HP E2615-8-PoE Switch

Data sheet

Product overview

The HP E2615-8-PoE Switch is a fully managed 8-port 10/100 switch with an additional two dual-personality Gigabit Ethernet ports for copper or SFP connectivity. Together with static and RIP IPv4 routing, robust security and management, enterprise-class features, a free lifetime warranty, and free software updates, the HP E2615-8-PoE Switch is a cost-effective solution. The HP E2615-8-PoE Switch is fanless, providing quiet operation and making it ideal for deployments in open spaces. In addition, the compact form factor allows for flexible deployments, including wall, surface, or rack mounting. These switches can be deployed at enterprise edge and remote branch offices, as well as converged networks.

Key features

• Scalable 10/100 connectivity
• Layer 2 and 3 switching capabilities
• sFlow, ACLs, and rate limiting
• Energy-efficient design and quiet operation
• Rack-mountable, compact form factor

Features and benefits

Quality of Service (QoS)

- **Selectable queue configuration:** performance and/or traffic reliability can be increased by selecting the number of queues that best meet the requirements of network applications; the switch will map 8 priorities to either 2 or 4 queues

- **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

- **Layer 4 prioritization:** enables prioritization based on TCP/UDP port numbers

- **Traffic prioritization (IEEE 802.1p):** allows real-time traffic classification into eight priority levels mapped to four queues

- **Rate limiting:** per-port ingress-enforced maximums

- **Flow control:** helps ensure reliable communications during full-duplex operation

- **Type of service:**

  - **IP precedence:** honors IP precedence bits and allows mapping to a priority queue

  - **Differentiated Services Code Point values:** honors Differentiated Services Code Point (DSCP) bits and allows mapping to a priority queue

Management

- **Choice of management interfaces:**

  - **Web graphical user interface (GUI):** easy-to-use graphical interface allows configuration of the switch from any Web browser

  - **Command-line interface (CLI):** robust command-line interface provides advanced configuration and diagnostics

  - **Simple Network Management Protocol (SNMPv2c/SNMPv3):** allows switch to be managed with a variety of third-party network management applications

- **Multiple configuration files:** configuration file management tools allow up to three configuration files to be managed and stored on the switch

- **Dual flash images:** provide independent primary and secondary operating system files for backup while upgrading

- **Command authorization:** leverages RADIUS to link a custom list of CLI commands to an individual network administrator's login; also provides an audit trail

- **Front-panel LEDs:**

  - **Locator LED:** allows users to set the locator LED on a specific switch to either turn on, blink, or turn off; simplifies troubleshooting by making it easy to locate a particular switch within a rack of similar switches

  - **Per-port LEDs:** provides an at-a-glance view of status, activity, speed, and full-duplex operation

  - **Power and fault LEDs:** power LED and fault LEDs display any issues

- **Integration with HP PCM:** enables discovery, mapping, logging, and configuration via PCM, which is available as a free download from the Web

Connectivity

- **Dual-personality functionality:** two 10/100/1000 ports or SFP slots provide optional fiber connectivity such as Gigabit-SX, -LX, -LH, 100-FX, 100-BX, and 1000-BX

- **IEEE 802.3af Power over Ethernet:** 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 (see product specifications for total PoE power available)

- **Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100 ports

- **RJ-45 serial console port:** provides easy accessibility on front of the unit to the switch CLI

- **IPv6:**

  - **IPv6 host:** the switches can be managed and deployed at the edge of IPv6 networks

  - **Dual stack (IPv4/IPv6):** provides transition mechanism from IPv4 to IPv6; supports connectivity for both protocols

- **Single IP address management:** single IP address management for a virtual stack of up to 16 switches

Resiliency and high availability

- **IEEE 802.1s Multiple Spanning Tree:** provides high link availability in multiple VLAN environments by allowing multiple spanning trees; provides legacy support for IEEE 802.1d and IEEE 802.1w

- **Port trunking and link aggregation:**

  - **Trunking:** supports up to eight links per trunk to increase bandwidth and create redundant connections

