



HP ProCurve Switch 2810 Series

Product overview

The HP ProCurve Switch 2810 Series consists of two switches: the 24-port HP ProCurve Switch 2810-24G with 20 10/100/1000 ports, and the 48-port HP ProCurve Switch 2810-48G with 44 10/100/1000 ports. Each switch also has four dual-personality ports for RJ-45 10/100/1000 or mini-GBIC fiber Gigabit connectivity. Ideal for high-performance and secure 10/100/1000 connectivity, the 2810 series offers access security and advanced prioritization and traffic-monitoring capabilities. The 2810 series is cost-effective and easy to use, with a shallow, 1U form factor that provides operational flexibility for use in smaller wiring closets.

Key features

- Managed Layer 2 feature set with 24 or 48 Gb ports
- sFlow, source port filtering, enhanced security
- Optional redundant power supply
- Four dual-personality mini-GBIC slots
- Industry-leading warranty

Features and benefits

Industry-leading warranty



Connectivity

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

Performance

- **35.7 Mpps at 64 bytes (HP ProCurve 2810-24G) and 71.4 Mpps at 64 bytes (HP ProCurve Switch 2810-48G):** ten times the bandwidth for low-latency throughput

Resiliency and high availability

- **IEEE 802.3ad Link Aggregation Protocol (LACP) and ProCurve trunking:** support up to 24 trunks, each with up to 8 links (ports) per trunk
- **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
- **Optional redundant power supply:** provides uninterrupted power (provided by HP ProCurve 600 RPS/EPS)

Manageability

- **sFlow (RFC 3176):** wire-speed traffic accounting and monitoring
- **RMON:** provides advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- **Dual flash images:** provides independent primary and secondary operating system files for backup while upgrading
- **Troubleshooting:** ingress/egress port monitoring enables network problem-solving

- **Stacking capability:** single IP address management for a virtual stack of up to 16 switches, including the HP ProCurve Switch 2500 Series, 2510 Series, 2600 Series, 2610 Series, 2800 Series, 2810 Series, 2900 Series, 3400cl Series, 3500l Series, 4200vl Series, 6108, 6200yl-24G-mGBIC, and 6400cl Series
- **Multiple configuration files:** allow multiple configuration files to be stored to flash image

Layer 2 switching

- **VLAN support and tagging:** supports the IEEE 802.1Q (4,094 VLAN IDs) and 256 VLANs simultaneously
- **GARP VLAN Registration Protocol:** allows automatic learning and dynamic assignment of VLANs
- **Jumbo packet support:** supports up to 9,220-byte frame size to improve performance of large data transfers

Security

- **Port security:** allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **NEW 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 only communicate with the uplink or shared resources
- **MAC address lockout:** prevents configured particular MAC addresses from connecting to the network
- **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, 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
- **Switch management logon security:** can require either RADIUS or TACACS+ authentication for secure switch CLI logon

◆ For as long as you own the product, with next-business-day advance replacement (available in most countries). The following hardware products and their related series modules have a one-year hardware warranty with extensions available: HP ProCurve Routing Switch 9300m Series, HP ProCurve Switch 8100l Series, HP ProCurve Network Access Controller 800, and HP ProCurve DCM Controller. The following hardware mobility products have a one-year hardware warranty with extensions available: HP ProCurve M111 Client Bridge, HP ProCurve MSM3xx-R Access Points, HP ProCurve MSM7xx Mobility and Access Controllers, HP ProCurve RF Manager IDS/IPS Systems, HP ProCurve MSM Power Supplies, HP ProCurve 1-Port Power Injector, and HP ProCurve CNMS Appliances. Disk drives in the HP ProCurve ONE Services zI Modules have a five year hardware warranty. Standalone software, upgrades, or licenses may have a different warranty duration. For details, refer to the ProCurve Software License, Warranty, and Support booklet at www.procurve.com/warranty.

- **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 FTP:** allows secure file transfer to/from the switch; protects against unwanted file downloads or unauthorized copying of switch configuration file
- **RADIUS/TACACS+:** eases switch management security administration by using a password authentication server
- **Source-port filtering:** allows only specified ports to communicate with each other
- **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
- **Friendly port names:** allow assignment of descriptive names to ports
- **Find-Fix-and-Inform:** finds and fixes common network problems automatically, then informs administrator
- **ProCurve/IEEE Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all RJ-45 ports

Warranty and support

- **ProCurve Lifetime Warranty:** for as long as you own the product, with next-business-day advance replacement (available in most countries).
- **Electronic and telephone support:** limited electronic and telephone support is available from HP. Refer to the HP Web site at www.procurve.com/support for details on the support provided and the period during which support is available.
- **Software releases:** refer to the HP Web site at www.procurve.com/support for details on the software releases provided and the period during which software releases are available.

Convergence

- **IP multicast snooping and data-driven IGMP:** automatically prevents flooding of IP multicast traffic
- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP):** automated device discovery protocol for easy mapping by network management applications
- **Per-port broadcast throttling:** selectively configures broadcast control on heavy traffic port uplinks
- **Software updates:** free downloads from the Web

Quality of Service (QoS)

- **Traffic prioritization (IEEE 802.1p):** allows real-time traffic classification into eight priority levels mapped to eight queues
- **Class of Service (CoS):** sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), L3 protocol, TCP/UDP port number, source port, and DiffServ
- **Layer 4 prioritization:** enables prioritization based on TCP/UDP port numbers

Ease of use

- **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

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Specifications



HP ProCurve Switch 2810-24G (J9021A)

HP ProCurve Switch 2810-48G (J9022A)

