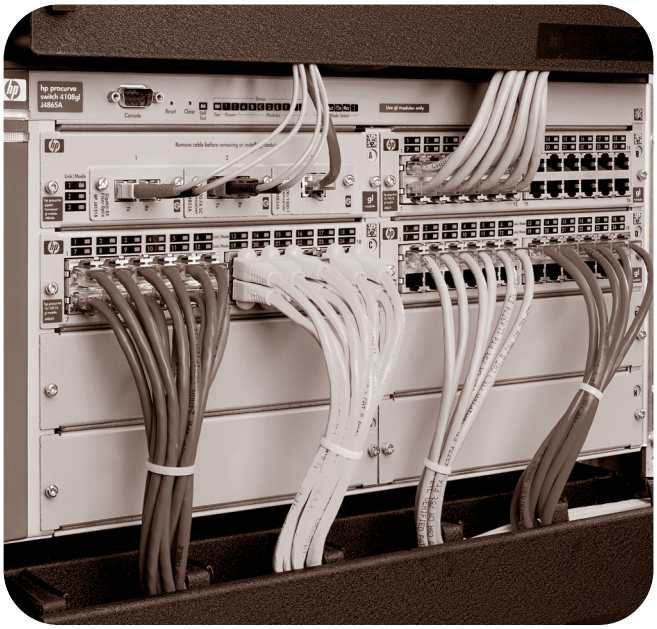
hp procurve switches and hubs

invent



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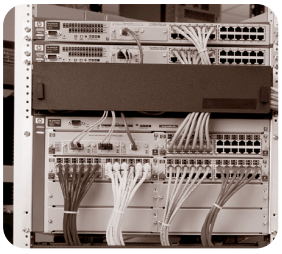

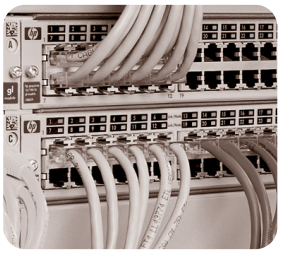

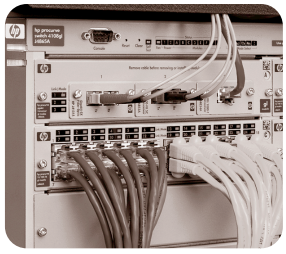

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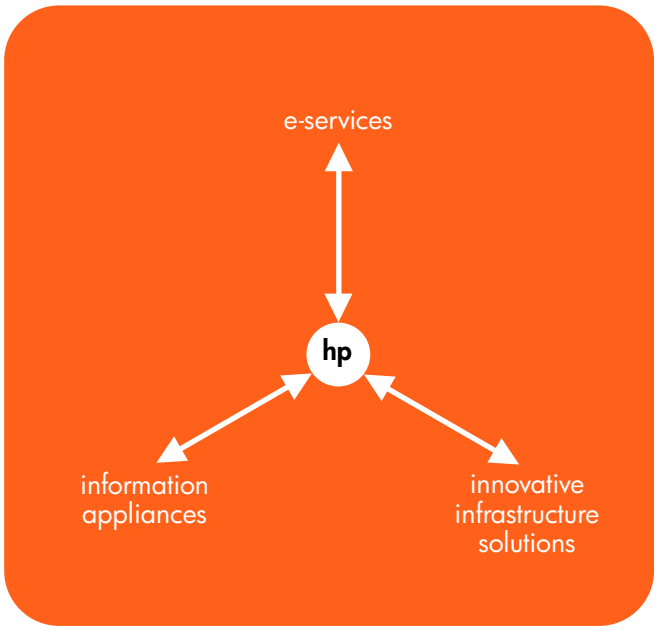


HP has a vision of this new age. A vision that springs from our core purpose: invent.

Where people use simple, personal, and pervasive information appliances to connect anytime, anywhere to automatic e-services of all kinds as easily as accessing a Web page. Where any application or business process is automated and delivered as an e-service across the Net. Where these useful e-services run on a dependable infrastructure. Where you don't have to work the Web—the Web works for you.

