



#### Key features

- Access layer
- Layer 2 and Layer 3 lite feature set
- Scalable 10/100/1000 connectivity
- 10-GbE uplinks

Datasheet

## HP ProCurve Switch 4200vl Series

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The HP ProCurve Switch 4200vl Series consists of modular chassis that provide a flexible, cost-effective LAN solution as an alternative to stackables. These switches offer a proven chassis form factor with high quality and reliability in 10/100, 10/100/1000, and 10-Gigabit scalable solutions that integrate easily into any network.

# HP ProCurve Switch 4200vl Series

## Features and benefits

### Industry-leading warranty



### Management

- **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

### Connectivity

- **Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100/1000 ports

### Performance

- **Architecture:** up to 76.8 Gbps crossbar switching fabric provides wire-speed intra- and inter-module switching with up to 48 million pps throughput built on ProCurve custom-designed ASIC technology

### Resiliency and high availability

- **IEEE 802.3ad Link Aggregation Control Protocol (LACP) and ProCurve trunking:** support up to 60 trunks, each with up to 8 links (ports) per trunk; trunking across modules is supported
- **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
- **Hot-swappable modules:** permit modules and mini-GBICs to be added or swapped without interrupting the network
- **Optional redundant power supply:** provides uninterrupted power; allows hot-swapping of one of the two supplies when installed

### 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

### Layer 3 routing

- **Basic IP routing:** enables automatic routing to the connected VLANs and up to 16 static routes—including one default route—in IP networks

### Security

- **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
- **Authentication flexibility:**
  - **Multiple IEEE 802.1X users per port:** provides authentication of up to eight IEEE 802.1X users per port; prevents user "piggybacking" on another user's IEEE 802.1X authentication
- **Dynamic ARP protection:** blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- **Port security:** allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **MAC address lockout:** prevents configured particular MAC addresses from connecting to the network
- **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
- **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 8100fl Series, and HP ProCurve Network Access Controller 800. 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 z1 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 <http://www.procurve.com/warranty>.

# HP ProCurve Switch 4200vl Series

- **Custom banner:** displays security policy when users log in to the switch
- **STP BPDU port protection:** blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks

## Convergence

- **IP multicast (data-driven IGMPv3):** 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
- **LLDP-MED (Media Endpoint Discovery):** a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones

## 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

## Manageability

- **sFlow (RFC 3176):** wire-speed traffic accounting and monitoring
- **RMON and XRMON:** provide 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
- **Multiple configuration files:** allows a configuration file to be stored to flash image
- **Friendly port names:** allow assignment of descriptive names to ports
- **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, 2800 Series, 2810 Series, 2900 Series, 3400cl Series, 3500yl Series, 4200vl Series, 6108, 6200yl-24G-mGBIC, and 6400cl Series
- **Find-Fix-and-Inform:** finds and fixes common network problems automatically, then informs administrator
- **Software updates:** free downloads from the Web
- **Troubleshooting:** ingress/egress port monitoring enables network problem-solving

## 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](http://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](http://www.procurve.com/support) for details on the software releases provided and the period during which software releases are available.

# HP ProCurve Switch 4200vl Series

## Specifications



HP ProCurve Switch 4204vl (J8770A)



HP ProCurve Switch 4202vl-72 (J8772A)



HP ProCurve Switch 4208vl (J8773A)

