HP E8200 zl Switch Series

Data sheet

Product overview

The HP E8200 zl Switch Series offers high performance, scalability, and a wide range of features in a high-availability platform that dramatically reduces complexity and provides reduced cost of ownership. As part of a unified wired and wireless network infrastructure solution, the E8200 zl series provides platform technology, system software, system management, application integration, wired and wireless integration, network security, and support that are common across the HP E Series of modular and fixed-port switches. Together, they deliver an agile, cost-effective, high-availability network solution. With key technologies to provide solution longevity, the E8200 zl switch series is built to deliver long-term investment protection without added complexity for network core, aggregation, and high-availability access layer deployments. It provides these capabilities while bringing to market the industry's first highly available switch with a lifetime warranty.

Key features

- Core, distribution, mission-critical access layer
- Advanced high-availability AllianceONE integrated
- Layer 2 to 4 and intelligent edge feature set
- Enterprise-class performance and security
- Scalable 10/100/1000 and 10 GbE connectivity

Features and benefits

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 maximum bandwidth
  - **Classifier-based rate limiting:** uses access control list (ACL) to enforce maximum bandwidth for ingress traffic on each port
  - **Guaranteed minimum:** provides per-port, per-queue egress-based guaranteed minimum 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

HP AllianceONE integration

- **HP AllianceONE Services zl Module:** allows customers 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 HP AllianceONE solution, visit the HP website

Management

- **Remote intelligent mirroring:** mirrors selected ingress/egress traffic based on ACL, port, MAC address, or VLAN to a local or remote HP E8200 zl, E6600, E6200 yl, E5400 zl, or E3500 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):** automated device discovery protocol provides easy mapping by network management applications
- **Uni-Directional Link Detection (UDLD):** monitors cable between two switches and shuts down the ports on both ends if the cable is broken, turning the bi-directional link into uni-directional; this prevents network problems such as loops
- **HP Unified Core-to-Edge Device/Network Management tools:** provide HP E-Series portfolio-common device-level tools (CLI, Web GUI, Menu) plus seamless integration into HP 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; also provides an audit trail
- **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
- **HP Unified Core-to-Edge features:** HP ProVision portfolio-common feature implementation allows faster solution deployment

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 & 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 and 10-Gigabit ports, they allow high-performance remote backup and disaster recovery services

- **HP Unified Core-to-Edge hardware:** HP 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 list of supported devices in the product FAQs at www.hp.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 and deployed at the IPv6 network's edge
  - **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, preventing traffic flooding
  - **IPv6 routing:** supports static and OSPFv3 routing protocols

Performance

- **High-speed/capacity architecture:** 1.12 Tbps crossbar switching fabric provides intra- and inter-module switching with 739.2 million pps throughput on the purpose-built ProVision ASICs
- **Selectable queue configurations:** allow you to increase performance by selecting the number of queues and associated memory buffering that best meet the requirements of your 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

- **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
- **NEW Nonstop Routing:** enhances L3 high availability; OSPFv2/v3 and VRRP will continue to operate and route network traffic during failover from active to standby management module
- **Redundant management, fabric, and power:** provide enhanced system availability and continuity of operations
- **NEW 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 HP port trunking:** support up to 60 trunks, each with up to 8 links (ports) per trunk
- **Proven ASIC and system architecture:** the HP ProVision ASIC and platform architecture, leveraged from HP's successful E5400 zl, E3500, E6600, and E6200 yl switch families, reduces technology risk and provides reliable support and flexibility
- **HP 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 component failure
- **Virtual Route Redundancy Protocol:** Allows groups of two routers to dynamically back each other up to create highly available routed environments

Layer 2 switching

- **HP's switch meshing:** dynamically load balances across multiple active redundant links to increase available aggregate bandwidth
- **VLAN support and tagging:** supports the IEEE 802.1Q standard and 2048 VLANs simultaneously
- **IEEE 802.1v protocol VLANs:** isolate select non-IPv4 protocols automatically into their own VLANs

- **GARP VLAN Registration Protocol (GVRP):** allows automatic learning and dynamic assignment of VLANs
- **IEEE 802.1ad QinQ:** increases the scalability of an Ethernet network by providing a hierarchical structure; connects multiple LANs on high-speed campus or metro network
- **NEW MAC-based VLAN:** provides granular control and security; uses RADIUS to map MAC address/user to specific VLAN's. (requires v2 modules)