- continuous availability
- worldwide services and support
- free telephone and Web support

- price and performance leadership
- switches for the price of hubs
- free software updates

- safeguards e-commerce communications
- shields sensitive information
- enhances security policy administration

- plug-and-play with embedded find, fix, and inform
- class-of-service and quality-of-service
- policy-based management

- open standards leadership
- scalability
- convergence-ready (data, voice, video)

count on hp networking to help you build the infrastructure of your future

reliable means stable

Your business requires absolutely constant connectivity that is fast, secure, and reliable. HP Procurve switches and hubs deliver. HP Procurve switches and hubs build networks that are stable and dependable. We help you construct reliable networks with quality products and value-added services. A solid infrastructure built with HP Procurve switches and hubs will help you determine what connectivity means to the future of your business. With an industry-leading warranty and a worldwide support team available 24 x 7, HP offers free phone support during business hours and Web support all the time. And, with a variety of support options, we'll help you meet the infrastructure challenges you'll face now, and in the future. We even support our competitors' products, giving you a total proactive networking solution that's stable and dependable.

industry-leading price, performance, and uptime

HP understands that your network is an investment reliant on switches and hubs that must perform to the highest possible level. As you plan and expand your network, HP offers the value you need with quality and affordability. HP Procurve switches and hubs maintain industry-leading price and performance for 10/100 technology—the mainstream for performance LANs. In addition, many of our switches are as inexpensive as hubs, so you can over-provision for more network capacity than you need right now. With free software upgrades, you're guaranteed the latest management tools to keep your network up and running smoothly.

security that's reliable

A manageable, secure network is no longer optional. It's a core infrastructure requirement. HP Procurve managed switches and hubs feature built-in security capabilities for safe e-commerce communications throughout your network. You're able to guard and protect sensitive information against intrusion for your peace of mind. Plus, with HP Procurve policy-based management, the administration of security procedures is simpler.

we make networking easier

By employing HP proactive network technologies, HP Procurve switches and hubs are making network management more efficient. Their embedded intelligence examines your network, finds problems, automatically fixes what it can, and tells you what problems require your attention. Proactive networking means HP Procurve switches and hubs think ahead and act without hesitation to make your network run better. And, with HP Toptools your network is manageable via the Web, allowing you to make sure your network is functioning from wherever you are.

interoperability for a networked world

HP is leading the pack in cross-compatible, interoperable, open industry standards. A networked world needs to communicate cross-platform and cross-product. HP Procurve switches and hubs work seamlessly alongside any other vendors' industry-standard components. HP Procurve switches and hubs protect your existing investment as your needs go from 10 Mbps to 1 Gbps and beyond. From scaling your network's bandwidth and capability to managing traffic on your network—data, voice, and video—HP Procurve switches and hubs help it all work together smoothly, easily, and intelligently.

hp networking

A manageable, secure network is no longer optional. It is a core requirement of business infrastructure.

Networking solutions are interactive and combine with servers, storage, and clients. They examine your network, find problems, automatically fix what they can, and inform you about items that require your attention. A combined hardware and networking solution is secure. You're able to shield sensitive information and protect from intrusion, giving you peace of mind.

Your network is an investment reliant on performance at the highest possible level. Building a solid infrastructure means using products that are stable, scalable, efficient, and fast. At HP, our commitment and goal is to make the networking products you need—dependable, secure, and efficient.

support solutions

HP's commitment to quality and reliability goes beyond hardware and software solutions to ensure that your network performs smoothly over time. With the purchase of HP Procurve products, you receive an extensive set of free support services designed to keep your business, and network, running smoothly. Additional services are also available—ranging from planning to implementation, operation, and maintenance—that can be customized and used throughout your network's lifecycle.

hp supportpack for onsite service on hp network connectivity products

- 3 year warranty upgrade service
- Priority onsite support with 4-hour response time, Monday through Friday, during business hours
- For hp procurve routing switches and 6208m-sx products, priority onsite support with 4-hour response time, 24 x 7, is also available
- Configuration restoration assistance for serviced device
- Covers all hp internal auxiliary components purchased with the hp routing switch, switch or hub

hp supportpack for installation and network configuration services

- Physical installation and interconnection to other devices
- Configuration based upon your network specifications
- Verification of major connections
- Documentation including network map and implemented configuration

For all HP Procurve products, other warranty upgrade service levels and additional installation services are available through service agreements

For more information on any of these support services, please contact your local HP authorized reseller, your local HP sales and support office, or visit www.hp.com/go/hpprocurve

designed into hp procurve products

You receive HP's legendary commitment to quality and reliability with HP Procurve products. Coupled with intuitive design and ease-of-use, the following features can be found throughout the HP Procurve product line:

