2 zl Module	J9548A
HPE 20-port Gig-T PoE+/4-port SFP v2 zl Module	J9535A
HPE 20-port Gig-T/4-port SFP v2 zl Module	J9549A
HPE 24-port SFP v2 zl Module	J9537A
HPE 12-port Gig-T PoE+/12-port SFP v2 zl Module	J9637A
HPE 24-port Gig-T PoE+ v2 zl Module	J9534A
HPE 24-port Gig-T v2 zl Module	J9550A
HP 24-port 10/100/1000 PoE zl Module	J8702A
HP 20-port Gig-T / 4-port Mini-GBIC zl Module	J8705A
HP 24-port Mini-GBIC zl Module	J8706A
HPE 24-port 10/100 PoE+ v2 zl Module	J9547A
HP 24-port 10/100 PoE+ zl Module	J9478A
HP 24-port 10/100/1000 PoE+ zl Module	J9307A
HP 20-port 10/100/1000 PoE+ / 4-port Mini-GBIC zl Module	J9308A
HP 8200 zl System Support Module	J9095A
HP 8200 zl Management Module	J9092A
HP 8200 zl Fabric Module	J9093A
HPE Advanced Services v2 zl Module with HDD	J9857A
HPE Advanced Services v2 zl Module with SSD	J9858A

Transceivers

HP X131 10G X2 SC ER Transceiver	J8438A
HP X131 10G X2 SC SR Transceiver	J8436A
HP X131 10G X2 CX4 Transceiver	J8440C
HPE X111 100M SFP LC FX Transceiver	J9054C
HP X131 10G X2 SC LR Transceiver	J8437A
HP X131 10G X2 SC LRM Transceiver	J9144A
HP X112 100M SFP LC BX-D Transceiver	J9099B
HP X112 100M SFP LC BX-U Transceiver	J9100B
HPE X132 10G SFP+ LC SR Transceiver	J9150A
HPE X132 10G SFP+ LC LR Transceiver	J9151A
HPE X132 10G SFP+ LC LRM Transceiver	J9152A

Accessories

HPE X121 1G SFP LC LH Transceiver	J4860C
HPE X121 1G SFP LC SX Transceiver	J4858C
HPE X121 1G SFP LC LX Transceiver	J4859C
HPE X121 1G SFP RJ45 T Transceiver	J8177C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HPE X132 10G SFP+ LC ER Transceiver	J9153A
Cables	
HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A
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	
HPE 1500W PoE+ zl Power Supply	J9306A
HPE 1500W zl Power Supply	J8713A
HPE 875W zl Power Supply	J8712A
License	
HP 8200 zl Switch Premium License	J9474A
WLAN	
HP MSM775 zl Premium Controller Module	J9840A
HP 8206 zl Switch with Premium Software (J9640A)	
HPE 20-port Gig-T/4-port SFP v2 zl Module	J9549A
HP 8206 zl Switch Fan Tray	J9476A
HP 8212 zl Switch with Premium Software (J9641A)	
HP 8212 zl Fan Tray	J9094A

Accessory Product Details

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

HPE 8-port 10GbE SFP+ v2 zl Module (J9546A)	Ports	8 RJ-45 10-GbE ports; Duplex: full only	
	Physical characteristics	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)
		Weight	2.1 lb. (0.95 kg)
		Full configuration weight	2.1 lb. (0.95 kg)
	Environment	Operating temperature	32°F to 131°F (0°C to 55°C)
		Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 95% @ 158°F (70°C), noncondensing
	Notes	Fiber type	Single Mode
			Max Distance upto 100m with qualified 10Gbase-T Cat7(Shielded), Cat6a (Shielded/Unshielded) and Cat6 (Shielded, tested to 350Mhz TIA/EIA TSB-155A) cables. Max Distance upto 55m with Cat6 (unshielded, tested to 350Mhz TIA/EIA TSB-155A)
Services		Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

HPE 8-port 10GbE SFP+ v2 zl Module (J9538A)	Ports	8 open 10-GbE SFP+ transceiver slots	
	Physical characteristics	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)
		Weight	2.09 lb (0.95 kg)
		Environment	Operating temperature
	Environment	Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 95% @ 158°F (70°C), noncondensing
		Notes	
			When mini-GBICs are inserted in any mini-GBIC slot of a J9538A, this limits the operating temperature range of the chassis to 32F to 104F (0C to 40C).

Accessory Product Details

Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services_ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
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HP 4-port 10GbE CX4 zl Module (J8708A)	Ports	4 CX4 10-GbE ports (IEEE 802.3ak Type 10GBASE-CX4); Duplex: full only				
	Physical characteristics	<table> <tr> <td>Dimensions</td> <td>10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)</td> </tr> <tr> <td>Weight</td> <td>1.74 lb. (0.79 kg)</td> </tr> </table>	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)	Weight	1.74 lb. (0.79 kg)
	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)				
	Weight	1.74 lb. (0.79 kg)				
	Environment	Operating temperature 32°F to 131°F (0°C to 55°C)				
	Cabling	<p>Maximum distance:</p> <ul style="list-style-type: none"> • 15 m using CX4 cable • 300 m using optical media converters and multimode fiber cable 				
Notes	<p>Use CX4 10-GbE cable (0.5 m-15 m)</p> <p>No CX4 cables are included with this module.</p>					
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 4-port 10GbE X2 zl Module (J8707A)	Ports	4 open 10-GbE X2 transceiver slots				
	Physical characteristics	<table> <tr> <td>Dimensions</td> <td>10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)</td> </tr> <tr> <td>Weight</td> <td>1.74 lb. (0.79 kg)</td> </tr> </table>	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)	Weight	1.74 lb. (0.79 kg)
	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)				
	Weight	1.74 lb. (0.79 kg)				
	Environment	Operating temperature 32°F to 104°F (0°C to 40°C)				
	Notes	When installed in a zl chassis, the J8707A module limits the operating temperature range of the chassis to 32°F to 104°F (0°C to 40°C).				
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 4-port 10GbE SFP+ zl Module (J9309A)	Ports	4 open 10-GbE SFP+ transceiver slots				
	Physical characteristics	<table> <tr> <td>Dimensions</td> <td>10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)</td> </tr> <tr> <td>Weight</td> <td>1.64 lb. (0.74 kg)</td> </tr> </table>	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)	Weight	1.64 lb. (0.74 kg)
	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)				
	Weight	1.64 lb. (0.74 kg)				
	Environment	Operating temperature	32°F to 131°F (0°C to 55°C)			
		Operating relative humidity	15% to 95% @ 113°F (45°C), noncondensing			
Nonoperating/Storage temperature		-40°F to 158°F (-40°C to 70°C)				
	Nonoperating/Storage	15% to 95% @ 158°F (70°C), noncondensing				

Accessory Product Details

	Notes	relative humidity When installed in a zl chassis, the J9309A module limits the operating temperature range of the chassis to 32F to 113F (0C to 45C).
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
HPE 20-port Gig-T PoE+/2-port 10GbE SFP+ v2 zl Module (J9536A)	Ports	2 open 10-GbE SFP+ transceiver slots 20 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
	Physical characteristics	Dimensions 10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)
		Weight 2.1 lb. (0.95 kg)
	Environment	Operating temperature 32°F to 131°F (0°C to 55°C) Operating relative humidity 15% to 95% @ 131°F (55°C), noncondensing Nonoperating/Storage temperature -40°F to 158°F (-40°C to 70°C) Nonoperating/Storage relative humidity 15% to 95% @ 158°F (70°C), noncondensing
	Cabling	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;
	Notes	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required. When mini-GBICs are inserted in any mini-GBIC slot of a J9308A, this limits the operating temperature range of the chassis to 32F to 104F (0C to 40C).
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
HPE 20-port Gig-T/2-port 10GbE SFP+ v2 zl Module (J9548A)	Ports	2 open 10-GbE SFP+ transceiver slots 20 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
	Physical characteristics	Dimensions 10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)

Accessory Product Details

Environment	Weight	2.1 lb. (0.95 kg)
	Operating temperature	32°F to 131°F (0°C to 55°C)
	Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 95% @ 158°F (70°C), noncondensing
Cabling	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;	
Notes	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required. When mini-GBICs are inserted in any mini-GBIC slot of a J9308A, this limits the operating temperature range of the chassis to 32F to 104F (0C to 40C).	
Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services_ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

HPE 20-port Gig-T PoE+/4-port SFP v2 zl Module (J9535A)	Ports	4 open mini-GBIC (SFP) slots 20 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only		
	Physical characteristics	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)	
		Weight	2.1 lb. (0.95 kg)	
	Environment	Operating temperature	32°F to 131°F (0°C to 55°C)	
		Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing	
Nonoperating/Storage temperature		-40°F to 158°F (-40°C to 70°C)		
Nonoperating/Storage relative humidity		15% to 95% @ 158°F (70°C), noncondensing		
Cabling	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;			
Notes	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.			