  - **IEEE 802.3ad Link Aggregation Protocol (LACP):** eases configuration of trunks through automatic configuration

Layer 2 switching

- **GARP VLAN Registration Protocol (GVRP):** allows automatic learning and dynamic assignment of VLANs

- **VLAN support and tagging:** supports IEEE 802.1Q (4,094 VLAN IDs) and 256 VLANs simultaneously

Layer 3 routing

- **Static IP routing:** provides manually configured routing; includes ECMP capability

- **Routing Information Protocol (RIP):** provides RIPv1 and RIPv2 routing

Security

- **Access control lists (ACLs):** provide IP Layer 3 filtering based on source/destination IP address/subnet and source/destination TCP/UDP port number

- **Identity-driven ACL:** enables implementation of a highly granular and flexible access security policy and VLAN assignment specific to each authenticated network user

- **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 protocols for encryption of management traffic:**

  - **Secure Shell (SSHv2):** 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 (SFTP):** encrypts uploads and downloads of configuration file

- **Port security:** allows access only to specified MAC addresses, which can be learned or specified by the administrator

- **Dynamic IP lockdown:** works with DHCP protection to block traffic from unauthorized hosts, preventing IP source address spoofing

- **DHCP protection:** blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks

- **Dynamic ARP protection:** blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data

- **MAC address lockout:** prevents configured particular MAC addresses from connecting to the network

- **MAC address lockdown:** allows only specified MAC addresses access to the network on a specified port

- **Multiple user authentication methods:**

  - **IEEE 802.1X:** industry-standard method of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server

  - **Web-based authentication:** similar to IEEE 802.1X, it provides a browser-based environment to authenticate clients that do not support the IEEE 802.1X supplicant

  - **MAC-based authentication:** client is authenticated with the RADIUS server based on the client's MAC address

- **Authentication flexibility—2 IEEE 802.1X:** provides authentication of multiple IEEE 802.1X users per port; prevents user "piggybacking" on another user's IEEE 802.1X authentication

- **Protected ports:** prevents designated ports from communicating with each other while allowing access to unprotected ports

- **Per-port broadcast throttling:** selectively configures broadcast control on heavy traffic port uplinks

- **Physical security:**

  - **Front-panel buttons:** provides the ability to disable reset and clear buttons on front panel for added security

  - **Kensington Lock slot:** includes a Kensington Lock slot for securing the switches in open-space deployments

- **Spanning Tree Protocol Root Guard:** when running the spanning tree protocol, protects root bridge from malicious attacks or configuration mistakes

- **STP BPDU port protection:** blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks

Convergence

- **IP multicast snooping and 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

- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP):** is an automated device discovery protocol for easy mapping by network management applications

- **PoE allocations:** support multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user specified) to allocate PoE power for more efficient energy savings

Monitor and diagnostics

- **Port mirroring:** enables traffic on a port to be simultaneously sent to a network analyzer for monitoring

- **Network tools:** command-line interface includes telnet client, ping, traceroute, and Layer 2 link test tools for diagnostics

- **Logging:** local and remote logging of events via SNMP (v2c and v3) and syslog

- **Troubleshooting:** ingress and egress port monitoring enable network problem solving

- **Uni-Directional Link Detection (UDLD):** monitors a link between two switches and blocks the ports on both ends of the link if the link goes down at any point between the two devices

- **Find-Fix-Inform:** finds and fixes common network problems automatically, then informs the administrator

- **RMON, XRMON, sFlow, and SMON:** provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events

- **Port monitoring for network threats:** provides sampled port traffic using sFlow technology to the HP Network Immunity Manager application for Network Behavior Anomaly Detection (NBAD) analysis to detect threats and mitigate threats at the port where they originated

Flexibility

- **Flexible mounting:**
  - **Rackable:** can be mounted in a standard 19-inch rack with included hardware
  - **Wall mountable:** allows the switch to be mounted to a wall using included hardware
  - **Surface mountable:** allows the product to be mounted above or below a surface (such as a desk or table) with included hardware

