

## ProCurve Switch 4200vl Series

The 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.



ProCurve Switch 4208vl-72GS  
(J9030A)



ProCurve Switch 4208vl-96  
(J8775A)



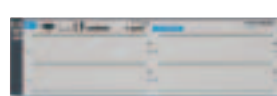
ProCurve Switch 4208vl  
(J8773A)



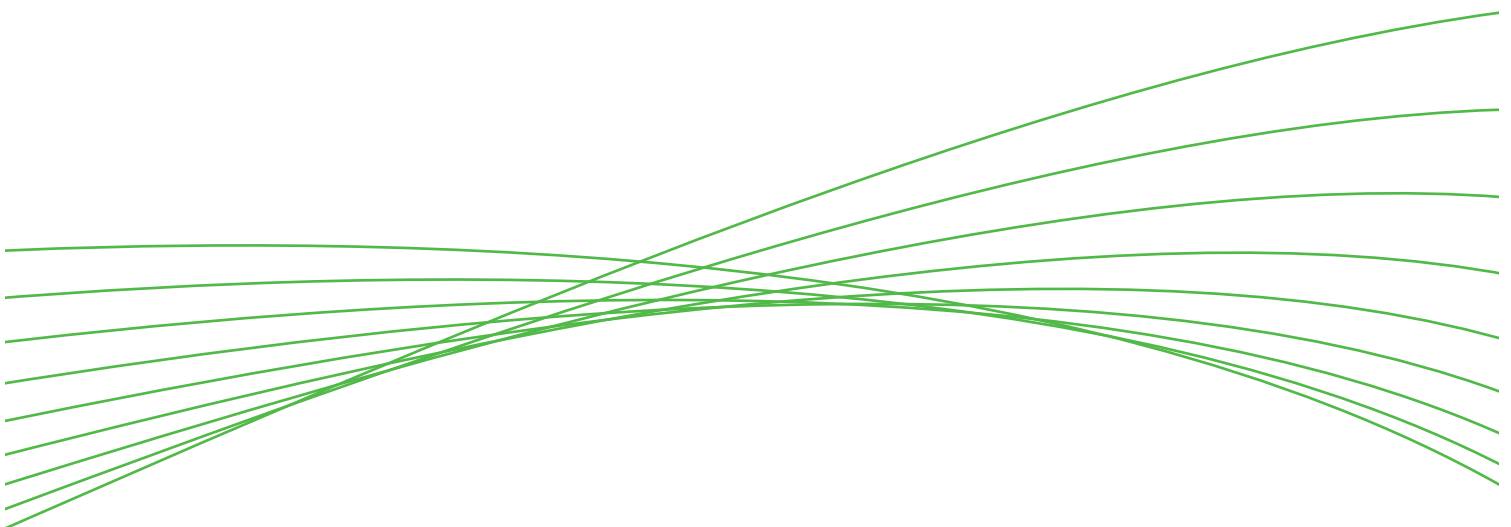
ProCurve Switch 4204vl-48GS  
(J9064A)



ProCurve Switch 4202vl-72  
(J8772A)



ProCurve Switch 4204vl  
(J8770A)



# ProCurve Switch 4200vl Series

## Features and benefits

### Connectivity

- **ProCurve/IEEE 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 36 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 (4,096 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

- **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
- **Multiple user authentication methods:**
  - **IEEE 802.1X:** industry-standard way 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 MAC address of the client

# ProCurve Switch 4200vl Series

## • **Authentication flexibility:**

- **Multiple IEEE 802.1X users per port:** provides authentication of up to 8 IEEE 802.1X users per port; prevents user “piggybacking” on another user’s IEEE 802.1X authentication
- **Secure FTP:** allows secure file transfer to/from the switch; protects against unwanted file downloads or unauthorized copying of switch configuration file
- **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
- **Custom banner:** displays security policy when users log in to the switch

## **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 8 priority levels mapped to 4 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

# ProCurve Switch 4200vl Series

## Features and benefits (continued)

### 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
- **Friendly port names:** allow assignment of descriptive names to ports
- **Dual flash images:** provide independent primary and secondary OS files for backup while upgrading
- **Multiple configuration files:** allows a config file to be stored to flash image

- **Stacking capability:** single IP address management for a virtual stack of up to 16 switches, including the ProCurve 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
- **Troubleshooting:** ingress/egress port monitoring enables network problem-solving
- **Find-Fix-and-Inform:** finds and fixes common network problems automatically, then informs administrator
- **Software updates:** free downloads from the Web