Accessory Product Details

Services

When mini-GBICs are inserted in any mini-GBIC slot of a J9308A, this limits the operating temperature range of the chassis to 32F to 104F (0C to 40C).

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

HPE 20-port Gig-T/4-port SFP v2 zl Module (J9549A)

Ports

4 open mini-GBIC (SFP) slots
20 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only

Physical characteristics

Dimensions

10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)

Weight

2.1 lb. (0.95 kg)

Environment

Operating temperature

32°F to 131°F (0°C to 55°C)

Operating relative humidity

15% to 95% @ 131°F (55°C), noncondensing

Nonoperating/Storage temperature

-40°F to 158°F (-40°C to 70°C)

Nonoperating/Storage relative humidity

15% to 95% @ 158°F (70°C), noncondensing

Cabling

Cable type:
1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;

Notes

When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.

When mini-GBICs are inserted in any mini-GBIC slot of a J9549A, this limits the operating temperature range of the chassis to 32F to 104F (0C to 40C).

Services

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

HPE 24-port SFP v2 zl Module (J9537A)

Ports

24 open mini-GBIC (SFP) slots

Physical characteristics

Dimensions

10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)

Weight

2.01 lb. (0.91 kg)

Notes

When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.

When installed in a zl chassis, the J8706A module limits the operating

Accessory Product Details

	Services	temperature range of the chassis to 32°F to 104°F (0°C to 40°C). Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
HPE 12-port Gig-T PoE+/12-port SFP v2 zl Module (J9637A)	Ports	12 open mini-GBIC (SFP) slots 12 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
	Physical characteristics	Dimensions 10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)
		Weight 2.1 lb. (0.95 kg)
	Environment	Operating temperature 32°F to 131°F (0°C to 55°C) Operating relative humidity 15% to 95% @ 131°F (55°C), noncondensing Nonoperating/Storage temperature -40°F to 158°F (-40°C to 70°C) Nonoperating/Storage relative humidity 15% to 95% @ 158°F (70°C), noncondensing
	Cabling	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;
	Notes	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required. When mini-GBICs are inserted in any mini-GBIC slot of a J9308A, this limits the operating temperature range of the chassis to 32F to 104F (0C to 40C).
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
HPE 24-port Gig-T PoE+ Ports v2 zl Module (J9534A)		24 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
	Physical characteristics	Dimensions 10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)
		Weight 2.0 lb. (0.98 kg)
	Environment	Operating temperature 32°F to 131°F (0°C to 55°C)

Accessory Product Details

	Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 95% @ 149°F (-40°C), noncondensing
Cabling	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;	
Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	
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HPE 24-port Gig-T v2 zl Module (J9550A)	Ports	24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
	Physical characteristics	Dimensions 10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)
		Weight 2.0 lb. (0.98 kg)
	Environment	Operating temperature 32°F to 131°F (0°C to 55°C)
		Operating relative humidity 15% to 95% @ 131°F (55°C), noncondensing
		Nonoperating/Storage temperature -40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity 15% to 95% @ 149°F (-40°C), noncondensing
	Cabling	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
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HPE 24-port 10/100 PoE+ v2 zl Module (J9547A)	Ports	24 RJ-45 autosensing 10/100 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3at PoE+); Media Type: Auto-MDIX; Duplex: half or full
	Physical characteristics	Dimensions 10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)

Accessory Product Details

Environment	Weight	2.0 lb. (0.98 kg)
	Operating temperature	32°F to 131°F (0°C to 55°C)
	Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
Environment	Nonoperating/Storage relative humidity	15% to 95% @ 158°F (70°C), noncondensing
	Cabling	Cable type: 100BASE-TX: Category 5 (or better), 100 Ω differential unshielded twisted pair (UTP) or shielded twisted pair (STP), complying with IEEE 802.3u 100BASE-TX;
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 24-port 10/100 PoE+ Ports zl Module (J9478A)

Physical characteristics	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)
	Weight	2.0 lb. (0.98 kg)
Environment	Operating temperature	32°F to 131°F (0°C to 55°C)
	Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 95% @ 158°F (70°C), noncondensing
Cabling	Cable type: 100BASE-TX: Category 5 (or better), 100 Ω unshielded twisted pair (UTP) or shielded twisted pair (STP), complying with IEEE 802.3u 100BASE-TX;	
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 24-port 10/100/1000 Ports PoE+ zl Module (J9307A)

Physical characteristics	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)
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Accessory Product Details

Environment	Weight	2.0 lb. (0.98 kg)
	Operating temperature	32°F to 131°F (0°C to 55°C)
	Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 95% @ 149°F (-40°C), noncondensing
Cabling	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;	
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 20-port 10/100/1000 PoE+ / 4-port Mini-GBIC zl Module (J9308A)	Ports	4 open mini-GBIC (SFP) slots 20 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only		
	Physical characteristics	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)	
		Weight	2.1 lb. (0.95 kg)	
	Environment	Operating temperature	32°F to 131°F (0°C to 55°C)	
		Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing	
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	
		Nonoperating/Storage relative humidity	15% to 95% @ 158°F (70°C), noncondensing	
	Cabling	Cable type: 1000BASE-T: Category 5 (5E or better recommended), 100 Ω differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000BASE-T;		
	Notes	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required. When mini-GBICs are inserted in any mini-GBIC slot of a J9308A, this limits the operating temperature range of the chassis to 32F to 104F (0C to 40C).		
	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 8200 zl System Support Module (J9095A)	Physical characteristics	Dimensions	10.3(d) x 8.13(w) x 1.4(h) in. (26.16 x 20.65 x 3.55 cm)
		Weight	1.00 lb. (0.45 kg)
	Environment	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 95%, noncondensing
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 8200 zl Management Ports Module (J9092A)	1 RJ-45 serial console port		
	Physical characteristics	Dimensions	10.3(d) x 8.13(w) x 1.4(h) in. (26.16 x 20.65 x 3.55 cm)
		Weight	1.20 lb. (0.54 kg)
	Environment	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	15% to 95%, noncondensing	
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 8200 zl Fabric Module (J9093A)	Physical characteristics	Dimensions	10.3(d) x 8.13(w) x 1.75(h) in. (26.16 x 20.65 x 4.45 cm)
		Weight	1.65 lb. (0.75 kg)
	Environment	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 95%, noncondensing
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 Survivable Branch Communication zl Module powered by Microsoft Lync (J9485A)

Ports 1 USB 2.0

Accessory Product Details

Physical characteristics	Dimensions	9.75(d) x 8.13(w) x 3.5(h) in. (24.77 x 20.65 x 8.89 cm)
	Weight	4.5 lb. (2.04 kg)
Environment	Operating temperature	32°F to 122°F (0°C to 50°C); Important: See note for 50°C temperature spec rules
	Operating relative humidity	15% to 90% @ 104°F (40°C), noncondensing
	Nonoperating/Storage temperature	14°F to 149°F (-10°C to 65°C)
	Nonoperating/Storage relative humidity	15% to 90% @ 149°F (65°C), noncondensing
	Altitude	up to 10,000 ft. (3 km)

Notes

HPE E5400 zl chassis operating temperature specifications when the services module is installed: 45°C when any services module is installed in the right side of the chassis, 50°C when all services modules are installed in the left side of the chassis.