- Free HP Toptools for hubs & switches software shipped with every managed product
- LED displays for at-a-glance monitoring and troubleshooting
- Extensive information shipped to get you up and running quickly

free electronic support via the Web

Comprehensive documentation such as product information, technical papers, release notes, and FAQs can be found on the HP Procurve networking Web site (www.hp.com/go/hpprocurve). This information is updated frequently and is available on-demand, every day, at any time. HP Procurve customers also receive the following:

- Free software updates
- Proactive notification of new software releases via E-mail
- Free technical product support via E-mail

worldwide telephone assistance

Free telephone support by highly trained service technicians at our HP customer care centers worldwide is available during normal business hours to assist with HP Procurve product questions.

In addition, if your telephone support needs include after-hours, multi-vendor, multi-site, or network-wide assistance, HP offers HP network environment support as an annual support contract. This service is available during business hours or 24 x 7, providing a one-stop solution for telephone-based network fault isolation, software problem resolution, and software usage assistance.

industry-leading warranty, upgrades, and installation

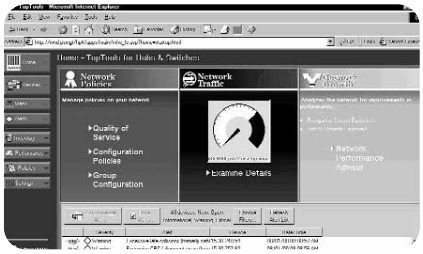
HP Procurve products come with warranties you would expect from HP. And, depending on your needs, several upgrade options are available. From next-business-day exchange programs to onsite installation and configuration services, HP Procurve support services are the best in the business.

- Free lifetime warranty* for as long as you own the product with next-business-day advance replacement (available in most countries)
- Extensive set of warranty upgrades for up to 4-hour 24 x 7 response and, for hp procurve 9300 series products, 6 hour call-to-repair
- Genuine hp parts for both in- and out-of-warranty repair needs
- Product and network-wide onsite installation and configuration services

* HP Procurve routing switches and 6208m-sx products have a 1-year warranty with extensions available.

hp toptools for hubs & switches (J2569R)

Easy to install and use, HP Toptools for hubs & switches is the answer to your network management challenges. The Web interface allows you to take care of management from any Web browser on your network. For managing devices, troubleshooting, or planning network upgrades, HP Toptools for hubs & switches takes the work out of network management. HP Toptools for hubs & switches is included with every managed hub and switch free of charge.



HP Toptools is a free, web-based tool that helps you manage your computer assets, upgrade PC BIOS, manage network devices and HP printers, and keep track of your network resources and performance. Based on industry-standards such as SNMP, DMI, WMI, TCP/IP and HTTP, it increases your efficiency by providing immediate device status from any location in your environment. For more information, go to www.hp.com/toptools

managing network devices

You'll spend less time and effort on day-to-day network tasks with HP Toptools for hubs & switches working for you:

- Easy management from anywhere on your intranet with a Web browser
- Automatic notification when hp switches and hubs use proactive features to fix or limit common network problems
- Simultaneous configuration of multiple switches
- Policy-based configuration of Quality of Service (QoS) features such as traffic prioritization

managing network traffic

Seeing your entire network at once and troubleshooting problems couldn't be easier:

- Shows top five conversations on every segment of a switch, including Gigabit ports, without a probe
- Monitors all server connections

managing network growth

Let HP Toptools for hubs & switches take the hassle out of upgrading your network:

- Automatically monitors and analyzes network traffic to determine where upgrades are needed
- Network Performance Advisor gives clear, easy-to-follow plans detailing the most cost-effective way to upgrade your network
- Recommends server placement and connectivity speed

hp toptools enterprise solutions

Get the advantages of the consistent, easy-to-use interface in HP Toptools for hubs & switches from industry-standard Microsoft Windows NT network-management platforms with HP Toptools software bridges:

- HP Toptools for openview NNM-NT
- HP Toptools for openview NNM-UX
- HP Toptools for openview NNM-Solaris
- HP Toptools for Unicenter TNG (Computer Associates)
- HP Toptools for Tivoli Enterprise Management (IBM)
- HP Toptools for Tivoli NetView (IBM)
- HP Toptools for Microsoft SMS

