

Data sheet

## Product overview

Designed to provide essential solutions to small and medium businesses, the HP E2510 Switch Series consists of four Layer 2-managed switches that provide reliable 10/100 and 10/100/1000 connectivity. Building off of the popularity of the HP E2510-24 Switch, a 24-port 10/100 switch with two dual-personality ports, the E2510 switch series has expanded to include a higher-density HP E2510-48 Switch, with 48 10/100 ports and four Gigabit Ethernet uplinks. Additionally, the E2510-G switches add Gigabit Ethernet to the E2510 series, with the E2510G-24 and E2510G-48 switches, which are 24and 48-port 10/100/1000 switches, each with four dual-personality ports, making them ideal for businesses that are ready to upgrade to increased network performance.

# Key features

- Managed Layer 2 feature set
- 24 or 48 10/100 or Gigabit Ethernet ports
- Two mini-GBIC slots for fiber connectivity
- Quiet fanless design (J9019B)
- Industry-leading warranty



# Features and benefits

# Quality of Service (QoS)

• **IEEE 802.1p prioritization:** delivers data to devices based on the priority and type of traffic

## Connectivity

- 10/100 and 10/100/1000 connectivity: provides customers with the choice of selecting the network connectivity speed that best meets their needs, with a consistent user experience
- Gigabit uplinks:
  - **E2510-24 and E2510-48 switches:** the E2510-24 switch has two dual-personality ports for either 10/100/1000 or mini-GBIC connectivity; the E2510-48 switch has four Gigabit Ethernet ports, which can all be used concurrently with two 10/100/1000 ports and two open mini-GBIC slots
  - E2510G-24 and E2510G-48 switches: four dual-personality ports for 10/100/1000 or SFP ports for optional fiber connectivity such as Gigabit-SX, -LX, and -LH, or 100-FX
- HP Auto-MDIX: automatically adjusts for straight-through or crossover cables on all 10/100 and 10/100/1000 copper ports

# 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
- IEEE 802.3ad Link Aggregation Control Protocol (LACP) and HP trunking:
  - E2510-24 switch supports up to two 10/100 trunks each with four links/ports plus one Gigabit Ethernet trunk
  - E2510-48 switch supports up to 24 trunks with eight links/ports per trunk
  - E2510-24G & E2510-48G switches support up to 24 trunks with eight links/ports per trunk

# Manageability

- IEEE 802.1AB Link Layer Discovery Protocol (LLDP): provides automated device discovery protocol for easy mapping by network management applications
- RMON: provides advanced monitoring and reporting capabilities for statistics, history, alarms, and events

- Full-featured console: provides complete control of the switch with a familiar command-line interface (CLI)
- **Web interface:** allows configuration of the switch from any Web browser on the network
- Single IP Address Management: provides single IP address management for a virtual stack of up to 16 switches
- Find-Fix-Inform: finds and fixes common network problems automatically, then informs administrator
- Dual flash images: provides independent primary and secondary operating system files for backup while upgrading
- Software updates: free downloads from the Web
- Friendly port names: allow assignment of descriptive names to ports

# Layer 2 switching

- VLAN support and tagging: support up to 64 port-based VLANs and dynamic configuration of IEEE 802.1Q VLAN tagging, providing security between workgroups
- GARP VLAN Registration Protocol: allows automatic learning and dynamic assignment of VLANs
- Jumbo packet support: supports up to 9216-byte frame size to improve the performance of large data transfers (2510G models only)

## Security

- Protected ports: provides increased security by allowing specified ports to be isolated from all other ports on the switch; the protected port or ports can communicate only with the uplinks or shared resources
- Multiple user authentication methods:
  - IEEE 802.1X: is an 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
- **Guest VLAN:** isolates guest and unauthorized user traffic to a separate VLAN