Up to four services modules can be installed in an HPE E5412 zl/E8212 zl Switch chassis simultaneously. Up to two services modules can be installed in an HPE E5406 zl/E8206 zl Switch chassis simultaneously.

When the services module is installed, the maximum relative humidity for the switch drops from 95% to 90%.

Services

3-year, 4-hour onsite, 13x5 coverage for hardware (UY932E)
 3-year, 4-hour onsite, 24x7 coverage for hardware (UY933E)
 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UY934E)
 3-year, 24x7 SW phone support, software updates (UY935E)
 3 Yr 6 hr Call-to-Repair Onsite (UY936E)

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 zl f AvayaAura SBC pwrld by AcmePacket (J9486A)

Physical characteristics	Dimensions	9.75(d) x 8.13(w) x 3.5(h) in. (24.77 x 20.65 x 8.89 cm)
	Weight	4.5 lb. (2.04 kg)
Environment	Operating temperature	32°F to 122°F (0°C to 50°C); Important: See note for 50°C temperature spec rules
	Operating relative humidity	15% to 90% @ 104°F (40°C), noncondensing
	Nonoperating/Storage temperature	14°F to 149°F (-10°C to 65°C)
	Nonoperating/Storage relative humidity	15% to 90% @ 149°F (65°C), noncondensing
	Altitude	up to 10,000 ft. (3 km)

Notes

HPE E5400zl chassis operating temperature specifications when the services module is installed: 45°C when any services module is installed in the right side of the chassis, 50°C when all services modules are installed in the left side of the chassis.

Up to four services modules can be installed in an HPE E5412zl/E8212zl Switch chassis simultaneously. Up to two services modules can be installed in an HPE E5406zl/E8206zl Switch chassis simultaneously.

Accessory Product Details

When the services module is installed, the maximum relative humidity for the switch drops from 95% to 90%.

The SBC software and licenses are procured from Avaya or Avaya authorized resellers.

This product does not support Avaya Aura SBC HA functionality.

Services

3-year, 4-hour onsite, 13x5 coverage for hardware (UY492E)

3-year, 4-hour onsite, 24x7 coverage for hardware (UY493E)

3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UY494E)

3-year, 24x7 SW phone support, software updates (UY496E)

3 Yr 6 hr Call-to-Repair Onsite (UY495E)

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 X131 10G X2 SC ER Transceiver (J8438A) HPE X131 10G X2 SC ER Transceiver: An X2 format 10-gigabit transceiver with SC connectors using ER technology.	Ports	1 SC 10-GbE port (IEEE 802.3ae Type 10GBASE-ER); Duplex: full only		
	Connectivity	Connector type	SC	
	Physical characteristics	Wavelength	1550 nm	
		Dimensions	3.48(d) x 1.42(w) x 0.43(h) in. (8.84 x 3.61 x 1.09 cm)	
		Weight	0.35 lb. (0.16 kg)	
	Environment	Transceiver form factor	X2	
		Operating temperature	32°F to 104°F (0°C to 40°C)	
		Operating relative humidity	15% to 95%, noncondensing	
	Electrical characteristics	Power consumption typical	3 W	
		Power consumption maximum	4.5 W	
	Cabling	Cable type: Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1;		
		Cable length	2m to 30km (max 40km on engineered links)	
		Fiber type	Single Mode	
	Notes	Conditioning patch cord cables are not supported For fiber patch cords, use Ultra Physical Contact (UPC) surface termination/polish. Angled Physical Contact (APC) is not recommended.		
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 X131 10G X2 SC SR Transceiver (J8436A)	Ports	1 SC 10-GbE port (IEEE 802.3ae Type 10GBASE-SR); Duplex: full only	
	Connectivity	Connector type	SC
		Wavelength	850 nm

Accessory Product Details

<p>HPE X131 10G X2 SC SR Transceiver: An X2 format 10-gigabit transceiver with SC connectors using SR technology.</p>	Physical characteristics	Dimensions	3.48(d) x 1.42(w) x 0.43(h) in. (8.84 x 3.61 x 1.09 cm)
		Weight	0.35 lb. (0.16 kg)
		Transceiver form factor	X2
	Environment	Operating temperature	32°F to 158°F (0°C to 70°C)
		Operating relative humidity	0% to 95%, noncondensing
		Nonoperating/Storage temperature	-40°F to 185°F (-40°C to 85°C)
		Nonoperating/Storage relative humidity	0% to 95%, noncondensing
	Electrical characteristics	Altitude	up to 10,000 ft. (3 km)
		Power consumption typical	1.7 W
		Power consumption maximum	2.4 W
Cabling	<p>Cable type: 62.5/125 μm or 50/125 μm (core/cladding) graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively;</p> <p>Maximum distance:</p> <ul style="list-style-type: none"> • 2-26m with 62.5 μm multimode cable @ 160 MHz*km • 2-33m with 62.5 μm multimode cable @ 200 MHz*km • 2-66m with 50 μm multimode cable @ 400 MHz*km • 2-82m with 50 μm multimode cable @ 500 MHz*km • 2-300m with 50 μm multimode cable @ 2000 MHz*km 		
	Cable length	2-300m	
Notes	Fiber type	Multi Mode	
	For fiber patch cords, use Ultra Physical Contact (UPC) surface termination/polish. Angled Physical Contact (APC) is not recommended.		
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.		

<p>HP X131 10G X2 CX4 Transceiver (J8440C)</p>	Ports	1 CX4 10-GbE port (IEEE 802.3ak Type 10GBASE-CX4); Duplex: full only	
	Connectivity	Connector type CX4	
<p>HPE X131 10G X2 CX4 Transceiver: An X2 format</p>	Physical characteristics	Dimensions	3.54(d) x 1.42(w) x 0.53(h) in. (8.99 x 3.61 x 1.35 cm)
		Weight	0.18 lb. (0.08 kg)

Accessory Product Details

10-gigabit CX4 transceiver.

Environment

Operating temperature 32°F to 131°F (0°C to 55°C)

Operating relative humidity 15% to 95% @ 14.9°F (65°C), non-condensing

Cabling

Maximum distance:

- 15 m using CX4 cables
- 300 m using optical media converters and multimode fiber cable

Notes

Use CX4 10-GbE cable (0.5-15 m)
Includes a single 0.5 m cable.

Services

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

HPE X111 100M SFP LC Ports

FX Transceiver (J9054C) Physical characteristics

HPE X111 100M SFP LC FX Transceiver: An SFP format 100-megabit transceiver with LC connectors using FX technology.

Environment

1 LC 100BASE-FX port (IEEE 802.3u Type 100BASE-FX); Duplex: half or full

Dimensions: 2.7(d) x 0.54(w) x 0.48(h) in. (6.86 x 1.38 x 1.22 cm)

Weight: 0.06 lb. (0.03 kg)

Operating temperature: 32°F to 158°F (0°C to 70°C)

Operating relative humidity: 5% to 95%

Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C)

Nonoperating/Storage relative humidity: 5% to 85%

Altitude: up to 10,000 ft. (3 km)

Cabling

Type:

- 62.5/125 μm or 50/125 μm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively;

Maximum distance:

- 2 km (full duplex) or 412 m (half duplex)

Notes

Transmitter wavelength: 1310nm
Power consumption is 1.1 watt maximum.

For supported platforms and minimum software requirements to support this product, see the document titled "Support for the J9054C 100-FX SFP-LC Transceiver" on the "HPE Mini-GBICs and SFPs" Manuals Web page.