- **Compact size:** product is designed to reduce space requirements (see product specifications for exact dimensions)

- **NEW Power supply clip:** provides the ability to attach or detach the power supply to the device, allowing for either an integrated solution or a separate one, depending on deployment requirements

Product architecture

- **Energy-efficient design:**
  - **Fans:** fanless design helps reduce power consumption
  - **Port LEDs:** port link and activity LEDs can be turned off to conserve energy
  - **Port low-power mode option:** when no link is detected on a port, the port will automatically go into low-power mode to conserve energy

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)

HP E2615-8-PoE Switch

Specifications

HP E2615-8-PoE Switch (J9565A)

Included accessories	1 HP E2915/E2615/E2520 Power Supply Shelf (J9701A)
Ports	8 RJ-45 autosensing 10/100 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3af PoE); Media Type: Auto-MDIX; Duplex: half or full
	2 dual-personality ports; each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; an IEEE 802.3u Type 100Base-TX; an IEEE 802.3ab 1000Base-T Gigabit Ethernet); or an SFP slot (for use with SFP transceivers)
	1 RJ-45 serial console port

Physical characteristics
Dimensions	6.28(d) x 10(w) x 1.75(h) in. (15.95 x 25.4 x 4.45 cm) (1U height)
Weight	3.66 lb. (1.66 kg) including power adapter and power cord

Memory and processor
Processor	Freescale PowerPC 8313 @ 333 MHz, 32 MB flash, 128 MB DDR2 SDRAM; packet buffer size: 512 KB dynamically allocated

Mounting
	Mounts in an EIA-standard 19-inch telco rack or equipment cabinet; horizontal surface mounting; wall mounting

Performance
100 Mb Latency	< 5.3 μs (LIFO 64-byte packets)
1000 Mb Latency	< 2.7 μs (LIFO 64-byte packets)
Throughput	4.1 million pps
Switching capacity	5.6 Gbps
MAC address table size	8000 entries

Environment
Operating temperature	32°F to 113°F (0°C to 45°C)
Operating relative humidity	15% to 95% @ 104°F (40°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: 0 dB, Pressure: 0 dB

Electrical characteristics
Description	Use only the external power adapter module (5070-6082, PA1 AC adapter) supplied with this product
Maximum heat dissipation	87 BTU/hr (91.79 kJ/hr)
Voltage	100-240 VAC
Current	1.5 A
Idle power	11 W
Maximum power rating	86 W
PoE power	67 W
Frequency	50/60 Hz
Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the total power budget available to all PoE ports.

Safety
	cUL (CSA 22.2 No. 60950); CE Labeled; UL 60950-1; UL Listed; CAN/CSA 22.2 No. 60950; EN 60825; AS/NZS 60950; IEC 60950-1; EN 60950-1

Emissions
	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 (Canada); AS/NZS CISPR 22; IEC/EN 61000-3-2; IEC/EN 61000-3-3; IEC 61000:4-2, 4-3, 4-4, 4-5, 4-6, 4-8, 4-11

Immunity
Generic	EN 55024, CISPR 24
EN	EN 55024, CISPR 24
ESD	IEC 61000-4-2
Radiated	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4
Surge	IEC 61000-4-5
Conducted	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8
Voltage dips and interruptions	IEC 61000-4-11
Harmonics	EN 61000-3-2, IEC 61000-3-2
Flicker	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); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB

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.
	This product comes with a power supply clip adapter. The adapter dimensions are 1.7(d) x 10.7(w) x 3.8(h) in. (4.35 x 27.25 x 9.6 cm). The weight of the power supply clip adapter is .31 lb (.14 kg).