	HP ProCurve Switch 4204vl (J8770A)	HP ProCurve Switch 4202vl-72 (J8772A)	HP ProCurve Switch 4208vl (J8773A)
<b>Ports</b>	<p>4 open module slots</p> <p>1 RS-232C DB-9 console port</p> <p>Supports a maximum of 96 auto-sensing 10/100 ports or 96 auto-sensing 10/100/1000 ports or 16 mini-GBICs, or a combination</p>	<p>2 open module slots</p> <p>1 RS-232C DB-9 console port</p> <p>Supports a maximum of 120 auto-sensing 10/100 ports or 48 Gigabit ports or 8 mini-GBICs, or a combination</p> <p>72 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full</p>	<p>8 open module slots</p> <p>1 RS-232C DB-9 console port</p> <p>Supports a maximum of 192 auto-sensing 10/100 ports or 192 auto-sensing 10/100/1000 ports or 32 mini-GBICs, or a combination</p>
<b>Power supplies</b>	<p>includes: 1 x J4839A</p> <p>1 open power supply slots</p>	<p>includes: 1 x J4839A</p> <p>1 open power supply slots</p>	<p>includes: 1 x J4839A</p> <p>1 open power supply slots</p>
<b>Physical characteristics</b>			
Dimensions	15.3(d) x 17.4(w) x 5.25(h) in. (38.86 x 44.2 x 13.34 cm) (3U height)	15.3(d) x 17.4(w) x 5.25(h) in. (38.86 x 44.2 x 13.34 cm) (3U height)	15.3(d) x 17.4(w) x 8.75(h) in. (38.86 x 44.2 x 22.23 cm) (5U height)
Weight	20.75 lb. (9.41 kg), Fully loaded	23.81 lb. (10.8 kg), Fully loaded	26.85 lb. (12.18 kg), Fully loaded
<b>Memory and processor</b>			
Fabric	Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM; packet buffer size: 36 MB	Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM; packet buffer size: 36 MB	Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM; packet buffer size: 36 MB
<b>Mounting</b>			
	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	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only
<b>Performance</b>			
Latency	< 6 μs (FIFO)	< 6 μs (FIFO)	< 6 μs (FIFO)
Throughput	up to 24 million pps	up to 22.4 million pps	up to 48 million pps
Switch fabric speed	38.4 Gbps	33.6 Gbps	76.8 Gbps
<b>Environment</b>			
Operating temperature	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)
Operating relative humidity	15% to 95% @ 104°F (40°C), non-condensing	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)	-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	15% to 95% @ 149°F (65°C), non-condensing
Altitude	up to 15000 ft. (4.6 km)	up to 15000 ft. (4.6 km)	up to 15000 ft. (4.6 km)
Acoustic	Power: 64.2 dB; DIN 45635T.19 per ISO 7779	Power: 64.2 dB; DIN 45635T.19 per ISO 7779	Power: 63.1 dB; DIN 45635T.19 per ISO 7779
<b>Electrical characteristics</b>			
Maximum heat dissipation	2152 BTU/hr (2270 kJ/hr)	2152 BTU/hr (2270 kJ/hr)	2152 BTU/hr (2270 kJ/hr)
Voltage	100-127 / 200-240 VAC	100-127 / 200-240 VAC	100-127 / 200-240 VAC
Current	8.2 / 3.8 A	8.2 / 3.8 A	8.2 / 3.8 A

# HP ProCurve Switch 4200vl Series

Power consumption	630 W	630 W	630 W
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Notes	Maximum power rating is the worst-case theoretical maximum power number with fully loaded PoE, 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating is the worst-case theoretical maximum power number with fully loaded PoE, 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating is the worst-case theoretical maximum power number with fully loaded PoE, 100% traffic, all ports plugged in, and all modules populated.
<b>Safety</b>			
	CSA 22.2 No. 950; UL 60950; EN 60950	CSA 22.2 No. 950; UL 60950; EN 60950	CSA 22.2 No. 950; UL 60950; EN 60950
<b>Emissions</b>			
	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A; CISPR 22 Class A; EN 55024; IEC/EN 61000-3-2; IEC/EN 61000-3-3	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A; CISPR 22 Class A; EN 55024; IEC/EN 61000-3-2; IEC/EN 61000-3-3	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A; CISPR 22 Class A; EN 55024; IEC/EN 61000-3-2; IEC/EN 61000-3-3
<b>Immunity</b>			
EN	EN 55024, CISPR 24	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3	IEC 61000-4-3	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4	IEC 61000-4-4	IEC 61000-4-4
Surge	IEC 61000-4-5	IEC 61000-4-5	IEC 61000-4-5
Conducted	IEC 61000-4-6	IEC 61000-4-6	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8	IEC 61000-4-8	IEC 61000-4-8
Voltage dips and interruptions	IEC 61000-4-11	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	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	EN 61000-3-3, IEC 61000-3-3
<b>Management</b>			
	HP ProCurve Manager Plus; HP ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (DB-9 serial port console); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	HP ProCurve Manager Plus; HP ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (DB-9 serial port console); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	HP ProCurve Manager Plus; HP ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (DB-9 serial port console); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB
<b>Notes</b>			
	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.	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.
<b>Services</b>			