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 OSPF that can always be reachable, improving diagnostic capability
- **Route maps:** provide more control during route redistribution; allow filtering and altering of route metrics

Layer 3 routing

- **Static IP routing:** provides manually configured routing for both IPv4 and IPv6 networks
- **Routing Information Protocol (RIP):** provides RIPv1 and RIPv2 routing
- **OSPF:**
  - provides OSPFv2 for IPv4 routing and OSPFv3 for IPv6 routing

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 Web browser for clients that do not support IEEE 802.1X supplicant
  - **MAC-based authentication:** authenticates client with the RADIUS server based on 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 ensure that management interfaces such as SNMP, telnet, SSH, SSL, Web, and USB are secured to 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:** 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 (SSHv2):** encrypts all transmitted data for secure, remote command-line interface (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 File Transfer Protocol (FTP):** allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of 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
- **USB Secure Autorun (requires HP PCM+):** deploys, diagnoses, and updates switch using a USB flash drive; works with a secure credential to prevent tampering
- **STP Root Guard:** protects root bridge from malicious attack 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 HP 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
- **RADIUS VLAN for voice:** uses standard RADIUS attribute and LLDP-MED to automatically configure VLAN for 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

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 seamless addition of new QoS and security features over time without costly hardware upgrades

Warranty and support

- **Lifetime warranty:** for as long as you own the product with advance replacement and next-business-day delivery (available in most countries)*
- **Electronic and telephone support:** limited electronic and telephone support is available from HP; refer to www.hp.com/networking/warranty for details on the support provided and the period during which support is available
- **Software releases:** refer to www.hp.com/networking/warranty for details on the software releases provided and the period during which software releases are available for your product(s)

*Hardware warranty replacement for as long as you own the product, with next business day advance replacement (available in most countries) with a five-year hardware warranty replacement for the disk drive included with HP AllianceONE Services zl Module, HP Threat Management Services zl Module, HP PCM+ Agent with AllianceONE Services zl Module, and HP E-MSM765 zl Mobility Controller. For details, refer to the HP Software License, Warranty, and Support booklet at www.hp.com/networking/warranty.