- 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
- Multiple IEEE 802.1X users per port: provides authentication of up to two IEEE 802.1X users per port; prevents user "piggybacking" on another user's IEEE 802.1X authentication
- STP BPDU port protection: blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- Secure management access: securely encrypts all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3
- TACACS+: eases switch management security administration by using a password authentication server

## Convergence

• **IP multicast snooping:** automatically prevents flooding of IP multicast traffic

## **Flexibility**

- Fanless design: reduces noise and distractions when deployed in open spaces (E2510-24 switch only)
- Multiple port density and connectivity speed options: provide choice and flexibility with a consistent user experience

# 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 <a href="https://www.hp.com/networking/warranty">www.hp.com/networking/warranty</a> 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)

<sup>\*</sup>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 <a href="https://www.hp.com/networking/warranty">www.hp.com/networking/warranty</a>.

# Specifications

	HP E2510-48G Switch (J9280A)	HP E2510-24G Switch (J9279A)
Ports	44 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	20 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only
	4 dual-personality ports; each port can be used as either an RJ-45 10/100/1000 port or an open mini-GBIC slot (for use with mini-GBIC transceivers)	4 dual-personality ports; each port can be used as either an RJ-45 10/100/1000 port or an open mini-GBIC slot (for use with mini-GBIC transceivers)
Physical characteristics		
Dimensions Weight	12.7(d) x 17.4(w) x 1.7(h) in. (32.26 x 44.2 x 4.32 cm) (1U height) 8.6 lb. (3.9 kg)	12.7(d) x 17.4(w) x 1.7(h) in. (32.26 x 44.2 x 4.32 cm) (1U height) 7.21 lb. (3.27 kg)
Memory and processor	2.0 (2.1 (2.1 (2.5)	(c
Processor	MIPS @ 264 MHz, 16 MB flash, 64 MB SDRAM; packet buffer size: 1.5 MB	MIPS @ 264 MHz, 16 MB flash, 64 MB SDRAM; packet buffer size: 0.75 MB
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only	Mounts in an ElA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only
Performance		
Latency	< 5.4 μs (FIFO 64-byte packets)	< 5.6 μs (FIFO 64-byte packets)
Throughput	up to 71.4 million pps	up to 35.7 million pps
Switching capacity	96 Gbps	48 Gbps
MAC address table size	8000 entries	8000 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% @ 104°F (40°C), noncondensing	15% to 95% @ 104°F (40°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 90% @ 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: 40.5 dB	Power: 40.3 dB
Electrical characteristics		
and the second second	Achieved Miercom Certified Green Award	
Maximum heat dissipation	341 BTU/hr (360 kJ/hr)	164 BTU/hr (173 kJ/hr)
Voltage	100-127/200-240 VAC	100-127/200-240 VAC
Current	1.5 A	1.0 A
Power output	92 W	48 W
Frequency	50/60 Hz	50/60 Hz
Safety	cUL (CSA 22.2 No. 60950); UL 60950-1; IEC 60950; EN 60950	cUL (CSA 22.2 No. 60950); UL 60950-1; IEC 60950; EN 60950
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A; IEC/EN 61000-3-2; IEC/EN 61000-3-3	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A; IEC/EN 61000-3-2; IEC/EN 61000-3-3
Immunity		
Generic	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4	IEC 61000-4-4
Surge	IEC 61000-4-5	IEC 61000-4-5
Conducted	IEC 61000-4-6	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8	IEC 61000-4-8
Voltage dips and interruptions	IEC 61000-4-11	IEC 61000-4-11
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; command-line interface; Web browser; out-of-band management	HP PCM+; HP PCM; command-line interface; Web browser; out-of-band management
Notes	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ending with the letter "B" or later, e.g., J4858B, J4859C) are required.	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ending with the letter "B" or later, e.g., J4858B, J4859C) are required.