### Industry-leading warranty

- **Lifetime warranty:** for as long as you own the product, with next-business-day advance replacement (available in most countries)

# ProCurve Switch 4200vl Series

## Services

### ProCurve Switch 4202vl-72

- 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)
- Installation with minimum configuration, system-based pricing (U4827E)
- Installation with HP-provided configuration, system-based pricing (U4831E)

### ProCurve Switch 4204vl and ProCurve Switch 4204vl-48GS

- 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)

### ProCurve Switch 4208vl-96

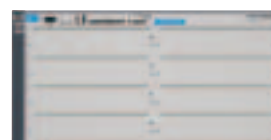
- 3-year, 4-hour onsite, 13x5 coverage for hardware (UE244E)
- 3-year, 4-hour onsite, 24x7 coverage for hardware (UE245E)
- 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UE246E)
- Installation with minimum configuration, system-based pricing (U4827E)
- Installation with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

### ProCurve Switch 4208vl and ProCurve Switch 4208vl-72GS

- 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)
- Installation with minimum configuration, system-based pricing (U4827E)
- Installation with HP-provided configuration, system-based pricing (U4831E)
- Check [www.procurve.eu/services](http://www.procurve.eu/services) for part numbers and service-level descriptions. For details about services and response times in your area, please contact your local HP sales office.

# ProCurve Switch 4200vl Series

## Specifications



	<b>ProCurve Switch 4208vl-726S (J9030A)</b>	<b>ProCurve Switch 4208vl-96 (J8775A)</b>	<b>ProCurve Switch 4208vl (J8773A)</b>
<b>Included accessories</b>	2 ProCurve Switch vl 24-Port Gig-T Modules (J8768A) 1 ProCurve Switch vl 20-Port Gig-T + 4-Port SFP Module (J9033A)	4 ProCurve Switch vl 24-Port 10/100-TX Modules (J8765A)	N/A
<b>Ports</b>	5 open module slots 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: IEEE Auto-MDIX Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only 4 open mini-GBIC (SFP) 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 4 10-GbE ports, or a combination	4 open module slots 96 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX) Media type: ProCurve 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 4 10-GbE ports, or a combination	8 open module slots 1 RS-232C DB-9 console port  Supports a maximum of 192 auto-sensing 10/100 ports or 192 auto-sensing 10/100/1000 ports or 32 mini-GBICs or 4 10-GbE ports, or a combination
<b>Power supplies</b>	Includes 1 x J4839A 1 open power-supply slot	Includes 1 x J4839A 1 open power-supply slot	Includes 1 x J4839A 1 open power-supply slot
<b>Physical characteristics</b>			
Dimensions (D x W x H)	38.86 x 44.2 x 22.23 cm (15.3 x 17.4 x 8.75 in.) (5U height)	38.86 x 44.2 x 22.23 cm (15.3 x 17.4 x 8.75 in.) (5U height)	38.86 x 44.2 x 22.23 cm (15.3 x 17.4 x 8.75 in.) (5U height)
Weight (fully loaded)	14.01 kg (30.88 lb.)	14.65 kg (32.3 lb.)	12.18 kg (26.85 lb.)
<b>Memory and processor</b>			
Fabric module	Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM	Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM	Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM
Packet buffer size	36 MB	36 MB	36 MB
<b>Mounting</b>	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 48 million pps	Up to 48 million pps	Up to 48 million pps
Switch fabric speed	76.8 Gbps	76.8 Gbps	76.8 Gbps
<b>Environment</b>			
Operating temperature	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 (32°F to 104°F)
Operating relative humidity	15% to 95% @ 40°C (104°F), non-condensing	15% to 95% @ 40°C (104°F), non-condensing	15% to 95% @ 40°C (104°F), non-condensing
Non-operating/Storage temperature	-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 (-40°F to 158°F)
Non-operating/Storage relative humidity	15% to 95% @ 65°C (149°F), non-condensing	15% to 95% @ 65°C (149°F), non-condensing	15% to 95% @ 65°C (149°F), non-condensing
Altitude	Up to 4.6 km (15,000 ft.)	Up to 4.6 km (15,000 ft.)	Up to 4.6 km (15,000 ft.)
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	2,270 kJ/hr (2,152 BTU/hr)	2,270 kJ/hr (2,152 BTU/hr)	2,270 kJ/hr (2,152 BTU/hr)
Voltage	100–127 VAC/200–240 VAC	100–127 VAC/200–240 VAC	100–127 VAC/200–240 VAC
Current	8.2 A/3.8 A	8.2 A/3.8 A	8.2 A/3.8 A
Power consumption	630 W	630 W	630 W
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
<b>Safety</b>	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		
<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>	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (DB-9 serial port console), 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.		