Specifications

	HP E8206 zl Switch with Premium Software (J9640A)	HP E8212 zl Switch with Premium Software (J9641A)
Included accessories	1 HP E8200 zl Management Module (J9092A) 2 HP E8200 zl Fabric Module (J9093A) 1 HP E8200 zl System Support Module (J9095A) 1 HP E8200 zl Switch Premium License (J9474A)	1 HP E8200 zl Management Module (J9092A) 2 HP E8200 zl Fabric Module (J9093A) 1 HP E8200 zl System Support Module (J9095A) 1 HP E8200 zl Switch Premium License (J9474A)
Ports	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	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
Power supplies	2 power supply slots 1 minimum power supplies required (ordered separately)	4 power supply slots 2 minimum power supplies required (ordered separately)
Physical characteristics		
Dimensions	17.49(d) x 17.42(w) x 10.35(h) in. (44.42 x 44.25 x 26.29 cm) (6U height)	18.7(d) x 17.5(w) x 15.6(h) in. (47.5 x 44.45 x 39.62 cm) (9U height)
Weight	48.1 lb. (21.82 kg)	50.45 lb. (22.88 kg)
Memory and processor		
Gigabit module	ARM9 @ 200 MHz; packet buffer size: 144 Mb QDR SDRAM	ARM9 @ 200 MHz; packet buffer size: 144 Mb QDR SDRAM
10G module	ARM9 @ 200 MHz; packet buffer size: 36 Mb QDR SDRAM	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	Freescale PowerPC 8540 @ 666 MHz, 4 MB flash, 128 MB compact flash, 256 MB DDR SDRAM
Mounting	Mounts in EIA-standard 19 in telco rack/equipment cabinet (hardware included); horizontal surface mounting only. Optional 4-post cabinet rail is available (see ordering guide).	Mounts in an EIA-standard 19 in telco rack or equipment cabinet (hardware included); horizontal surface mounting only. Optional 4-post cabinet rail is available (see switch 8212zl ordering guide).
Performance		
1000 Mb Latency	< 3.7 µs (FIFO 64-byte packets)	< 3.7 µs (FIFO 64-byte packets)
10 Gbps Latency	< 2.1 µs (FIFO 64-byte packets)	< 2.1 µs (FIFO 64-byte packets)
Throughput	up to 369.6 million pps	up to 739 million pps
Routing/Switching capacity	496.8 Gbps	993.6 Gbps
Switch fabric speed	561.6 Gbps	1.1 Tbps
Routing table size	10000 entries	10000 entries
MAC address table size	64000 entries	64000 entries
Environment		
Operating temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing	15% to 95% @ 131°F (55°C), noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	15% to 95% @ 149°F (65°C), noncondensing	15% to 95% @ 149°F (65°C), noncondensing
Altitude	up to 10,000 ft. (3 km)	up to 10,000 ft. (3 km)
Acoustic	Power: 60.0 dB, Pressure: 41.3 dB; ISO 7779, ISO 9296	Power: 63.0 dB, Pressure: 47.8 dB; ISO 7779, ISO 9296
Electrical characteristics		
	Achieved Miercom Certified Green Award	Achieved Miercom Certified Green Award
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.	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	2450 BTU/hr (2584.75 kJ/hr), (max. non-PoE); 3,700 BTU/hr (3,903 kJ/hr) (max. PoE)	4900 BTU/hr (5170 kJ/hr), (max. non-PoE); 7400 BTU/hr (7807 kJ/hr) (max. PoE)
Voltage	100-127/200-240 VAC	100-127/200-240 VAC
Frequency	50/60 Hz	50/60 Hz
Notes	Power supplies must be ordered separately. A minimum of one J8712A, J8713A, or J9306A supply is required to power the system.	Power supplies must be ordered separately. A minimum of two J8712A, J8713A, or J9306A supplies are required to power the system.
Safety	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950; IEC 60825	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	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	EN 55024, CISPR 24
ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD	IEC 61000-4-2; 4 kV CD, 8 kV AD
Radiated	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m
EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
Surge	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC
Conducted	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V
Power frequency magnetic field	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	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	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
Harmonics	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2

Specifications (continued)

	HP E8206 zl Switch with Premium Software (J9640A)	HP E8212 zl Switch with Premium Software (J9641A)
Flicker	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3
Management	HP PCM+; HP PCM (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)	HP PCM+; HP 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. When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required.	Interface/Service modules, power supplies, and redundant management module must be ordered separately. RS-232C console port via an RJ-45 connector. When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required.
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UT012E) 3-year, 4-hour onsite, 13x5 coverage for hardware (UW442E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UW443E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UT013E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UW444E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UT014E) 3-year, 24x7 SW phone support, software updates (UT015E) 3-year, 24x7 SW phone support, software updates (UW445E) Installation with minimum configuration, system-based pricing (U4828E) Installation with HP-provided configuration, system-based pricing (U4832E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UW462E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UT016E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UT017E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UW463E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UT018E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW464E) 4-year, 24x7 SW phone support, software updates (UT019E) 4-year, 24x7 SW phone support, software updates (UW465E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UY921E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UT020E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UT021E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UY922E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UT022E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UY923E) 5-year, 24x7 SW phone support, software updates (UY924E) 5-year, 24x7 SW phone support, software updates (UT023E) 3 Yr 6 hr Call-to-Repair Onsite (UW335E) 3 Yr 6 hr Call-to-Repair Onsite (UW446E) 4 Yr 6 hr Call-to-Repair Onsite (UW466E) 4 Yr 6 hr Call-to-Repair Onsite (UW336E) 5 Yr 6 hr Call-to-Repair Onsite (UY925E) 5 Yr 6 hr Call-to-Repair Onsite (UW337E) Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	3-year, 4-hour onsite, 13x5 coverage for hardware (UF807E) 3-year, 4-hour onsite, 13x5 coverage for hardware (UW447E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UW448E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UF808E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UW449E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UF809E) 3-year, 24x7 SW phone support, software updates (UF810E) 3-year, 24x7 SW phone support, software updates (UW450E) Installation with minimum configuration, system-based pricing (U4828E) Installation with HP-provided configuration, system-based pricing (U4832E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UW467E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR808E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR809E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UW468E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR810E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW469E) 4-year, 24x7 SW phone support, software updates (UR811E) 4-year, 24x7 SW phone support, software updates (UW471E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UY926E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UR812E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UR813E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UY927E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR814E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UY928E) 5-year, 24x7 SW phone support, software updates (UY929E) 5-year, 24x7 SW phone support, software updates (UR815E) 3 Yr 6 hr Call-to-Repair Onsite (UW398E) 3 Yr 6 hr Call-to-Repair Onsite (UY937E) 4 Yr 6 hr Call-to-Repair Onsite (UW472E) 4 Yr 6 hr Call-to-Repair Onsite (UW399E) 5 Yr 6 hr Call-to-Repair Onsite (UY930E) 5 Yr 6 hr Call-to-Repair Onsite (UW400E) Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Specifications (continued)