For details or to purchase a bridge, contact your dealer or go to www.hp.com/toptools

hp openview

HP Openview is a portfolio of network management software and services that play a critical role by providing the IT management solutions needed to successfully develop an e-service. For over a decade, Openview solutions have given IT organizations the management control they need quickly and effectively. For more information, go to www.openview.hp.com

hp policy-based network management

Policy-based network management consolidates and synchronizes QoS and security policies across the enterprise by automatically and dynamically configuring a large number of managed HP Procurve switches and hubs. This eases policy administration and reduces the possibility of configuration errors

hp procurve routing switch 9308m

A feature-rich, managed modular routing switch delivering 96 million pps performance, the HP Procurve routing switch 9308m provides up to 64 Gigabit Ethernet ports or up to 168 autosensing 10/100Base-TX ports or a combination. It is ideal for large networks, and provides non-blocking performance in collapsed backbone data centers.

hp procurve routing switch 9308m (J4138A)
with 8 open module slots for up to 64 Gigabit Ethernet or up to 168 autosensing 10/100Base-TX ports or a combination.
This product requires management module (ordered separately).

accessories

n w HP Procurve 9300 Mini-GBIC module (J4856A)
- 8 open slots. Accepts J4858A and J4859A

n w HP Procurve 9300 Mini-GBIC redundant mgmt. module (J4857A)
- 8 open slots. Accepts J4858A and J4859A

n w HP Procurve Gigabit-SX-LC Mini-GBIC (J4858A)
n w HP Procurve Gigabit-LX-LC Mini-GBIC (J4859A)
HP Procurve 9300 1000Base-T module (J4842A)
- 8 RJ-45 ports

HP Procurve 9300 10/100 module (J4140A)
- 24 RJ-45 ports

HP Procurve 9300 100Base-FX module (J4142A)
- 24 MT-RJ ports

HP Procurve 9300 redundant power supply (J4147A)

For accessory information, including port counts, IEEE specs, and compatibility, see pages 20-23.

features and benefits

- **IP/IPX/Appletalk routing:** provides routing of IP and IPX at media speed
- **IP multicast (IGMP, DVMRP, and PIM) routing:** provides IGMP, DVMRP, PIM-dense and PIM-sparse mode support in routed environments to control multicast traffic
- **Policy-based VLANs:** allow you to assign VLANs on a port, protocol, subnet, or IEEE 802.1Q tagged basis
- **Hardware-based Access Control Lists:** ensure high level of security without impacting network performance
- **Filter-based enhanced security:** provided on the basis of IP source and destination address, protocol type, port number, and MAC address
- **Web interface:** allows you to configure the switch from any Web browser on the network
- **Software updates:** free downloads from the Web
- **Full-featured console:** provides complete control of the switch with a familiar command line interface, accessible in-band via Telnet or out-of-band via a serial port
- **Industry-leading warranty:** one year with extensions available
- **Optional redundant power supply:** provides uninterrupted power for high availability
- **Hot-swappable chassis modules:** allow you to swap modules without interrupting the network
- **Automatic routing switch failover:** provides hot standby redundancy using VRRP (Virtual Router Redundancy Protocol) or SRP (Standby Routing Protocol)
- **Optional redundant management:** provides automatic failover from the active management module to the standby management module for high availability
- **96 million pps performance:** provides high performance required by large networks
- **Layer 4 prioritization:** delivers QoS (Quality of Service) for delay-sensitive applications
- **Port trunking:** for higher switch-to-switch and switch-to-server throughput and link-level redundancy

specifications

Ports
8 open module slots
Physical Characteristics
Dimensions: 52.7 x 44.4 x 38.7 cm (20.75 x 17.5 x 15.25 in)
Weight: 26.0 kg (57.3 lb)
Memory & Processor
Packet buffer size: 4 MB per module
Processor type and speed: Motorola PowerPC 603 @ 240 MHz
Mini-GBIC redundant management module
– RAM/ROM capacity: 256 MB per module
– Flash capacity: 8 MB
Mounting
Mounts in a standard 19-in rack (hardware included)
Management
HP Toptools for hubs & switches included
SNMPv2c
RMON groups: 1 (statistics), 2 (history), 3 (alarm), and 9 (events)
RFC 1493 Bridge MIB; 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB

Performance
Latency: <7 µs (FIFO)
Throughput: 96 million pps (64-byte packets)
Routing and switching capacity: 256 Gbps
Address table size: 64,000 entries
Environment
Operating
– Temperature: 5°C to 40°C (41°F to 104°F)
– Relative humidity: 15 to 80% @ 40°C (104°F), noncondensing
Non-operating/storage
– Temperature: -40°C to 70°C (-40°F to 158°F)
– Relative humidity: 90% @ 65°C (149°F), noncondensing
Shock & Vibration: EN 60068 (IEC 68)
Electrical Characteristics
Heat dissipation/hour: 100 BTU/hr (chassis); 300 BTU/hr (module)
Maximum wattage: 30 W (chassis); 100 W (module)
Voltage: 100–120 VAC/200–240 VAC
Current: 8 A/4 A
Frequency: 50/60 Hz

Communications
IEEE 802.1p Priority; IEEE 802.1D Spanning Tree; IEEE 802.1Q VLANs; IEEE 802.3x Flow Control; RFC 1075 DVMRP; RFC 1583 OSPF; PIM–dense and sparse mode; RFC 1112 IGMP; RFC 2338 VRRP; RFC 1058 RIP; RFC 1723 RIPv2
Safety
EN 60950/IEC 950; UL 1950; CSA 950
Emissions
FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A
Immunity
Generic: EN 50082-1
ESD: IEC 61000-4-2; 4 kV CD, 8 kV AD
Radiated: IEC 61000-4-3; 3 V/m
EFT/Burst: IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
Conducted: IEC 61000-4-6; 3 V

hp procurve routing switch 9304m

A feature-rich, managed modular routing switch delivering 48 million pps performance. The HP Procurve routing switch 9304m provides up to 32 Gigabit Ethernet ports or up to 72 autosensing 10/100Base-TX ports or a combination. It is ideal for medium-to-large networks, and provides non-blocking performance in collapsed backbone data centers.

hp procurve routing switch 9304m (J4139A)
with 4 open module slots for up to 32 Gigabit Ethernet or up to 72 autosensing 10/100Base-TX ports or a combination.
This product requires management module (ordered separately).

accessories

n w HP Procurve 9300 Mini-GBIC module (J4856A)
- 8 open slots. Accepts J4858A and J4859A

n w HP Procurve 9300 Mini-GBIC redundant mgmt. module (J4857A)
- 8 open slots. Accepts J4858A and J4859A

n w HP Procurve Gigabit-SX-LC Mini-GBIC (J4858A)
n w HP Procurve Gigabit-LX-LC Mini-GBIC (J4859A)
HP Procurve 9300 1000Base-T module (J4842A)
- 8 RJ-45 ports

HP Procurve 9300 10/100 module (J4140A)
- 24 RJ-45 ports

HP Procurve 9300 100Base-FX module (J4142A)
- 24 MT-RJ ports

HP Procurve 9300 redundant power supply (J4147A)

For accessory information, including port counts, IEEE specs, and compatibility, see pages 20-23 .

features and benefits

- **IP/IPX/Appletalk routing:** provides routing of IP and IPX at media speed
- **IP multicast (IGMP, DVMRP, and PIM) routing:** provides IGMP, DVMRP, PIM-dense and PIM-sparse mode support in routed environments to control multicast traffic
- **Policy-based VLANs:** allow you to assign VLANs on a port, protocol, subnet, or IEEE 802.1Q tagged basis
- **Hardware-based Access Control Lists:** ensure high level of security without impacting network performance
- **Filter-based enhanced security:** provided on the basis of IP source and destination address, protocol type, port number, and MAC address
- **Web interface:** allows you to configure the switch from any Web browser on the network
- **Software updates:** free downloads from the Web
- **Full-featured console:** provides complete control of the switch with a familiar command line interface, accessible in-band via Telnet or out-of-band via a serial port
- **Industry-leading warranty:** one year with extensions available
- **Optional redundant power supply:** provides uninterrupted power for high availability
- **Hot-swappable chassis modules:** allow you to swap modules without interrupting the network
- **Automatic routing switch failover:** provides hot standby redundancy using VRRP (Virtual Router Redundancy Protocol) or SRP (Standby Routing Protocol)
- **Optional redundant management:** provides automatic failover from the active management module to the standby management module for high availability
- **48 million pps performance:** provides high performance required by large networks
- **Layer 4 prioritization:** delivers QoS (Quality of Service) for delay-sensitive applications
- **Port trunking:** for higher switch-to-switch and switch-to-server throughput and link-level redundancy