# HP ProCurve Switch 4200vl Series

3-year, 4-hour onsite, 13x5 coverage for hardware (UE241E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware (UE242E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UE243E)  
 3-year, 24x7 SW phone support, software updates (UE263E)  
 Installation with minimum configuration, system-based pricing (U4827E)  
 Installation with HP-provided configuration, system-based pricing (U4831E)

Refer to the HP Web site at [www.procurve.com/services](http://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.

3-year, 4-hour onsite, 13x5 coverage for hardware (UE247E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware (UE248E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UE249E)  
 3-year, 24x7 SW phone support, software updates (UE265E)  
 Installation with minimum configuration, system-based pricing (U4827E)  
 Installation with HP-provided configuration, system-based pricing (U4831E)

Refer to the HP Web site at [www.procurve.com/services](http://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.

3-year, 4-hour onsite, 13x5 coverage for hardware (UE244E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware (UE245E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UE246E)  
 3-year, 24x7 SW phone support, software updates (UF787E)  
 Installation with minimum configuration, system-based pricing (U4827E)  
 Installation with HP-provided configuration, system-based pricing (U4831E)

Refer to the HP Web site at [www.procurve.com/services](http://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.

## Standards and protocols

### Device management

HTML and telnet management

### 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 791 IP  
 RFC 792 ICMP  
 RFC 793 TCP  
 RFC 826 ARP  
 RFC 854 TELNET  
 RFC 1542 BOOTP Extensions  
 RFC 2030 Simple Network Time Protocol (SNTP) v4

RFC 3046 DHCP Relay Agent Information Option

### IP multicast

RFC 3376 IGMPv3

### MIBs

RFC 1213 MIB II  
 RFC 1493 Bridge MIB  
 RFC 2613 SMON MIB  
 RFC 2618 RADIUS Client MIB  
 RFC 2665 Ethernet-Like-MIB  
 RFC 2668 802.3 MAU MIB  
 RFC 2737 Entity MIB (Version 2)

### Network management

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)  
 RFC 1757 RMON 4 groups: Stats, History, Alarms and Events  
 RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9

(events)

RFC 3164 BSD syslog Protocol  
 RFC 3176 sFlow  
 ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)  
 SNMPv1/v2c/v3  
 XRMON

### 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 2138 RADIUS Authentication Secure Sockets Layer (SSL)  
 SSHv2 Secure Shell

# HP ProCurve Switch 4200vl Series

## Specifications



HP ProCurve Switch 4208vl-96 (J8775A)



HP ProCurve Switch 4204vl-48GS (J9064A)



HP ProCurve Switch 4208vl-72GS (J9030A)

### Included accessories

4 HP ProCurve Switch vl 24-Port 10/100-TX Module (J8765A)

1 HP ProCurve Switch vl 24-Port Gig-T Module (J8768A)  
1 HP ProCurve Switch vl 20-Port Gig-T + 4-Port SFP Module (J9033A)

2 HP ProCurve Switch vl 24-Port Gig-T Module (J8768A)  
1 HP ProCurve Switch vl 20-Port Gig-T + 4-Port SFP Module (J9033A)

### Ports

4 open module slots  
96 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full  
1 RS-232C DB-9 console port  
Supports a maximum of 192 auto-sensing 10/100 ports or 96 auto-sensing 10/100/1000 ports or 16 mini-GBICs, or a combination

2 open module slots  
1 RS-232C DB-9 console port  
Supports a maximum of 48 auto-sensing 10/100 ports or 92 auto-sensing 10/100/1000 ports or 12 mini-GBICs, or a combination

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  
4 open mini-GBIC (SFP) slots