	HP E8206 zl Switch with Premium Software (J9640A)	HP E8212 zl Switch with Premium Software (J9641A)

Standards and protocols
(applies to all products in series)

Device management
RFC 1591 DNS (client)
HTML and telnet management

General protocols
IEEE 802.1ad Q-in-Q
IEEE 802.1AX-2008 Link Aggregation
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 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
UDLD (Uni-directional Link Detection)

IP multicast
RFC 3376 IGMPv3 (host joins only)
RFC 3973 Draft 2 PIM Dense Mode
RFC 4601 Draft 10 PIM Sparse Mode

IPv6
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
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 MLDv2 (host joins only)
RFC 4022 MIB for TCP
RFC 4113 MIB for UDP
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 5722 Handling of Overlapping IPv6 Fragments

MIBs
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 1724 RIPv2 MIB
RFC 1850 OSPFv2 MIB
RFC 2021 RMONv2 MIB
RFC 2096 IP Forwarding Table MIB
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

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
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
Secure Sockets Layer (SSL)
SSHv2 Secure Shell

Specifications (continued)

	 HP E8206-44G-PoE+/2XG-SFP+ v2 zl Switch with Premium Software (J9638A)	 HP E8212-92G-PoE+/2XG-SFP+ v2 zl Switch with Premium Software (J9639A)
Included accessories	1 HP E8200 zl Management Module (J9092A) 2 HP E8200 zl Fabric Module (J9093A) 1 HP E8200 zl System Support Module (J9095A) 1 HP 1500 W PoE+ zl Power Supply (J9306A) 1 HP 24-port Gig-T PoE+ v2 zl Module (J9534A) 1 HP 20-port Gig-T PoE+ / 2-port 10-GbE SFP+ v2 zl Module (J9536A) 1 HP E8200 zl Switch Premium License (J9474A)	1 HP E8200 zl Management Module (J9092A) 2 HP E8200 zl Fabric Module (J9093A) 1 HP E8200 zl System Support Module (J9095A) 1 HP E8200 zl Switch Premium License (J9474A) 2 HP 1500 W PoE+ zl Power Supply (J9306A) 3 HP 24-port Gig-T PoE+ v2 zl Module (J9534A) 1 HP 20-port Gig-T PoE+ / 2-port 10-GbE SFP+ v2 zl Module (J9536A)
Ports	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	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 2 SFP+ 10-GbE ports; Duplex: full only 8 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
Power supplies	2 power supply slots 1 minimum power supplies required includes: 1 x J9306AHP 1500 W PoE+ zl Power Supply	4 power supply slots 2 minimum power supplies required includes: 2 x J9306AHP 1500 W PoE+ zl Power Supply
Physical characteristics		
Dimensions	17.49(d) x 17.42(w) x 10.35(h) in. (44.42 x 44.25 x 26.29 cm) (6U height)	18.7(d) x 17.5(w) x 15.6(h) in. (47.5 x 44.45 x 39.62 cm) (9U height)
Weight	61.49 lb. (27.89 kg)	102.76 lb. (46.61 kg)
Memory and processor		
Gigabit module	ARM9 @ 200 MHz; packet buffer size: 144 Mb QDR SDRAM	ARM9 @ 200 MHz; packet buffer size: 144 Mb QDR SDRAM
10G module	ARM9 @ 200 MHz; packet buffer size: 36 Mb QDR SDRAM	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	Freescale PowerPC 8540 @ 666 MHz, 4 MB flash, 128 MB compact flash, 256 MB DDR SDRAM
Mounting	Mounts in EIA-standard 19 in telco rack/equipment cabinet (hardware included); horizontal surface mounting only. Optional 4-post cabinet rail is available (see ordering guide).	Mounts in an EIA-standard 19 in telco rack or equipment cabinet (hardware included); horizontal surface mounting only. Optional 4-post cabinet rail is available (see switch 8212zl ordering guide).
Performance		
1000 Mb Latency	< 3.7 µs (FIFO 64-byte packets)	< 3.7 µs (FIFO 64-byte packets)
10 Gbps Latency	< 2.1 µs (FIFO 64-byte packets)	< 2.1 µs (FIFO 64-byte packets)
Throughput	up to 369.6 million pps	up to 739 million pps
Routing/Switching capacity	496.8 Gbps	993.6 Gbps
Switch fabric speed	561.6 Gbps	1.1 Tbps
Routing table size	10000 entries	10000 entries
MAC address table size	64000 entries	64000 entries
Environment		
Operating temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Operating relative humidity	15% to 95% @ 131°F (55°C), noncondensing	15% to 95% @ 131°F (55°C), noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	15% to 95% @ 149°F (65°C), noncondensing	15% to 95% @ 149°F (65°C), noncondensing
Altitude	up to 10,000 ft. (3 km)	up to 10,000 ft. (3 km)
Acoustic	Power: 60.0 dB, Pressure: 41.3 dB; ISO 7779, ISO 9296	Power: 63.0 dB, Pressure: 47.8 dB; ISO 7779, ISO 9296
Electrical characteristics		
	Achieved Miercom Certified Green Award	Achieved Miercom Certified Green Award
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.	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	2450 BTU/hr (2584.75 kJ/hr), (max. non-PoE); 3,700 BTU/hr (3,903 kJ/hr) (max. PoE)	4900 BTU/hr (5170 kJ/hr), (max. non-PoE); 7400 BTU/hr (7807 kJ/hr) (max. PoE)
Voltage	100-127/200-240 VAC	100-127/200-240 VAC
Frequency	50/60 Hz	50/60 Hz
Notes	Power supplies must be ordered separately. A minimum of one J8712A, J8713A, or J9306A supply is required to power the system.	Power supplies must be ordered separately. A minimum of two J8712A, J8713A, or J9306A supplies are required to power the system.