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 X131 10G X2 SC LR Ports

1 SC 10-GbE port (IEEE 802.3ae Type 10GBASE-LR); Duplex: full only

Accessory Product Details

<p>Transceiver (J8437A)</p> <p>An X2 form-factor transceiver that supports the 10-Gigabit LR standard, providing 10-Gigabit connectivity up to 10 km on single-mode fiber.</p>	Connectivity	Connector type	SC
	Physical characteristics	Wavelength	1310 nm
		Dimensions	3.48(d) x 1.42(w) x 0.43(h) in. (8.84 x 3.61 x 1.09 cm)
		Weight	0.35 lb. (0.16 kg)
	Environment	Transceiver form factor	X2
		Operating temperature	32°F to 104°F (0°C to 40°C)
		Operating relative humidity	15% to 95%, noncondensing
		Nonoperating/Storage temperature	-40°F to 185°F (-40°C to 85°C)
	Electrical characteristics	Altitude	up to 10,000 ft. (3 km)
		Power consumption typical	2 W
		Power consumption maximum	3 W
	Cabling	Cable type::	
		Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1;	
Maximum distance:			
		<ul style="list-style-type: none"> • 10 km 	
	Cable length	2m to 10km with 9/125 μm single-mode cable	
	Fiber type	Single Mode	
Notes	Conditioning patch cord cables are not supported For fiber patch cords, use Ultra Physical Contact (UPC) surface termination/polish. Angled Physical Contact (APC) is not recommended		
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.		

<p>HP X131 10G X2 SC LRM Transceiver (J9144A)</p> <p>An X2 form-factor transceiver that supports the 10-Gigabit LRM standard, providing 10-Gigabit connectivity up to 220 m on legacy multimode fiber.</p>	Ports	1 SC 10-GbE port (IEEE 802.3aq Type 10GBASE-LRM); Duplex: full only	
	Physical characteristics	Dimensions	3.54(d) x 1.59(w) x 0.7(h) in. (9.0 x 4.05 x 1.78 cm)
		Weight	0.35 lb. (0.16 kg)
		Transceiver form factor	X2
	Environment	Operating temperature	32°F to 158°F (0°C to 70°C)
		Operating relative humidity	0% to 95%, noncondensing
		Nonoperating/Storage	-40°F to 185°F (-40°C to 85°C)

Accessory Product Details

	temperature	
	Altitude	up to 10,000 ft. (3 km)
Electrical characteristics	Power consumption typical	3.2 W
	Power consumption maximum	4.2 W
Cabling	<p>Cable type: 62.5/125 μm or 50/125 μm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively (a mode conditioning patch cord may be needed in some multimode fiber installations);</p> <p>Maximum distance:</p> <ul style="list-style-type: none"> • 0.5-220m with 62.5 μm multimode cable @ 160/500 MHz*km • 0.5-220m with 62.5 μm multimode cable @ 200/500 MHz*km • 0.5-100m with 50 μm multimode cable @ 400/400 MHz*km • 0.5-220m with 50 μm multimode cable @ 500/500 MHz*km • 0.5-220m with 50 μm multimode cable @ 1500/500 MHz*km <p>Cable length .5m to 220m</p> <p>Fiber type Multi Mode</p>	
Notes	<p>Wavelength: 1310nm</p> <p>For OM3 cable (50 μm multimode @ 1500/500 MHz*km), a mode-conditioning patch cord is not required. Other multimode cables may require mode-conditioning patch cords to achieve the maximum distances listed above.</p> <p>For supported platforms and minimum software requirements to support this product, see the document titled "Support for the J9144A 10-GbE X2-SC LRM Optic" on the "HPE 10-GbE Transceivers" Manuals Web page.</p> <p>Power Consumption: 4W Max</p>	
Services	<p>Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>	

HP X112 100M SFP LC BX-D Transceiver (J9099B) A small form-factor pluggable (SFP) 100-Megabit BX (bi-directional) "downstream" transceiver that provides 100 Mbps full-duplex connectivity up to 10 km	Ports	1 LC 100BASE-BX10 port (IEEE 802.3ah Type 100BASE-BX10-D); Duplex: full only
	Physical characteristics	Dimensions 2.7(d) x 0.55(w) x 0.48(h) in. (6.86 x 1.39 x 1.22 cm)
	Environment	Weight 0.04 lb. (0.03 kg)
		Operating temperature 32°F to 158°F (0°C to 70°C)
		Operating relative humidity 0% to 95%, noncondensing
		Nonoperating/Storage temperature -40°F to 185°F (-40°C to 85°C)

Accessory Product Details

on one strand of singlemode fiber. The J9099B connects to the J9100B "upstream" transceiver, or to any IEEE-standard 100BASE-BX10-U ("upstream") device.

Cabling

Type:

Single-mode fiber optic, complying with ITU-T G.652;

Maximum distance:

- 0.5-10,000 m (single-mode fiber)

Notes

Transmit wavelength: 1550 nm. Receive wavelength: 1310 nm.

Power consumption is 1.1 watt maximum.

For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HPE BX Transceivers" on the "HPE Mini-GBICs and SFPs" Manuals Web page.

The J9099B connects to the J9100B "upstream" transceiver, or to any IEEE-standard 100BASE-BX10-U ("upstream") device. (A 100-BX-D transceiver can only connect to a 100-BX-U product. You cannot connect two 100-BX-D transceivers together.)

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 X112 100M SFP LC BX-U Transceiver (J9100B)

A small form-factor pluggable (SFP) 100-Megabit BX (bi-directional) "upstream" transceiver that provides 100 Mbps full-duplex connectivity up to 10 km on one strand of singlemode fiber. The J9100B connects to the J9099B "downstream" transceiver, or to any IEEE-standard 100BASE-BX10-D ("downstream") device.

Ports

1 LC 100BASE-BX10 port (IEEE 802.3ah Type 100BASE-BX10-U); Duplex: full only

Physical characteristics

Dimensions

2.7(d) x 0.55(w) x 0.48(h) in. (6.86 x 1.39 x 1.22 cm)

Weight

0.07 lb. (.03 kg)

Environment

Operating temperature

32°F to 158°F (0°C to 70°C)

Operating relative humidity

0% to 95%, noncondensing

Nonoperating/Storage temperature

-40°F to 185°F (-40°C to 85°C)

Cabling

Type:

Single-mode fiber optic, complying with ITU-T G.652;

Maximum distance:

- 0.5-10,000 m (single-mode fiber)

Notes

For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HPE BX Transceivers" on the "HPE Mini-GBICs and SFPs" Manuals Web page.

The J9100B connects to the J9099B "downstream" transceiver, or to any IEEE-standard 100BASE-BX10-D ("downstream") device. (A 100-BX-U

Accessory Product Details

		transceiver can only connect to a 100-BX-D product. You cannot connect two 100-BX-U transceivers together.) Transmit wavelength: 1310 nm. Receive wavelength: 1550 nm. Power consumption is 1.1 watts maximum.
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
HPE X132 10G SFP+ LC SR Transceiver (J9150A)	Ports	1 LC 10-GbE port (IEEE 802.3ae Type 10Gbase-SR); Duplex: full only
	Connectivity	Connector type LC
	Physical characteristics	Wavelength 850 nm
A 10-Gigabit transceiver in SFP+ form-factor that supports the 10-Gigabit SR standard, providing 10-Gigabit connectivity up to 300 m on multimode fiber.	Dimensions	2.19(d) x 0.54(w) x 0.47(h) in. (5.57 x 1.38 x 1.19 cm)
	Weight	0.04 lb. (0.02 kg)
	Transceiver form factor	SFP+
	Environment	Operating temperature 32°F to 158°F (0°C to 70°C)
		Operating relative humidity 0% to 85%, noncondensing
		Nonoperating/Storage temperature -40°F to 185°F (-40°C to 85°C)
		Altitude up to 10,000 ft. (3 km)
	Electrical characteristics	Power consumption typical 0.6 W
		Power consumption maximum 0.8 W
	Cabling	Cable type: 62.5/125 μm or 50/125 μm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively; Maximum distance: <ul style="list-style-type: none"> • 2-26m with 62.5 μm multimode cable @ 160 MHz*km • 2-33m with 62.5 μm multimode cable @ 200 MHz*km • 2-66m with 50 μm multimode cable @ 400 MHz*km • 2-82m with 50 μm multimode cable @ 500 MHz*km • 2-300m with 50 μm multimode cable @ 2000 MHz*km
		Cable length 2-300m
		Fiber type Multi Mode
	Notes	For fiber patch cords, use Ultra Physical Contact (UPC) surface termination/polish. Angled Physical Contact (APC) is not recommended.
	Services	Refer to the Hewlett Packard Enterprise website at