Specifications (continued)

HP E2615-8-PoE Switch (J9565A)

Services	3-year, 4-hour onsite, 13x5 coverage for hardware (U4683E)
	3-year, 4-hour onsite, 24x7 coverage for hardware (U4835E)
	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (U6321E)
	3-year, 24x7 SW phone support, software updates (UF792E)
	Installation with minimum configuration, system-based pricing (U4826E)
	Installation with HP-provided configuration, system-based pricing (U4830E)
	4-year, 4-hour onsite, 13x5 coverage for hardware (UR948E)
	4-year, 4-hour onsite, 24x7 coverage for hardware (UR949E)
	4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR950E)
	4-year, 24x7 SW phone support, software updates (UR951E)
	5-year, 4-hour onsite, 13x5 coverage for hardware (UR952E)
	5-year, 4-hour onsite, 24x7 coverage for hardware (UR953E)
	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR954E)
	5-year, 24x7 SW phone support, software updates (UR955E)
	3 Yr 6 hr Call-to-Repair Onsite (UW368E)
	4 Yr 6 hr Call-to-Repair Onsite (UW369E)
	5 Yr 6 hr Call-to-Repair Onsite (UW370E)
	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.

Standards and protocols

Denial of service protection
Automatic Filtering of well known Denial of Service Packets

Device management
RFC 1591 DNS (client)
Multiple Configuration Files
Multiple Software Images
SSHv1/SSHv2 Secure Shell
TACACS/TACACS+
Web UI

General protocols
IEEE 802.1D MAC Bridges
IEEE 802.1p Priority
IEEE 802.1Q VLANs
IEEE 802.1s Multiple Spanning Trees
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.3 Type 10BASE-T
IEEE 802.3ab 1000BASE-T
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3af Power over Ethernet
IEEE 802.3u 100BASE-X
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 1723 RIP v2
RFC 1812 IPv4 Routing
RFC 2030 Simple Network Time Protocol (SNTP) v4
RFC 2131 DHCP

RFC 2453 RIPv2
UDLD (Uni-directional Link Detection)

IP multicast
RFC 3376 IGMPv3 (host joins only)

IPv6
RFC 1981 IPv6 Path MTU Discovery
RFC 2460 IPv6 Specification
RFC 2925 Remote Operations MIB (Ping only)
RFC 3315 DHCPv6 (client only)
RFC 3513 IPv6 Addressing Architecture
RFC 3596 DNS Extension for IPv6
RFC 4022 MIB for TCP
RFC 4113 MIB for UDP
RFC 4251 SSHv6 Architecture
RFC 4252 SSHv6 Authentication
RFC 4253 SSHv6 Transport Layer
RFC 4293 MIB for IP
RFC 4419 Key Exchange for SSH
RFC 4443 ICMPv6
RFC 4861 IPv6 Neighbor Discovery
RFC 4862 IPv6 Stateless Address Auto-configuration

MIBs
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 2021 RMONv2 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 2863 The Interfaces Group MIB

Network management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 1098 A Simple Network Management Protocol (SNMP)
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
RFC 3176 sFlow
SNMPv1/v2c/v3

QoS/CoS
RFC 2474 DiffServ precedence, with 4 queues per port
RFC 2475 DiffServ Architecture
RFC 2597 DiffServ Assured Forwarding (AF)
RFC 2598 DiffServ Expedited Forwarding (EF)
Ingress Rate Limiting

Security
IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
RFC 2138 RADIUS Authentication
RFC 2866 RADIUS Accounting
Access Control Lists (ACLs)
MAC Authentication
MAC Lockdown
MAC Lockout
Port Security
Secure Sockets Layer (SSL)
Web Authentication

HP E2615-8-PoE Switch accessories

Transceivers

HP X121 1G SFP LC SX Transceiver (J4858C)

HP X121 1G SFP LC LX Transceiver (J4859C)

HP X121 1G SFP LC LH Transceiver (J4860C)

HP X111 100M SFP LC FX Transceiver (J9054B)

HP X112 100M SFP LC BX-D Transceiver (J9099B)

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

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

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

Cables

HP 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)

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)

Mounting Kit

NEW HP E2915/E2615/E2520 Cable Guard (J9700A)

NEW HP E2915/E2615/E2520 Power Supply Shelf (J9701A)

Software

HP Identity Driven Manager 3.0 Software--500-User License (J9438A)

HP Identity Driven Manager 3.0 Software--Unlimited-User License (J9439A)

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