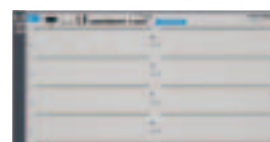
# ProCurve Switch 4200vl Series



**ProCurve Switch 4208vl-72GS (J9030A)**



**ProCurve Switch 4208vl-96 (J8775A)**



**ProCurve Switch 4208vl (J8773A)**

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**Standards and protocols**  
(applies to all products)

**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

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# ProCurve Switch 4200vl Series

## Specifications



**ProCurve Switch 4204vl-48GS (J9064A)**

**ProCurve Switch 4202vl-72 (J8772A)**

**ProCurve Switch 4204vl (J8770A)**

<b>Included accessories</b>	1 ProCurve Switch vl 24-Port Gig-T Module (J8768A) 1 ProCurve Switch vl 20-Port Gig-T + 4-Port SFP Module (J9033A)	N/A	N/A
<b>Ports</b>	2 open module slots 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: IEEE Auto-MDIX Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only 4 open mini-GBIC (SFP) 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 2 10-GbE ports, or a combination	2 open module slots 72 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX) Media type: ProCurve Auto-MDIX Duplex: half or full  1 RS-232C DB-9 console port Supports a maximum of 120 auto-sensing 10/100 ports or 48 Gigabit ports or 8 mini-GBICs or 2 10-GbE ports, or a combination	4 open module slots   1 RS-232C DB-9 console port Supports a maximum of 96 auto-sensing 10/100 ports or 96 auto-sensing 10/100/1000 ports or 16 mini-GBICs or 4 10-GbE ports, or a combination
<b>Power supplies</b>	Includes 1 x J4839A 1 open power-supply slot	Includes 1 x J4839A 1 open power-supply slot	Includes 1 x J4839A 1 open power-supply slot
<b>Physical characteristics</b>			
Dimensions (D x W x H)	38.86 x 44.2 x 13.34 cm (15.3 x 17.4 x 5.25 in.) (3U height)	38.86 x 44.2 x 13.34 cm (15.3 x 17.4 x 5.25 in.) (3U height)	38.86 x 44.2 x 13.34 cm (15.3 x 17.4 x 5.25 in.) (3U height)
Weight (fully loaded)	11.09 kg (24.45 lb.)	10.8 kg (23.81 lb.)	9.41 kg (20.75 lb.)
<b>Memory and processor</b>			
Fabric module	Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM	Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM	Motorola PowerPC MPC8245 @ 330 MHz, 24 MB flash, 64 MB SDRAM
Packet buffer size	36 MB	36 MB	36 MB
<b>Mounting</b>	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 24 million pps
Switch fabric speed	38.4 Gbps	33.6 Gbps	38.4 Gbps
<b>Environment</b>			
Operating temperature	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 (32°F to 104°F)
Operating relative humidity	15% to 95% @ 40°C (104°F), non-condensing	15% to 95% @ 40°C (104°F), non-condensing	15% to 95% @ 40°C (104°F), non-condensing
Non-operating/Storage temperature	-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 (-40°F to 158°F)
Non-operating/Storage relative humidity	15% to 95% @ 65°C (149°F), non-condensing	15% to 95% @ 65°C (149°F), non-condensing	15% to 95% @ 65°C (149°F), non-condensing
Altitude	Up to 4.6 km (15,000 ft.)	Up to 4.6 km (15,000 ft.)	Up to 4.6 km (15,000 ft.)
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
<b>Electrical characteristics</b>			
Maximum heat dissipation	2,270 kJ/hr (2,152 BTU/hr)	2,270 kJ/hr (2,152 BTU/hr)	2,270 kJ/hr (2,152 BTU/hr)
Voltage	100–127 VAC/200–240 VAC	100–127 VAC/200–240 VAC	100–127 VAC/200–240 VAC
Current	8.2 A/3.8 A	8.2 A/3.8 A	8.2 A/3.8 A
Power consumption	630 W	630 W	630 W
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
<b>Safety</b>	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		
<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>	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (DB-9 serial port console); 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.		