Accessory Product Details

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

HPE X132 10G SFP+ LC LR Transceiver (J9151A) A 10-Gigabit transceiver in SFP+ form-factor that supports the 10-Gigabit LR standard, providing 10-Gigabit connectivity up to 10 km on single-mode fiber.	Ports	1 LC 10-GbE port (IEEE 802.3ae Type 10Gbase-LR); Duplex: full only		
	Connectivity	Connector type	LC	
	Physical characteristics	Wavelength	1310 nm	
		Dimensions	2.19(d) x 0.54(w) x 0.47(h) in. (5.57 x 1.38 x 1.19 cm)	
		Weight	0.04 lb. (.02 kg)	
	Environment	Transceiver form factor	SFP+	
		Operating temperature	32°F to 158°F (0°C to 70°C)	
		Operating relative humidity	0% to 85%, noncondensing	
		Nonoperating/Storage temperature	-40°F to 185°F (-40°C to 85°C)	
	Electrical characteristics	Altitude	up to 10,000 ft. (3 km)	
		Power consumption typical	0.9 W	
		Power consumption maximum	1 W	
	Cabling	Cable type: Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1; Maximum distance: <ul style="list-style-type: none"> • 2m-10km with 9/125 μm single-mode cable 		
Notes	Cable length	2m to 10km		
	Fiber type	Single Mode		
Services	Conditioning patch cord cables are not supported. For fiber patch cords, use Ultra Physical Contact (UPC) surface termination/polish. Angled Physical Contact (APC) is not recommended. Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services : _ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.			

HPE X132 10G SFP+ LC LRM Transceiver (J9152A)	Ports	1 LC 10-GbE port (IEEE 802.3aq Type 10Gbase-LRM); Duplex: full only	
	Connectivity	Connector type	LC
	Physical characteristics	Wavelength	1310 nm
Dimensions		2.19(d) x 0.54(w) x 0.47(h) in. (5.57 x 1.38 x 1.19	

Accessory Product Details

A 10-Gigabit transceiver in SFP+ form-factor that supports the 10-Gigabit LRM standard, for 10-Gigabit connectivity up to 220 m on legacy multimode fiber.

Environment	<p>Weight cm) 0.04 lb. (.02 kg)</p> <p>Transceiver form factor SFP+</p> <p>Operating temperature 32°F to 158°F (0°C to 70°C)</p> <p>Operating relative humidity 0% to 85%, noncondensing</p> <p>Nonoperating/Storage temperature -40°F to 185°F (-40°C to 85°C)</p> <p>Altitude up to 10,000 ft. (3 km)</p>
Electrical characteristics	<p>Power consumption typical 0.7 W</p> <p>Power consumption maximum 1 W</p>
Cabling	<p>Cable type: 62.5/125 μm or 50/125 μm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2</p> <p>Type A1b or A1a, respectively (a mode conditioning patch cord may be needed in some multimode fiber installations);</p> <p>Maximum distance:</p> <ul style="list-style-type: none"> • 0.5-220m with 62.5 μm multimode cable @ 160/500 MHz*km • 0.5-220m with 62.5 μm multimode cable @ 200/500 MHz*km • 0.5-100m with 50 μm multimode cable @ 400/400 MHz*km • 0.5-220m with 50 μm multimode cable @ 500/500 MHz*km • 0.5-220m with 50 μm multimode cable @ 1500/500 MHz*km <p>Cable length 0.5m to 220m</p> <p>Fiber type Multi Mode</p>
Notes	<p>For OM3 cable (50 μm multimode @ 1500/500 MHz*km), a mode-conditioning patch cord is not required. Other multimode cables may require mode-conditioning patch cords to achieve the maximum distances listed above.</p> <p>For fiber patch cords, use Ultra Physical Contact (UPC) surface termination/polish. Angled Physical Contact (APC) is not recommended.</p>
Services	<p>Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services: _ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>

HPE X121 1G SFP LC LH Transceiver (J4860C)

A small form-factor

Ports	1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics); Duplex: full only
Physical characteristics	Dimensions: 2.17(d) x 0.60(w) x 0.46(h) in. (5.5 x 1.53 x 1.18 cm) Weight: 0.04 lb. (0.02 kg)

Accessory Product Details

pluggable (SFP) Gigabit LH transceiver that provides a full-duplex Gigabit solution up to 70 km on single-mode fiber.	Environment	Operating temperature: -40°F to 185°F (-40°C to 85°C) Operating relative humidity: 0% to 95% @ 77°F (25°C), noncondensing Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C) Altitude: up to 10,000 ft. (3 km)
	Cabling	Cable type: <ul style="list-style-type: none"> Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1; <p>Maximum distance:</p> <ul style="list-style-type: none"> 10-70,000 m (single-mode fiber)
	Notes	Power consumption is 0.8 watts typical with 1 watt maximum at 100% utilization. For distances less than 20 km, a 10 dB attenuator must be used. For distances between 20 km and 40 km, a 5 dB attenuator must be used. Attenuators can be purchased from most cable vendors.
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

HPE X121 1G SFP LC SX Transceiver (J4858C) A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550 m on multimode fiber.	Ports	1 LC 1000BASE-SX port; Duplex: full only
	Physical characteristics	Dimensions: 2.24(d) x 0.54(w) x 0.48(h) in. (5.69 x 1.37 x 1.22 cm) Weight: 0.04 lb. (0.02 kg) Transceiver form factor: SFP
	Environment	Operating temperature: 32°F to 158°F (0°C to 70°C) Operating relative humidity: 5% to 85%, noncondensing Nonoperating/Storage temperature: -40°F to 203°F (-40°C to 85°C) Altitude: up to 10,000 ft. (3 km)
	Electrical characteristics	Power consumption typical: 0.4 W Power consumption maximum: 0.7 W
	Cabling	Type: <ul style="list-style-type: none"> 62.5/125 μm or 50/125 μm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively; <p>Maximum distance:</p> <ul style="list-style-type: none"> 2-220 m (62.5 μm core diameter, 160 MHz*km bandwidth) 2-275 m (62.5 μm core diameter, 200 MHz*km bandwidth) 2-500 m (50 μm core diameter, 400 MHz*km bandwidth) 2-550 m (50 μm core diameter, 500 MHz*km bandwidth)

Accessory Product Details

	Services	<p>Cable length: 2-550m</p> <p>Fiber type: Multi Mode</p> <p>Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>
<p>HPE X121 1G SFP LC LX Transceiver (J4859C)</p> <p>HPE X121 1G SFP LC LX Transceiver: An SFP format gigabit transceiver with LC connectors using LX technology.</p>	<p>Ports</p> <p>Physical characteristics</p> <p>Environment</p> <p>Cabling</p>	<p>1 LC 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX); Duplex: full only</p> <p>Dimensions: 2.24(d) x 0.54(w) x 0.486(h) in. (5.69 x 1.37 x 1.23 cm)</p> <p>Weight: 0.04 lb. (0.02 kg)</p> <p>Operating temperature: 32°F to 158°F (0°C to 70°C)</p> <p>Operating relative humidity: 0% to 85%, noncondensing</p> <p>Nonoperating/Storage temperature: -40°F to 212°F (-40°C to 100°C)</p> <p>Altitude: up to 10,000 ft. (3 km)</p> <p>Type:</p> <ul style="list-style-type: none"> • Either single mode or multimode; 62.5/125 μm or 50/125 μm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively; Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1; <p>Maximum distance:</p> <ul style="list-style-type: none"> • 2-550 m (multimode 62.5 μm core diameter, 500 MHz*km bandwidth) • 2-550 m (multimode 50 μm core diameter, 400 MHz*km bandwidth) • 2-550 m (multimode 50 μm core diameter, 500 MHz*km bandwidth) • 2-10,000 m (single-mode fiber)
	Notes	<p>A mode conditioning patch cord may be needed in some multimode fiber installations.</p> <p>Wavelength: 1310nm</p> <p>Power Consumption: < 500mW Typical</p>
	Services	<p>Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>
<p>HPE X121 1G SFP RJ45 T Transceiver (J8177C)</p> <p>HPE X121 1G SFP RJ45 T</p>	<p>Ports</p> <p>Physical characteristics</p>	<p>1 RJ-45 1000BASE-T port (IEEE 802.3ab Type 1000BASE-T); Duplex: full only</p> <p>Dimensions: 2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm)</p> <p>Weight: 0.06 lb. (0.03 kg)</p>