specifications

Ports
4 open module slots
Physical Characteristics
Dimensions: 22.8 x 44.4 x 38.1 cm (9 x 17.5 x 15 in)
Weight: 13.8 kg (30.4 lb)
Memory & Processor
Packet buffer size: 4 MB per module
Processor type and speed: Motorola PowerPC 603 @ 240 MHz
Mini-GBIC redundant management module
– RAM/ROM capacity: 256 MB per module
– Flash capacity: 8 MB
Mounting
Mounts in a standard 19-in rack (hardware included)
Management
HP Toptools for hubs & switches included
SNMPv2c
RMON groups: 1 (statistics), 2 (history), 3 (alarm), and 9 (events)
RFC 1493 Bridge MIB; 802.3 Ethernet MIB; Repeater MIB; Ethernet Interface MIB

Performance
Latency: <7 µs (FIFO)
Throughput: 48 million pps (64-byte packets)
Routing and switching capacity: 128 Gbps
Address table size: 64,000 entries
Environment
Operating
– Temperature: 5°C to 40°C (41°F to 104°F)
– Relative humidity: 15 to 80% @ 40°C (104°F), noncondensing
Non-operating/storage
– Temperature: -40°C to 70°C (-40°F to 158°F)
– Relative humidity: 90% @ 65°C (149°F), noncondensing
Shock & Vibration: EN 60068 (IEC 68)
Electrical Characteristics
Heat dissipation/hour: 70 BTU/hr (chassis); 300 BTU/hr (module)
Maximum wattage: 20 W (chassis); 100 W (module)
Voltage: 100–120 VAC/200–240 VAC
Current: 8 A/4 A
Frequency: 50/60 Hz

Communications
IEEE 802.1p Priority; IEEE 802.1D Spanning Tree; IEEE 802.1Q VLANs; IEEE 802.3x Flow Control; RFC 1075 DVMRP; RFC 1583 OSPF; PIM-dense and sparse mode; RFC 1112 IGMP; RFC 2338 VRRP; RFC 1058 RIP; RFC 1723 RIPv2
Safety
EN 60950/IEC 950; UL 1950; CSA 950
Emissions
FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A
Immunity
Generic: EN 50082-1
ESD: IEC 61000-4-2; 4 kV CD, 8 kV AD
Radiated: IEC 61000-4-3; 3 V/m
EFT/Burst: IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
Conducted: IEC 61000-4-6; 3 V

hp procurve switch 4108gl

High performance, managed modular 10/100/1000T workgroup switches, targeted to meet high port density needs in the wiring-closet environment. The Fast Path Technology on the HP Procurve Switch 4108gl enables intra-module switching at wire-speed. Ideal for growing organizations which need to increase their performance to key network services (internet, application servers, multimedia, telephony).

hp procurve switch 4108gl (J4865A)
with 8 open module slots

accessories

modules:
HP Procurve switch gl 10/100-TX module (J4862A)
HP Procurve switch gl 100/1000-T module (J4863A)
HP Procurve switch gl transceiver module (J4864A)
HP Procurve switch gl redundant power supply (J4839A)

transceivers:
HP Procurve Gigabit SX transceiver (J4131A)
HP Procurve Gigabit LX transceiver (J4132A)
HP Procurve 100/1000T transceiver (J4834A)
HP Procurve 100 FX SC transceiver (J4853A)
HP Procurve switch Gigabit Stacking Kit (J4116A)

For accessory information, including port counts, IEEE specs, and compatibility, see pages 20-23.