Safety	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950; IEC 60825	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	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	EN 55024, CISPR 24

Specifications (continued)

	HP E8206-44G-PoE+/2XG-SFP+ v2 zl Switch with Premium Software (J9638A)	HP E8212-92G-PoE+/2XG-SFP+ v2 zl Switch with Premium Software (J9639A)
ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD	IEC 61000-4-2; 4 kV CD, 8 kV AD
Radiated	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m
EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
Surge	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC
Conducted	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V
Power frequency magnetic field	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	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	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
Harmonics	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2
Flicker	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3
Management	HP PCM+; HP PCM (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)	HP PCM+; HP 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. When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required.	Interface/Service modules, power supplies, and redundant management module must be ordered separately. RS-232C console port via an RJ-45 connector. When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, for example, J4858B, J4859C) are required.
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UT012E) 3-year, 4-hour onsite, 13x5 coverage for hardware (UW442E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UW443E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UT013E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UW444E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UT014E) 3-year, 24x7 SW phone support, software updates (UT015E) 3-year, 24x7 SW phone support, software updates (UW445E) Installation with minimum configuration, system-based pricing (U4828E) Installation with HP-provided configuration, system-based pricing (U4832E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UW462E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UT016E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UT017E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UW463E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UT018E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW464E) 4-year, 24x7 SW phone support, software updates (UT019E) 4-year, 24x7 SW phone support, software updates (UW465E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UY921E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UT020E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UT021E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UY922E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UT022E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UY923E) 5-year, 24x7 SW phone support, software updates (UY924E) 5-year, 24x7 SW phone support, software updates (UT023E) 3 Yr 6 hr Call-to-Repair Onsite (UW335E) 3 Yr 6 hr Call-to-Repair Onsite (UW446E) 4 Yr 6 hr Call-to-Repair Onsite (UW466E) 4 Yr 6 hr Call-to-Repair Onsite (UW336E) 5 Yr 6 hr Call-to-Repair Onsite (UY925E) 5 Yr 6 hr Call-to-Repair Onsite (UW337E) Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	3-year, 4-hour onsite, 13x5 coverage for hardware (UF807E) 3-year, 4-hour onsite, 13x5 coverage for hardware (UW447E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UW448E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UF808E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UW449E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UF809E) 3-year, 24x7 SW phone support, software updates (UF810E) 3-year, 24x7 SW phone support, software updates (UW450E) Installation with minimum configuration, system-based pricing (U4828E) Installation with HP-provided configuration, system-based pricing (U4832E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UW467E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR808E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR809E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UW468E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR810E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW469E) 4-year, 24x7 SW phone support, software updates (UR811E) 4-year, 24x7 SW phone support, software updates (UW471E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UY926E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UR812E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UR813E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UY927E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR814E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UY928E) 5-year, 24x7 SW phone support, software updates (UY929E) 5-year, 24x7 SW phone support, software updates (UR815E) 3 Yr 6 hr Call-to-Repair Onsite (UW398E) 3 Yr 6 hr Call-to-Repair Onsite (UY937E) 4 Yr 6 hr Call-to-Repair Onsite (UW472E) 4 Yr 6 hr Call-to-Repair Onsite (UW399E) 5 Yr 6 hr Call-to-Repair Onsite (UY930E) 5 Yr 6 hr Call-to-Repair Onsite (UW400E) Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Specifications (continued)