# Specifications (continued)

#### HP E2510-48G Switch (J9280A)

#### HP E2510-24G Switch (J9279A)

#### 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) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR849E)

1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR850E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR851E) 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

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)

1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)

1-year, 24x7 software phone support, software updates (HR852E)

1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)

1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)

3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E) 3-year, 24x7 software phone support, software updates + 4 hour Hardware

Exchange (HS557E) 4-year, 24x7 software phone support, software updates + Next Business Day

Hardware Exchange (HS558E) 4-year, 24x7 software phone support, software updates + 4 hour Hardware

Exchange (HS559E) 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)

5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

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 (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)

1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR849E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR850E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7

software phone support (HR851E)

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) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)

I-year, 24x7 software phone support, software updates (HR852E)

1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)

1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)

3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)

3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)

4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)

4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)

5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)

5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at <a href="https://www.hp.com/networking/services">www.hp.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

#### Standards and protocols

(applies to all products in series)

#### **Device management**

HTML and telnet management

### **General protocols**

IEEE 802.1p Priority IEEE 802.1Q VLANs

IEEE 802.1s Multiple Spanning Trees

IEEE 802.3ad Link Aggregation Control Protocol (LACP)

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 951 BOOTP

RFC 1542 BOOTP Extensions RFC 2030 Simple Network Time Protocol (SNTP) v4

IP multicast RFC 3376 IGMPv3

### MIBs

RFC 1213 MIB II RFC 1493 Bridge MIB RFC 1573 SNMP MIB II 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-MIR 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

RFC 3418 MIB for SNMPv3

#### 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) SNMPv1/v2c/v3

#### Security

IEEE 802.1X Port Based Network Access Control RFC 1492 TACACS+ RFC 2138 RADIUS Authentication RFC 2866 RADIUS Accounting Secure Sockets Layer (SSL) SSHv1/SSHv2 Secure Shell

# Specifications (continued)

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	HP E2510-48 Switch (J9020A)	HP E2510-24 Switch (J9019B)
Ports	48 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Media Type: Auto-MDIX; Duplex: half or full	24 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Media Type: Auto-MDIX; Duplex: half or full
	2 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	2 dual-personality ports; each port can be used as either an RJ-45 10/100/1000 port or an open mini-GBIC slot (for use with mini-GBIC transceivers)
	1 RJ-45 serial console port	
	2 open mini-GBIC (SFP) slots	
Physical characteristics		
Dimensions Weight	9.3(d) x 17.42(w) x 1.73(h) in. (23.62 x 44.25 x 4.39 cm) (1U height) 6.05 lb. (2.74 kg), Fully loaded	9.3(d) x 17.42(w) x 1.73(h) in. (23.62 x 44.25 x 4.39 cm) (1U height) 4.89 lb. (2.22 kg), Fully loaded
Memory and processor	0.03 lb. (2.74 kg), Fully loaded	4.69 lb. (2.22 kg), Fully loaded
Processor	MIPS 32 @ 300 MHz, 16 MB flash, 128 MB SDRAM; packet buffer size: 512 KB	MIPS 32 @ 264 MHz, 8 MB flash, 64 MB SDRAM; packet buffer size: 384 KB
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only
Performance		
100 Mb Latency	< 4.9 μs (64-byte packets)	< 4.9 μs (64-byte packets)
1000 Mb Latency	< 2.9 μs (64-byte packets)	< 2.6 μs (64-byte packets)
Throughput	up to 13 million pps (64-byte packets)	up to 6.5 million pps (64-byte packets)
Switching capacity	17.6 Gbps	8.8 Gbps
MAC address table size	8000 entries	8000 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% @ 104°F (40°C), noncondensing	15% to 95% @ 104°F (40°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 90% @ 149°F (65°C), noncondensing	15% to 95% @ 149°F (65°C), noncondensing
Altitude	up to 15,000 ft. (4.6 km)	up to 10,000 ft. (3 km)
Acoustic	Power: 43.6 dB; DIN 45635T.19 per ISO 7779	Power: 0 dB no fan
Electrical characteristics		
Maximum heat dissipation	92 BTU/hr (97 kJ/hr)	68 BTU/hr (71.74 kJ/hr)
Voltage	100-127/200-240 VAC	100-127/200-240 VAC
Current	1.2/0.7 A	0.7/0.4 A
Maximum power rating	27 W	20 W
Frequency	50/60 Hz	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.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	cUL (CSA 22.2 No. 60950); UL 60950-1; IEC 60950; EN 60950	cUL (CSA 22.2 No. 60950); UL 60950-1; IEC 60950; EN 60950
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A; IEC/EN 61000-3-2; IEC/EN 61000-3-3	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A; IEC/EN 61000-3-2; IEC/EN 61000-3-3
Immunity		
Generic	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4	IEC 61000-4-4
Surge	IEC 61000-4-5	IEC 61000-4-5
Conducted	IEC 61000-4-6	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8	IEC 61000-4-8
Voltage dips and interruptions	IEC 61000-4-11	IEC 61000-4-11
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; command-line interface; Web browser; out-of-band management	HP PCM+; HP PCM; command-line interface; Web browser; out-of-band management
Notes	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ending with the letter "B" or later, e.g., J4858B, J4859C) are required.	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ending with the letter "B" or later, e.g., J4858B, J4859C) are required.