Accessory Product Details

<p>Transceiver: An SFP format gigabit transceiver with RJ45 connectors using 1000BaseT technology.</p>	Environment	<p>Operating temperature: 32°F to 158°F (0°C to 70°C); with 100 LFM airflow over the SFP module</p> <p>Operating relative humidity: 0% to 95% @ 75°F (25°C), noncondensing</p> <p>Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C)</p> <p>Nonoperating/Storage relative humidity: 0% to 95% @ 77°F (25°C), noncondensing</p> <p>Altitude: up to 10,000 ft. (3000 km)</p>
	Cabling	<p>Cable type:</p> <p>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;</p> <p>Maximum distance:</p> <ul style="list-style-type: none"> • 100 m
	Notes	<p>Power consumption is nominally 1 watt.</p> <p>For supported platforms and minimum software requirements to support this product, see the document titled "Support for the J8177C 1000Base-T Mini-GBIC" on the "HPE Mini-GBICs and SFPs" Manuals Web page.</p> <p>The J8177C Gigabit copper mini-GBIC is not supported on dual-personality ports.</p> <p>The J8177C is capable of 100 Mb operation. This is supported on only the HPE E8200zl, E5400zl, and HPE E6200-24G-mGBIC yl Switches using software version K.12.21 or later. Use the "auto-100" port setting to enable 100 Mb operation.</p> <p>Important: The earlier J8177B does not support 100 Mb operation. When used in the Switch gl 20-Port 10/100/1000 Module (J4908A), the J8177C mini-GBIC can be installed in either the upper or lower mini-GBIC port, but will block access to the other port.</p>
	Services	<p>Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>

HP X122 1G SFP LC BX-D Ports Transceiver (J9142B)

A small form-factor pluggable (SFP) Gigabit-BX (bi-directional) "downstream" transceiver that provides a full-duplex

Physical characteristics	Dimensions	2.19(d) x 0.54(w) x 0.46(h) in. (5.57 x 1.37 x 1.18 cm)
	Weight	0.04 lb. (0.02 kg)
Environment	Operating temperature	32°F to 158°F (0°C to 70°C)
	Operating relative humidity	0% to 95%, non-condensing

Accessory Product Details

Gigabit solution up to 10 km on one strand of single-mode fiber. The J9142B connects to the J9143B "upstream" transceiver, or to any IEEE-standard 1000BASE-BX10-U ("upstream") device.

Cabling

Non-operating/Storage temperature –40°F to 185°F –40°C to 85°C)

Type:
Single-mode fiber optic, complying with ITU-T G.652;

Maximum distance:

- 0.5-10,000 m (single-mode fiber)

Notes

Transmit wavelength: 1490 nm. Receive wavelength: 1310 nm.

Power consumption is 1 watt maximum.

For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HPE BX Transceivers" on the "HPE Mini-GBICs and SFPs" Manuals Web page.

The J9142B connects to the J9143B "upstream" transceiver, or to any IEEE-standard 1000BASE-BX10-U ("upstream") device. (A 1000-BX-D transceiver can only connect to a 1000-BX-U product. You cannot connect two 1000-BX-D transceivers together.)

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 X122 1G SFP LC BX-U Ports Transceiver (J9143B)

1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-U); Duplex: full only

A small form-factor pluggable (SFP) Gigabit-BX (bi-directional) "upstream" transceiver that provides a full-duplex Gigabit solution up to 10 km on one strand of single-mode fiber. The J9143B connects to the J9142B "downstream" transceiver, or to any IEEE-standard 1000BASE-BX10-D ("downstream") device.

Physical characteristics

Dimensions

2.19(d) x 0.54(w) x 0.46(h) in. (5.57 x 1.37 x 1.18 cm)

Weight

0.04 lb. (0.02 kg)

Environment

Operating temperature

32°F to 158°F (0°C to 70°C)

Operating relative humidity

0% to 95%, non-condensing

Cabling

Non-operating/Storage temperature

–40°F to 185°F –40°C to 85°C)

Type:
Single-mode fiber optic, complying with ITU-T G.652;

Maximum distance:

- 0.5-10,000 m (single-mode fiber)

Notes

Transmit wavelength: 1310 nm. Receive wavelength: 1490 nm.

For supported platforms and minimum software requirements to support this product, see the document titled "Support for the HPE BX Transceivers" on the "HPE Mini-GBICs and SFPs" Manuals Web page.

The J9143B connects to the J9142B "downstream" transceiver, or to any

Accessory Product Details

		IEEE-standard 1000BASE-BX10-D ("downstream") device. (A 1000-BX-U transceiver can only connect to a 1000-BX-D product. You cannot connect two 1000-BX-U transceivers together.) Power consumption is 1 watt maximum.
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services_ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
HPE X132 10G SFP+ LC ER Transceiver (J9153A)	Ports	1 LC 10-GbE port (IEEE 802.3ae Type 10Gbase-ER); Duplex: full only
	Connectivity	Connector type LC
		Wavelength 1550 nm
	Physical characteristics	Dimensions 2.22(d) x 0.55(w) x 0.47(h) in. (5.65 x 1.39 x 1.19 cm)
		Weight .04 lb., Fully loaded
		Transceiver form factor SFP+
	Environment	Operating temperature 32°F to 158°F (0°C to 70°C)
		Operating relative humidity 5% to 95%, noncondensing
		Nonoperating/Storage temperature -40°F to 185°F (-40°C to 85°C)
		Nonoperating/Storage relative humidity 5% to 95%, noncondensing
		Altitude up to 10,000 ft. (3 km)
	Electrical characteristics	Power consumption typical 1.3 W
		Power consumption maximum 1.5 W
	Cabling	Cable type: Single-mode fiber optic, complying with ITU-T G.652; Maximum distance: <ul style="list-style-type: none"> • 40km
		Fiber type Single Mode
	Notes	Check switch release notes for minimum version of software required to support this transceiver. Some switches have limits as to how many of this particular transceiver can be installed. See the release notes of the switch software/firmware being used for more details.
	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

Accessory Product Details

sales office.

HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281B)	Connectivity	Length	3.28 ft. (1 m)
	Physical characteristics	Weight	0.24 lb. (0.11 kg) the cable with an SFP+ transceiver at each end of the cable
		Environment	Operating temperature
	Operating relative humidity		5% to 95%, noncondensing
	Nonoperating/Storage temperature		14°F to 185°F (-10°C to 85°C)
	Nonoperating/Storage relative humidity		5% to 95%, noncondensing
	Altitude		up to 10,000 ft. (3 km)
	Electrical characteristics	Notes	0.04 watts maximum per transceiver end
	Notes	Electrical Properties	<ul style="list-style-type: none"> • Cable Characteristic Impedance: 100 ohms • Crosstalk between pairs: 2% max • Time delay: 1.31 nsec/ft
		Physical Properties	<ul style="list-style-type: none"> • Cable Diameter: 0.180" • Minimum Cable Bend Radius: 1.0"
Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.		

HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283B)	Connectivity	Length	10 ft. (3 m)
	Physical characteristics	Weight	.49 lb. (0.22 kg), Fully loaded the cable with an SFP+ transceiver at each end of the cable
		Environment	Operating temperature
	Operating relative humidity		5% to 95%, noncondensing
	Nonoperating/Storage temperature		14°F to 185°F (-10°C to 85°C)
	Nonoperating/Storage relative humidity		5% to 95%, noncondensing
	Altitude		up to 10,000 ft. (3 km)
	Electrical characteristics	Notes	0.04 watts maximum per transceiver end
	Notes	Electrical Properties	<ul style="list-style-type: none"> • Cable Characteristic Impedance: 100 ohms • Crosstalk between pairs: 2% max • Time delay: 1.31 nsec/ft

Accessory Product Details

		Physical Properties	
		<ul style="list-style-type: none"> • Cable Diameter: 0.180" • Minimum Cable Bend Radius: 1.0" 	
	Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services_ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	
HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable (J9285B)	Connectivity	Length	22.97 ft. (7 m)
	Physical characteristics	Weight	1.02 lb., Fully loaded the cable with an SFP+ transceiver at each end of the cable
	Environment	Operating temperature	32°F to 158°F (0°C to 70°C)
		Operating relative humidity	5% to 95%, noncondensing
		Nonoperating/Storage temperature	14°F to 185°F (-10°C to 85°C)
		Nonoperating/Storage relative humidity	5% to 95%, noncondensing
		Altitude	up to 10,000 ft. (3 km)
	Electrical characteristics	Notes	0.04 watts maximum per transceiver end
	Notes	Electrical Properties	
		<ul style="list-style-type: none"> • Cable Characteristic Impedance: 100 ohms • Crosstalk between pairs: 2% max • Time delay: 1.31 nsec/ft 	
		Physical Properties	
		<ul style="list-style-type: none"> • Cable Diameter: 0.180" • Minimum Cable Bend Radius: 1.0" 	
	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 X244 10G XFP to SFP+ 1m Direct Attach Copper Cable (J9300A)	Connectivity	Length	3.28 ft. (1 m)
	Physical characteristics	Weight	.27 lb. (0.12 kg), Fully loaded cable with XFP transceiver on one end and SFP+ on the other end
A 1m direct attach copper cable with an XFP connector attached on one end and an SFP+ connector attached on the other end. This cable provides a low price	Environment	Operating temperature	32°F to 158°F (0°C to 70°C)
		Operating relative humidity	5% to 95%, noncondensing
		Nonoperating/Storage temperature	32°F to 158°F (0°C to 70°C)
		Nonoperating/Storage	5% to 95%, noncondensing

Accessory Product Details

connectivity option between switches/servers/storage to interconnect XFP and SFP+ form factors.	Notes	relative humidity	
	Services	Altitude	up to 10,000 ft. (3 km)
		XFP end consumes 2 watts SFP+ end consumes 0.036 watts	
		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 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable (J9301A) A 3m direct attach copper cable with an XFP connector attached on one end and an SFP+ connector attached on the other end. This cable provides a low price connectivity option between switches/servers/storage to interconnect XFP and SFP+ form factors.	Connectivity	Length	9.84 ft. (3 m)	
	Physical characteristics	Weight	.51 lb. (0.23 kg), Fully loaded cable with XFP transceiver on one end and SFP+ on the other end	
		Environment	Operating temperature	32°F to 158°F (0°C to 70°C)
	Cabling		Operating relative humidity	5% to 95%, noncondensing
			Nonoperating/Storage temperature	32°F to 158°F (0°C to 70°C)
			Nonoperating/Storage relative humidity	5% to 95%, noncondensing
			Altitude	up to 10,000 ft. (3 km)
	Notes		Maximum distance:	
		Services	<ul style="list-style-type: none"> • 3m Direct Attach Cable 	
			XFP end consumes 2 watts SFP+ end consumes 0.036 watts	
		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 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable (J9302A) A 5m direct attach copper cable with an XFP connector attached on one end and an SFP+ connector attached on the other end. This cable provides a low price connectivity option between switches/servers/storage to interconnect XFP and SFP+ form factors.	Connectivity	Length	16.4 ft. (5 m)	
	Physical characteristics	Weight	.74 lb. (0.34 kg), Fully loaded cable with XFP transceiver on one end and SFP+ on the other end	
		Environment	Operating temperature	32°F to 158°F (0°C to 70°C)
	Cabling		Operating relative humidity	5% to 95%, noncondensing
			Nonoperating/Storage temperature	32°F to 158°F (0°C to 70°C)
			Nonoperating/Storage relative humidity	5% to 95%, noncondensing
			Altitude	up to 10,000 ft. (3 km)
	Notes		XFP end consumes 2 watts SFP+ end consumes 0.036 watts	
		Services	Refer to the Hewlett Packard Enterprise website at	

Accessory Product Details

factors. 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 LC to LC Multi-mode Cabling
OM3 2-Fiber 0.5m 1-
Pack Fiber Optic Cable**
(AJ833A)

Cable type:

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

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

Notes

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

- Dimensions: Core diameter: $50 \pm 3.0\mu\text{m}$ Cladding diameter: $125 \pm 2.0\mu\text{m}$ Coating diameter: $245 \pm 10\mu\text{m}$
- Optical glass: Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.
- Optical glass: Bandwidth: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links.
- CABLE: The cable is duplex zipcord graded index 50/125 μm 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 LC to LC Multi-mode Cabling
OM3 2-Fiber 1.0m 1-Pack
Fiber Optic Cable**
(AJ834A)

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

Accessory Product Details

Notes

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

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

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

Services

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

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

Cable type:

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

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

Notes

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

- Dimensions: Core diameter: $50 \pm 3.0\mu\text{m}$ Cladding diameter: $125 \pm 2.0\mu\text{m}$ Coating diameter: $245 \pm 10\mu\text{m}$
- Optical Glass Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.

Accessory Product Details

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

Cable type:

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

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

Notes

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

- Dimensions: Core diameter: 50 \pm 3.0um Cladding diameter: 125 \pm 2.0um Coating diameter: 245 \pm 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 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 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 LC to LC Multi-mode Cabling OM3 2-Fiber 15.0m 1- Pack Fiber Optic Cable (AJ837A)

Cable type:

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

Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

Notes

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

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

Services

Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services_ for details on the service-level

Accessory Product Details

descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

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

Notes

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

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

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

Services

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

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

Cable type:

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

Maximum distance:

Accessory Product Details

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

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

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

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

Accessory Product Details

Services

- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

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

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

Services

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

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

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

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

Accessory Product Details

Services

- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45
- Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services_ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

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

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

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

Services

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

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: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m

Accessory Product Details

Services

- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

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

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.

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

Services

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

HPE 1500 W PoE+ zl Power Supply (J9306A)	Physical characteristics	Dimensions	6.05(d) x 7.45(w) x 5.1(h) in. (15.37 x 18.92 x 12.95 cm)
		Weight	7.5 lb. (3.2 kg)
	Environment	Operating temperature	32°F to 131°F (0°C to 55°C)
		Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 95% @ 158°F (70°C), noncondensing
		Altitude	up to 10,000 ft. (3 km)
	Electrical characteristics	AC voltage	110-127/200-240 VAC
		Current	13/10 A
		Maximum power rating	1768 W

Accessory Product Details

	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. The Maximum Power Rating at 120 volts is 1114 watts and at 240 volts is 1768 watts.
Notes		Each J9306A supplies 600 W chassis power, 300 W of PoE/PoE+ power at 110-127 volts, and 900 W of PoE/PoE+ power at 200-240 volts. One J9306A can power the J8697A chassis. One J9306A can power the J9477A chassis. Two J9306A supplies are required to power the J8698A chassis. Two J9306A supplies are required to power the J8715A chassis.
Services		Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

HPE 1500W zl Power Supply (J8713A)	Physical characteristics	Dimensions	6.05(d) x 7.45(w) x 5.1(h) in. (15.37 x 18.92 x 12.95 cm)
		Weight	7.5 lb. (3.2 kg)
		Environment	
		Operating temperature	32°F to 131°F (0°C to 55°C)
		Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 95% @ 158°F (70°C), noncondensing
		Altitude	up to 10,000 ft. (3 km)
	Electrical characteristics	AC voltage	200-240 VAC
		Current	10 A
Maximum power rating		1800 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.	
Notes		200–240 V only. Installation of the J8713A reduces the chassis altitude specification to 10,000 ft. (3677m). • J8713A supplies 600 W chassis power and 900 W PoE power.	