Ports	20 auto-sensing 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 1 RJ-45 serial console port 4 dual-personality ports; each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab 1000Base-T Gigabit Ethernet) or an open mini-GBIC slot (for use with mini-GBIC transceivers)	44 auto-sensing 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 1 RJ-45 serial console port 4 dual-personality ports; each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab 1000Base-T Gigabit Ethernet) or an open mini-GBIC slot (for use with mini-GBIC transceivers)
Physical characteristics		
Dimensions	12.7(d) x 17.4(w) x 1.7(h) in. (32.26 x 44.2 x 4.32 cm) (1U height)	12.7(d) x 17.4(w) x 1.7(h) in. (32.26 x 44.2 x 4.32 cm) (1U height)
Weight	7.21 lb. (3.27 kg)	8.6 lb. (3.9 kg)
Memory and processor		
Processor	MIPS @ 264 MHz, 16 MB flash, 64 MB SDRAM; packet buffer size: 0.75 MB	MIPS @ 264 MHz, 16 MB flash, 64 MB SDRAM; packet buffer size: 1.5 MB
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		
Latency	< 5.6 μ s (FIFO 64-byte packets)	< 5.4 μ s (FIFO 64-byte packets)
Throughput	up to 35.7 million pps	up to 71.4 million pps
Switching capacity	48 Gbps	96 Gbps
MAC address table size	8,000 entries	8,000 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), non-condensing	15% to 95% @ 104°F (40°C), non-condensing
Non-operating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Non-operating/Storage relative humidity	15% to 95% @ 149°F (65°C), non-condensing	15% to 95% @ 149°F (65°C), non-condensing
Altitude	up to 10,000 ft. (3 km)	up to 10,000 ft. (3 km)
Acoustic	Power: 40.3 dB	Power: 40.5 dB
Electrical characteristics		
Maximum heat dissipation	164 BTU/hr (173 kJ/hr)	341 BTU/hr (360 kJ/hr)
Voltage	100-127 / 200-240 VAC	100-127 / 200-240 VAC
Current	1.0 A	1.5 A
Power consumption	48 W	92 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); EN 60950/IEC 60950; NOM-019-SCFI-1994; UL 60950	cUL (CSA 22.2 No. 60950); EN 60950/IEC 60950; NOM-019-SCFI-1994; UL 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		
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
Flicker	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3
Management	HP ProCurve Manager Plus; HP ProCurve Manager; command-line interface; Web browser; configuration menu; out-of-band management	HP ProCurve Manager Plus; HP ProCurve Manager; command-line interface; Web browser; configuration menu; out-of-band management
Notes	When using mini-GBICs with this product, mini-GBICs with revision "B" or later (product number ends with the letter "B" or later, e.g., J4858B, J4859C) are required.	When 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.

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Specifications (continued)

	HP ProCurve Switch 2810-24G (J9021A)	HP ProCurve Switch 2810-48G (J9022A)
Services	<p>3-year, 4-hour onsite, 13x5 coverage for hardware (U2855E) 3-year, 4-hour onsite, 24x7 coverage for hardware (U2856E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (U6304E) 3-year, 24x7 SW phone support, software updates (UE262E) Installation with minimum configuration, system-based pricing (U4826E) Installation with HP-provided configuration, system-based pricing (U4830E)</p> <p>Refer to the HP Web site at www.procurve.com/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.</p>	<p>3-year, 4-hour onsite, 13x5 coverage for hardware (H4496E) 3-year, 4-hour onsite, 24x7 coverage for hardware (H2893E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (U6319E) 3-year, 24x7 SW phone support, software updates (UE264E) Installation with minimum configuration, system-based pricing (U4826E) Installation with HP-provided configuration, system-based pricing (U4830E)</p> <p>Refer to the HP Web site at www.procurve.com/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.</p>
Standards and protocols (applies to all products in series)	<p>Device management HTML and telnet management</p> <p>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 802.3ad 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</p>	<p>RFC 951 BOOTP RFC 1542 BOOTP Extensions RFC 2030 Simple Network Time Protocol (SNTP) v4</p> <p>IP multicast RFC 3376 IGMPv3</p> <p>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-MIB RFC 2668 802.3 MAU MIB</p> <p>RFC 2674 802.1p and IEEE 802.1Q Bridge MIB RFC 2737 Entity MIB (Version 2) RFC 2863 The Interfaces Group MIB</p> <p>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 SNMPv1/v2c/v3</p> <p>Security IEEE 802.1X Port Based Network Access Control RFC 1492 TACACS+ RFC 2138 RADIUS Authentication RFC 2866 RADIUS Accounting Secure Sockets Layer (SSL) SSHv2 Secure Shell</p>

HP ProCurve Switch 2810 Series accessories

HP ProCurve 100-FX SFP-LC Transceiver (J9054B)

NEW HP ProCurve 100-BX-D SFP-LC Transceiver (J9099B)

NEW HP ProCurve 100-BX-U SFP-LC Transceiver (J9100B)

HP ProCurve Gigabit-SX-LC Mini-GBIC (J4858C)

HP ProCurve Gigabit-LX-LC Mini-GBIC (J4859C)

HP ProCurve Gigabit-LH-LC Mini-GBIC (J4860C)

NEW HP ProCurve 1000-BX-D SFP-LC Mini-GBIC (J9142B)

NEW HP ProCurve 1000-BX-U SFP-LC Mini-GBIC (J9143B)

HP ProCurve 600 Redundant External Power Supply (J8168A)

HP ProCurve Manager 2.3 (-)

HP ProCurve Network Immunity Manager 1.0 50-device license (J9060A)

HP ProCurve Network Immunity Manager 1.0 +100-device license (J9061A)

HP ProCurve Network Immunity Manager 1.0 unlimited-device license (J9062A)

Technology for better business outcomes

To learn more, visit www.hp.com/go/procurve

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