# Specifications (continued)

#### HP E2510-48 Switch (J9020A)

#### HP E2510-24 Switch (J9019B)

#### 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) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR849E)

1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR850E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR851E) Installation with minimum configuration, system-based pricing (U4826E)

Installation with HP-provided configuration, system-based pricing (U4830E) 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)

1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E) 1-year, 24x7 software phone support, software updates (HR852E)

1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)

1-year, 24x7 software phone support, software updates + 4 hour hardware

exchange (HSS55E) 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)

3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E)

4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS558E)

4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS559E)

5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)

5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

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 (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)

1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR849E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR850E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7

software phone support (HR851E)

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)

1-year, 6 hour Call-To-Repair Onsite for hardware (HR853E)

I-year, 24x7 software phone support, software updates (HR852E)

1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS554E)

1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS555E)

3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS556E)

3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS557E) 4-year, 24x7 software phone support, software updates + Next Business Day

Hardware Exchange (HS558E) 4-year, 24x7 software phone support, software updates + 4 hour Hardware

Exchange (HS559E)

5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS560E)

5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS561E)

Refer to the HP website at <a href="https://www.hp.com/networking/services">www.hp.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Network management

#### Standards and protocols

(applies to all products in series)

#### **Device management**

HTML and telnet management

#### **General protocols**

IEEE 802. 1p Priority IEEE 802.1Q VLANs

IEEE 802.1s Multiple Spanning Trees

IEEE 802.3ad Link Aggregation Control Protocol (LACP)

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 951 BOOTP RFC 1542 BOOTP Extensions

RFC 2030 Simple Network Time Protocol (SNTP) v4

IP multicast RFC 3376 IGMPv3

#### MIBs

RFC 1213 MIB II RFC 1493 Bridge MIB RFC 1573 SNMP MIB II 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-MIR 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 RFC 3418 MIB for SNMPv3

Security

(history), 3 (alarm) and 9 (events) SNMPv1/v2c/v3

### IEEE 802.1X Port Based Network Access Control

RFC 1492 TACACS+ RFC 2138 RADIUS Authentication RFC 2866 RADIUS Accounting Secure Sockets Layer (SSL) SSHv1/SSHv2 Secure Shell

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

RFC 2819 Four groups of RMON: 1 (statistics), 2

## HP E2510 Switch Series accessories

#### **Transceivers**

HP 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)

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)

#### Cables

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)

### Mounting Kit

HP X410 E-Series 1U Universal 4-Post Rack Mounting Kit (J9583A)

# HP E2510-48 Switch (J9020A)

HP X121 1G SFP RJ45 T Transceiver (J8177C)



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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