# ProCurve Switch 4200vl Series



**ProCurve Switch 4204vl-48GS (J9064A)**



**ProCurve Switch 4202vl-72 (J8772A)**



**ProCurve Switch 4204vl (J8770A)**

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**Standards and protocols**  
(applies to all products)

**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

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# ProCurve Switch 4200vl Series Modules



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

with 4 mini-GBIC XCVR slots

### Ports

4 open mini-GBIC (SFP) slots

### Physical characteristics

Dimensions (D x W x H): 22.78 x 20.32 x 4.45 cm (8.97 x 8.0 x 1.75 in.)  
Weight: 0.65 kg (1.43 lb.)

### Cabling

Type:  
Either single mode or multimode

### 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.

The ProCurve 100-FX SFP-LC Transceiver (J9054B) is not supported in this module.



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

with 12 100-FX fiber MTRJ ports

### Ports

12 MTRJ 100Base-FX ports (IEEE 802.3u Type 100Base-FX)  
Duplex: half or full

### Physical characteristics

Dimensions (D x W x H): 22.78 x 20.32 x 4.45 cm (8.97 x 8.0 x 1.75 in.)  
Weight: 0.81 kg (1.79 lb.)

### Cabling

Type:  
• 62.5/125  $\mu\text{m}$  or 50/125  $\mu\text{m}$  (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively

Maximum distance:  
2 km (full duplex) or 412 m (half duplex)



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

with 24 RJ-45 10/100 ports

### Ports

24 RJ-45 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX)  
Media type: ProCurve Auto-MDIX  
Duplex: half or full

### Physical characteristics

Dimensions (D x W x H): 22.78 x 20.32 x 4.45 cm (8.97 x 8.0 x 1.75 in.)  
Weight: 0.65 kg (1.43 lb.)

### Cabling

Type:  
• 100Base-TX: Category 5 (or better), 100  $\Omega$  differential unshielded twisted pair (UTP) or shielded twisted pair (STP), complying with IEEE 802.3u 100Base-TX

Maximum distance:  
100 meters



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

with 20 RJ-45 10/100/1000-T ports and 4 SFP ports

### Ports

4 open mini-GBIC (SFP) slots  
20 RJ-45 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: IEEE Auto-MDIX  
Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only

### Physical characteristics

Dimensions (D x W x H): 22.78 x 20.32 x 4.45 cm (8.97 x 8.0 x 1.75 in.)  
Weight: 0.69 kg (1.52 lb.)

### Cabling

Type:  
• 1000Base-T: Category 5 (5E or better recommended), 100  $\Omega$  differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000Base-T

### 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.

Services for accessories are covered under the product in which they are installed.

# ProCurve Switch 4200vl Series Modules



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

with 24 RJ-45 10/100/1000-T ports

### Ports

24 RJ-45 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: IEEE Auto-MDIX  
Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only

### Physical characteristics

Dimensions: 22.78 x 20.32 x 4.45 cm (8.97 x 8.0 x 1.75 in.)  
Weight: 0.56 kg (1.23 lb.)

### Cabling

Type:  
• 1000Base-T: Category 5 (5E or better recommended), 100  $\Omega$  differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000Base-T



## **NEW** ProCurve Switch vl 1-Port 10-GbE X2 Module (J8766A)

1-port 10-GbE X2 module for vl series switches

### Ports

1 open 10-GbE X2 transceiver slot

### Physical characteristics

Dimensions (D x W x H): 22.78 x 20.32 x 4.45 cm (8.97 x 8.0 x 1.75 in.)  
Weight: 0.459 kg (1.00 lb.)

### Environment

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

### Notes

Expected throughput is 2.5 to 7 Gbps, depending on packet size. Traffic from single MAC SA to single MAC DA will be at most 1 Gbps. The 4200vl chassis can support up to 4 modules. 2 10-GbE ports can be trunked together.

## Additional accessories

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

**ProCurve Gigabit 1000Base-T Mini-GBIC (J8177B)**

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

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

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

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

**ProCurve Manager 2.2**

**ProCurve Manager Plus v2.2 upgrade from PCM+ 1.6 or newer (J9056A)**

**ProCurve Manager Plus v2.2 50-device license (J9057A)**

**ProCurve Manager Plus v2.2 upgrade +100-device license (J9058A)**

**ProCurve Manager Plus v2.2 unlimited-device license (J9059A)**

**ProCurve Identity Driven Manager 2.2 base product (500 user license) (J9012A)**

**ProCurve Identity Driven Manager 2.2 base product (upgrade from v1.0) (J9013A)**

**ProCurve Identity Driven Manager 2.2—add 2000 users license (J9014A)**

Services for accessories are covered under the product in which they are installed.

## For more information

To learn more about ProCurve  
Networking, please visit  
**[www.procurve.eu](http://www.procurve.eu)**

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