5 open module slots  
1 RS-232C DB-9 console port  
Supports a maximum of 120 auto-sensing 10/100 ports or 188 auto-sensing 10/100/1000 ports or 24 mini-GBICs, or a combination

68 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  
4 open mini-GBIC (SFP) slots

### Power supplies

includes: 1 x J4839A  
1 open power supply slots

includes: 1 x J4839A  
1 open power supply slots

includes: 1 x J4839A  
1 open power supply slots

### Physical characteristics

Dimensions 15.3(d) x 17.4(w) x 8.75(h) in. (38.86 x 44.2 x 22.23 cm) (5U height)

Weight 32.3 lb. (14.65 kg), Fully loaded

Dimensions 15.3(d) x 17.4(w) x 5.25(h) in. (38.86 x 44.2 x 13.34 cm) (3U height)

Weight 24.45 lb. (11.09 kg), Fully loaded

Dimensions 15.3(d) x 17.4(w) x 8.75(h) in. (38.86 x 44.2 x 22.23 cm) (5U height)

Weight 30.88 lb. (14.01 kg), Fully loaded

### Memory and processor

Fabric Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM; packet buffer size: 36 MB

Fabric Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM; packet buffer size: 36 MB

Fabric Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM; packet buffer size: 36 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

Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only

### Performance

Latency < 6  $\mu$ s (FIFO)

Throughput up to 48 million pps

Switch fabric speed 76.8 Gbps

Latency < 6  $\mu$ s (FIFO)

Throughput up to 24 million pps

Switch fabric speed 38.4 Gbps

Latency < 6  $\mu$ s (FIFO)

Throughput up to 48 million pps

Switch fabric speed 76.8 Gbps

### Environment

Operating temperature 32°F to 104°F (0°C to 40°C)

Operating temperature 32°F to 104°F (0°C to 40°C)

Operating temperature 32°F to 104°F (0°C to 40°C)

# HP ProCurve Switch 4200vl Series

Operating relative humidity	15% to 95% @ 104°F (40°C), non-condensing	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)	-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	15% to 95% @ 149°F (65°C), non-condensing
Altitude	up to 15000 ft. (4.6 km)	up to 15000 ft. (4.6 km)	up to 15000 ft. (4.6 km)
Acoustic	Power: 64.2 dB; DIN 45635T.19 per ISO 7779	Power: 64.2 dB; DIN 45635T.19 per ISO 7779	Power: 64.2 dB; DIN 45635T.19 per ISO 7779

## Electrical characteristics

Maximum heat dissipation	2152 BTU/hr (2270 kJ/hr)	2152 BTU/hr (2270 kJ/hr)	2152 BTU/hr (2270 kJ/hr)
Voltage	100-127 / 200-240 VAC	100-127 / 200-240 VAC	100-127 / 200-240 VAC
Current	8.2 / 3.8 A	8.2 / 3.8 A	8.2 / 3.8 A
Power consumption	630 W	630 W	630 W
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Notes	Maximum power rating is the worst-case theoretical maximum power number with fully loaded PoE, 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating is the worst-case theoretical maximum power number with fully loaded PoE, 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating is the worst-case theoretical maximum power number with fully loaded PoE, 100% traffic, all ports plugged in, and all modules populated.

## Safety

CSA 22.2 No. 950; UL 60950; EN 60950	CSA 22.2 No. 950; UL 60950; EN 60950	CSA 22.2 No. 950; UL 60950; EN 60950
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## Emissions

FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A; CISPR 22 Class A; EN 55024; IEC/EN 61000-3-2; IEC/EN 61000-3-3	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A; CISPR 22 Class A; EN 55024; IEC/EN 61000-3-2; IEC/EN 61000-3-3	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A; CISPR 22 Class A; EN 55024; IEC/EN 61000-3-2; IEC/EN 61000-3-3
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## Immunity

EN	EN 55024, CISPR 24	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3	IEC 61000-4-3	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4	IEC 61000-4-4	IEC 61000-4-4
Surge	IEC 61000-4-5	IEC 61000-4-5	IEC 61000-4-5
Conducted	IEC 61000-4-6	IEC 61000-4-6	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8	IEC 61000-4-8	IEC 61000-4-8
Voltage dips and interruptions	IEC 61000-4-11	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	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	EN 61000-3-3, IEC 61000-3-3