Accessory Product Details

See the Ordering Guide for more details on power supply selection for PoE power.

Units shipped to North America include a NEMA L6-20P twist lock power cord. Non-locking NEMA 6-20P optionally available - see the Ordering Guide for more details.

When used in the J8714A power shelf, the following specs apply (at full load):

- Heat dissipation: 450 BTU/hr (475 kJ/hr) @ 220V
- Maximum current: 5.1 A @ 220 V

Services

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

HPE 875W zl Power Supply (J8712A)	Physical characteristics	Dimensions	6.05(d) x 7.45(w) x 5.1(h) in. (15.37 x 18.92 x 12.95 cm)
		Weight	7.05 lb. (3.2 kg)
		Environment	
	Environment	Operating temperature	32°F to 131°F (0°C to 55°C)
		Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing
		Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Nonoperating/Storage relative humidity	15% to 95% @ 158°F (70°C), noncondensing
		Altitude	up to 10,000 ft. (3 km)
	Electrical characteristics	AC voltage	100-127/200-240 VAC
		Current	12/5.7 A
Maximum power rating		1050 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.	
Notes	<p>J8712A supplies 600 W chassis power and 273 W PoE power. One J8712A can power the J8697A chassis. Two J8712A supplies are required to power the J8698A chassis. Two J8712A supplies are required to power the J8715A chassis. See the Ordering Guide for more details on power supply selection for PoE power. When used in the J8714A power shelf, the following specs apply (at full load):</p> <ul style="list-style-type: none"> • Heat dissipation: 250 BTU/hr (263 kJ/hr) @ 110 V, 210 BTU/hr (222 kJ/hr) @ 220 V 		

Accessory Product Details

	Services	<ul style="list-style-type: none"> • Maximum current: 3.2 A @ 110 V, 1.7 A @ 220 V <p>Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services_ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>	
HP 8200 zl Switch Premium License (J9474A)	Services	<p>3-Year, 9x5 SW phone support, software updates (UT481E) 3-year, 24x7 SW phone support, software updates (UT482E) 4-year, 24x7 SW phone support, software updates (UT458E) 5-year, 24x7 SW phone support, software updates (UT459E) 1-year, 24x7 software phone support, software updates (HS532E)</p> <p>Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services_ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>	
HP 8206 zl Switch Fan Tray (J9476A)	Physical characteristics	Dimensions	18.23(d) x 1.96(w) x 10.15(h) in. (46.3 x 4.98 x 25.78 cm) (6U height)
		Weight	3.46 lb. (1.57 kg)
	Services	<p>Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services_ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>	
HP 8212 zl Fan Tray (J9094A)	Physical characteristics	Dimensions	5(d) x 5(w) x 5(h) in. (12.7 x 12.7 x 12.7 cm)
	Services	<p>Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services_ for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.</p>	

Summary of Changes

Date	Version History	Action	Description of Change
27-May-2016	From Version 40 to 41	Changed	Product description updated.
01-Nov-2014	From Version 39 to 40	Change	Features and Warranty and support updated
09-Oct-2014	From Version 38 to 39	Changed	Accessory Product Details revised, SKU descriptions updated
17-Feb-2014	From Version 37 to 38	Changed	Transceivers were revised.
09-Dec-2013	From Version 36 to 37	Changed	Standard Switch Chassis, Box Level Integration CTO Models, Rack Level Integration CTO Models, Internal Power Supplies, Modules, and Cables were revised.
15-Oct-2013	From Version 35 to 36	Changed	Configuration was revised.
03-Oct-2013	From Version 34 to 35	Changed	Overview image callouts were realigned.
30-Sep-2013	From Version 33 to 34	Changed	Updated the Configuration section.
		Removed	Removed one EOL Accessory.
20-Sep-2013	From Version 32 to 33	Added	4 new images were added.
19-Aug-2013	From Version 31 to 32	Changed	Box Level Integration CTO Models in Configuration.
18-Jul-2013	From Version 30 to 31	Removed	Removed two EOL Accessories (Threat Management).
10-Jun-2013	From Version 29 to 30	Added	OM4 cables were added.
30-May-2013	From Version 28 to 29	Changed	Updated the Configuration section.
14-May-2013	From Version 27 to 28	Changed	Updated the Configuration section.
19-Mar-2013	From Version 26 to 27	Changed	Updated the new Configuration section.
27-Feb-2013	From Version 25 to 26	Changed	Updated the formatting of the new Configuration section.
19-Feb-2013	From Version 24 to 25	Added	Added the Configuration section.
24-Sep-2012	From Version 23 to 24	Changed	Features and Benefits was revised, as were Accessories and the model specifications.
06-Sep-2012	From Version 22 to 23	Changed	Updated a typographical error in the Features and Benefits section.
27-Aug-2012	From Version 21 to 22	Changed	Updated the specifications for the HPE 8-port 10 GbE SFP+ v2 zl Module in Accessory Product Details.
25-Jun-2012	From Version 20 to 21	Changed	Features and Benefits was revised, as were Accessories and the model specifications.
27-Mar-2012	From Version 19 to 20	Added	HPE X242 SFP+ to SFP+ 10m Direct Attach Copper Cable and HPE X242 SFP+ to SFP+ 15m Direct Attach Copper

Summary of Changes

			Cable were added.
26-Sep-2011	From Version 18 to 19	Changed	Accessories was revised.
05-Sep-2011	From Version 17 to 18	Added	Accessory Product Details was added.
20-Jun-2011	From Version 15 to 17	Changed	Features and Benefits was revised.
15-Apr-2011	From Version 14 to 15	Removed	Removed the remaining mentions of ProCurve from the QS.
16-Nov-2010	From Version 13 to 14	Changed	The QuickSpecs was completely revised, including adding several new models.
15-Sep-2010	From Version 11 to 13	Changed	The QuickSpecs was completely revised, including changing the title.
02-Jun-2010	From Version 10 to 11	Changed	Updated the Notes section of Technical Specifications. Updated Standards and Protocols Added new cables to the Accessories section.
28-Oct-2009	From Version 9 to 10	Changed	Updated the Standards and Protocols in Specifications. Updated the Introduction and Features and Benefits section.
03-Sep-2009	From Version 8 to 9	Changed	Updated the Standards and Protocols in Specifications. Updated the Transceivers section of Accessories
01-Sep-2009	From Version 7 to 8	Added	All mentions of the HPE ProCurve 8206zl Switch.
		Changed	Updates were made throughout the QuickSpecs. Note the title has changed.
01-Jul-2009	From Version 6 to 7	Changed	The Accessories section was revised as was the Notes section of Technical Specifications.
11-Jun-2009	From Version 5 to 6	Added	Added several new services.
		Changed	The Features and Benefits and the notes in the Technical Specifications section were revised.
28-Apr-2009	From Version 4 to 5	Added	Added several products to the Accessories section.
19-Jan-2009	From Version 3 to 4	Changed	Updated Features and Benefits and Services in the Overview section and Included Accessories, Management and Standards and Protocols in the Technical Specifications section, as well completely revising the Accessories section.
18-Dec-2007	From Version 2 to 3	Added	The line art image was added.
30-Oct-2007	From Version 1 to 2	Changed	The Model part number was corrected.

Summary of Changes



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