	HP E8206-44G-PoE+/2XG-SFP+ v2 zl Switch with Premium Software (J9638A)	HP E8212-92G-PoE+/2XG-SFP+ v2 zl Switch with Premium Software (J9639A)

Standards and protocols
(applies to all products in series)

Device management
RFC 1591 DNS (client)
HTML and telnet management

General protocols
IEEE 802.1ad Q-in-Q
IEEE 802.1AX-2008 Link Aggregation
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 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
UDLD (Uni-directional Link Detection)

IP multicast
RFC 3376 IGMPv3 (host joins only)
RFC 3973 Draft 2 PIM Dense Mode
RFC 4601 Draft 10 PIM Sparse Mode

IPv6
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
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 MLDv2 (host joins only)
RFC 4022 MIB for TCP
RFC 4113 MIB for UDP
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
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RFC 5453 Reserved IPv6 Interface Identifiers
RFC 5722 Handling of Overlapping IPv6 Fragments

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RFC 1493 Bridge MIB
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RFC 1850 OSPFv2 MIB
RFC 2021 RMONv2 MIB
RFC 2096 IP Forwarding Table MIB
RFC 2613 SMON MIB
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RFC 3101 OSPF NSSA
RFC 3623 Graceful OSPF Restart (Unplanned Outages only)
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IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
RFC 2865 RADIUS (client only)
RFC 2866 RADIUS Accounting
Secure Sockets Layer (SSL)
SSHv2 Secure Shell

HP E8200 zl Switch Series accessories

Modules

NEW HP 8-port 10GBase-T v2 zl Module (J9546A)
HP 8-port 10 GbE SFP+ v2 zl Module (J9538A)
HP 4-Port 10 GbE CX4 zl Module (J8708A)
HP 4-Port 10 GbE X2 zl Module (J8707A)
HP 4-Port 10 GbE SFP+ zl Module (J9309A)
HP 20-port Gig-T PoE+/2-port 10-GbE SFP+ v2 zl Module (J9536A)
HP 20-port Gig-T/2-port 10-GbE SFP+ v2 zl Module (J9548A)
HP 20-port Gig-T PoE+/4-port SFP v2 zl Module (J9535A)
HP 20-port Gig-T/4-port SFP v2 zl Module (J9549A)
HP 24-port SFP v2 zl Module (J9537A)
HP 12-port Gig-T PoE+/12-port SFP v2 zl Module (J9637A)
HP 24-port Gig-T PoE+ v2 zl Module (J9534A)
HP 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)
HP 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 E8200 zl System Support Module (J9095A)
HP E8200 zl Management Module (J9092A)
HP E8200 zl Fabric Module (J9093A)
HP AllianceONE Extended Services zl Module with Riverbed Steelhead RiOS Application (J9517A)
HP Survivable Branch Communication zl Module powered by Microsoft Lync (J9485A)
HP AllianceONE Services zl Module for Avaya Aura Session Border Controller powered by Acme Packet (J9486A)
HP Threat Management Services zl Module with 1-year IDS/IPS subscription (J9156A)
HP Threat Management Services zl Module (J9155A)
HP AllianceONE Services zl Module (J9289A)
HP AllianceONE Advanced Services zl Module (J9483A)
HP Advanced Services zl Module with Microsoft Windows Server 2008 R2 Standard Edition (J9666A)