## Management

HP ProCurve Manager Plus; HP ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (DB-9 serial port console); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	HP ProCurve Manager Plus; HP ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (DB-9 serial port console); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB	HP ProCurve Manager Plus; HP ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (DB-9 serial port console); IEEE 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB
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## Notes



# HP ProCurve Switch 4200vl Series

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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## Services

3-year, 4-hour onsite, 13x5 coverage for hardware (UE244E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware (UE245E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UE246E)  
 3-year, 24x7 SW phone support, software updates (UF787E)  
 Installation with minimum configuration, system-based pricing (U4827E)  
 Installation with HP-provided configuration, system-based pricing (U4831E)

Refer to the HP Web site at [www.procurve.com/services](http://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.

3-year, 4-hour onsite, 13x5 coverage for hardware (UE241E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware (UE242E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UE243E)  
 Installation with minimum configuration, system-based pricing (U4827E)  
 Installation with HP-provided configuration, system-based pricing (U4831E)

Refer to the HP Web site at [www.procurve.com/services](http://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.

3-year, 4-hour onsite, 13x5 coverage for hardware (UE244E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware (UE245E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UE246E)  
 3-year, 24x7 SW phone support, software updates (UF787E)  
 Installation with minimum configuration, system-based pricing (U4827E)  
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Refer to the HP Web site at [www.procurve.com/services](http://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.

## Standards and protocols

### Device management

HTML and telnet management

### 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 791 IP  
 RFC 792 ICMP  
 RFC 793 TCP  
 RFC 826 ARP  
 RFC 854 TELNET  
 RFC 1542 BOOTP Extensions  
 RFC 2030 Simple Network Time Protocol (SNTP) v4

RFC 3046 DHCP Relay Agent Information Option

### IP multicast

RFC 3376 IGMPv3

### MIBs

RFC 1213 MIB II  
 RFC 1493 Bridge MIB  
 RFC 2613 SMON MIB  
 RFC 2618 RADIUS Client MIB  
 RFC 2665 Ethernet-Like-MIB  
 RFC 2668 802.3 MAU MIB  
 RFC 2737 Entity MIB (Version 2)

### Network management

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)  
 RFC 1757 RMON 4 groups: Stats, History, Alarms and Events  
 RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9

(events)  
 RFC 3164 BSD syslog Protocol  
 RFC 3176 sFlow  
 ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)  
 SNMPv1/v2c/v3  
 XRMON

### 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 2138 RADIUS Authentication Secure Sockets Layer (SSL)  
 SSHv2 Secure Shell



## HP ProCurve Switch 4200vl Series accessories

HP ProCurve Switch gl/xl/vl Redundant Power Supply (J4839A)

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)

HP ProCurve Gigabit 1000Base-T Mini-GBIC (J8177C)

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

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

HP ProCurve 10-GbE X2-SC SR Optic (J8436A)

**NEW** HP ProCurve 10-GbE X2-SC LRM Optic (J9144A)

HP ProCurve 10-GbE X2-SC LR Optic (J8437A)

HP ProCurve 10-GbE X2-SC ER Optic (J8438A)

HP ProCurve 10-GbE X2-CX4 Transceiver (J8440B)

HP ProCurve 10-GbE CX4 Media Converter (J8439A)

HP ProCurve Manager 2.3 (-)

### vl Modules

HP ProCurve Switch vl 4-Port Mini-GBIC Module (J8776A)

HP ProCurve Switch vl 12-Port 100-FX MTRJ Module (J8763A)

HP ProCurve Switch vl 24-Port 10/100-TX Module (J8765A)

HP ProCurve Switch vl 20-Port Gig-T + 4-Port SFP Module (J9033A)

HP ProCurve Switch vl 24-Port Gig-T Module (J8768A)

HP ProCurve Switch vl 1-Port 10-GbE X2 Module (J8766A)

## For more information

To learn more about HP ProCurve Networking, please visit [ProCurve.com](http://ProCurve.com)

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