Transceivers

HP X131 10G X2 SC ER Transceiver (J8438A)
HP X130 CX4 Optical Media Converter (J8439A)
HP X131 10G X2 SC SR Transceiver (J8436A)
HP X131 10G X2 CX4 Transceiver (J8440C)
HP X111 100M SFP LC FX Transceiver (J9054B)
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)
HP X132 10G SFP+ LC SR Transceiver (J9150A)
HP X132 10G SFP+ LC LR Transceiver (J9151A)
HP X132 10G SFP+ LC LRM Transceiver (J9152A)
HP X121 1G SFP LC LH Transceiver (J4860C)
HP X121 1G SFP LC SX Transceiver (J4858C)
HP X121 1G SFP LC LX Transceiver (J4859C)
HP 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)
HP X132 10G SFP+ LC ER Transceiver (J9153A)

Cables

HP X242 SFP+ SFP+ 1 m Direct Attach Cable (J9281B)
HP X242 SFP+ SFP+ 3 m Direct Attach Cable (J9283B)
HP X242 SFP+ SFP+ 7 m Direct Attach Cable (J9285B)
HP X244 XFP SFP+ 1 m Direct Attach Cable (J9300A)
HP X244 XFP SFP+ 3 m Direct Attach Cable (J9301A)
HP X244 XFP SFP+ 5 m Direct Attach Cable (J9302A)
HP 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)
HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)
HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)
HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)
HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)
HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)
HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)
NEW HP 0.5 m PremierFlex OM3+ LC/LC Optical Cable (BK837A)
NEW HP 1 m PremierFlex OM3+ LC/LC Optical Cable (BK838A)
NEW HP 2 m PremierFlex OM3+ LC/LC Optical Cable (BK839A)
NEW HP 5 m PremierFlex OM3+ LC/LC Optical Cable (BK840A)
NEW HP 15 m PremierFlex OM3+ LC/LC Optical Cable (BK841A)
NEW HP 30 m PremierFlex OM3+ LC/LC Optical Cable (BK842A)
NEW HP 50 m PremierFlex OM3+ LC/LC Optical Cable (BK843A)

Power Supply

HP 1500 W PoE+ zl Power Supply (J9306A)
HP 1500 W zl Power Supply (J8713A)
HP 875 W zl Power Supply (J8712A)

License

HP E8200 zl Switch Premium License (J9474A)

WLAN

HP E-MSM765zl Mobility Controller (J9370A)

Appliance

HP PCM+ Agent with ONE Services zl Module (J9496A)

HP E8200 zl Switch Series accessories (continued)

HP E8206 zl Switch with Premium Software (J9640A)

HP 20-port Gig-T/4-port SFP v2 zl Module (J9549A)
HP E8206 zl Switch Fan Tray (J9476A)

HP E8212 zl Switch with Premium Software (J9641A)

HP E8212 zl Switch Fan Tray (J9094A)
HP 20-port Gig-T/4-port SFP v2 zl Module (J9549A)

HP E8206-44G-PoE+/2XG-SFP+ v2 zl Switch with Premium Software (J9638A)

HP 20-port Gig-T/4-port SFP v2 zl Module (J9549A)
HP E8206 zl Switch Fan Tray (J9476A)

HP E8212-92G-PoE+/2XG-SFP+ v2 zl Switch with Premium Software (J9639A)

HP E8212 zl Switch Fan Tray (J9094A)
HP 20-port Gig-T/4-port SFP v2 zl Module (J9549A)

Products within this series have achieved sufficient scores in each of the rated criteria to achieve the Miercom Certified Green distinction Award. See the Specifications section of this series for more information.

To learn more, visit www.hp.com/networking

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