features and benefits

- **Fast Path Technology:** enables intra-module traffic to be switched at wire-speed, providing a total throughput of up to 72Mpps
- **Fast switch fabric:** high performance switch fabric (36.6 Gbps)
- **Port density:** highest port density in the industry (max. 192 10/100 ports, 48 Gigabit ports—i.e., 38 10/100 ports per rack unit)
- **Management:** SNMPv2c and RMON 1,2,3 and 9 provide monitoring capabilities
- **Web interface:** allows you to configure the switch from any Web browser on the network
- **Virtual stacking capability:** single IP address management for a virtual stack of up to 16 switches including the 1600m, 2400m, 2424m, 2512, 2524, 4000m, 4108gl, and 8000m*
- **Find, fix, and inform:** automatically finds common network problems*
- **Friendly port names:** eases configuration management*
- **Cisco Discovery Protocol (CDP):** enables real-time mapping of end nodes to switch ports*
- **TACACS+:** eases administration of switch management security by using a password authentication server*
- **Port monitoring:** allows you to monitor traffic using a switched port so you can view several ports at one time with a network analyzer
- **VLANs:** supports up to 30 port-based VLANs, GVRP and 802.1Q VLAN tagging
- **Class of Service:** allows traffic prioritization based on 802.1p field (2 queues)
- **IP multicast (IGMP):** prevents flooding of IP multicast traffi

—continued on next page—

*Check www.hp.com/go/hpprocurve for availability of this software feature

specifications**

Ports
Switch 4108gl:
Eight open module slots
Switch 4108gl bundle:
72 RJ-45 10/100-TX ports (IEEE 802.3 type 10Base-T; 802.3u type 100Base-TX), 3 open transceiver slots, 4 open module slots
Both:
One RS-232C DB-9 console port

Physical Characteristics
Dimensions
Width: 44.2 cm (17.4 in)
Depth: 39.0 cm (15.3 in)
Height: 22.7 cm (9.0 in)
Weight
Switch 4108gl: 9.4 kg (20.7 lbs)
Switch 4108gl bundle: 10.4 kg (22.9 lbs) includes one GL Transceiver Module and three GL 10/100-TX Modules

Memory & Processor
Fabric: Motorola PowerPC @ 200 Mhz, 8 MB Flash, 32 MB SDRAM
Module: IDT MIPS32 @ 125 Mhz, 512 KB Flash, 8 MB SDRAM
Packet Buffer Size
Fabric: 1 MB
Gig Module: 512 KB
10/100-TX Module: 16 MB

Mounting
Mounts to an EIA-standard 19-in. telco rack or equipment cabinet (hardware included)
Wall mounting (hardware included)

Management
HP Toptools for hubs and switches included
SNMPv1/v2c
RFC 1493 Bridge MIB
RFC 1213 MIB II
RFC 1354 IP forwarding table MIB
RFC 2037 Entity MIB
RFC 1573 Evolution of Interface
RFC 1643 Ethernet MIB
RFC 1757 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm), and 9 (events)
RFC 2021 RMON probe configuration (RMON v2)
RFC 2239 802.3 MAU MIB
HTML, console and telnet management
RFC 2030 Simple Network Time Protocol

Performance
Latency: <10 μs (FIFO)
Throughput: 21.6 Mpps–71.4 Mpps (based on 64-byte packets)
Switch fabric speed: 36.6 Gbps
Address table size: 8,000

—continued on next page—

**Some product specifications are subject to change. For up-to-date information please visit www.hp.com/go/hpprocurve

hp procurve switch 4108gl bundle

What is Fast Path Technology?
Fast Path Technology is the architecture employed in the HP Procurve Switch 4108GL Switch that allows it to provide the highest performance in its class. Each connectivity module is a switch in and of itself, providing wire speed "local switching". So traffic that originates and is destined for ports on the same module get switched at full media speed without going through the central switching fabric!

nw hp procurve switch 4108gl bundle (J4861A)
with 72 10/100Base-TX autosensing ports, a 3-port transceiver module (transceivers ordered separately) for uplinks and 4 open module slots

accessories

nw modules:
HP Procurve switch gl 10/100-TX module (J4862A)
HP Procurve switch gl 100/1000-T module (J4863A)
HP Procurve switch gl transceiver module (J4864A)
HP Procurve switch gl redundant power supply (J4839A)

transceivers:
HP Procurve Gigabit SX transceiver (J4131A)
HP Procurve Gigabit LX transceiver (J4132A)
HP Procurve 100/1000T transceiver (J4834A)
HP Procurve 100 FX SC transceiver (J4853A)
HP Procurve switch Gigabit Stacking Kit (J4116A)

For accessory information, including port counts, IEEE specs, and compatibility, see pages 20-23.

features and benefits (continued)

- **IEEE 802.3ad standard trunking:** allows redundant connections between devices supporting LACP (Link Aggregation Control Protocol) for more aggregate bandwidth. Supports up to 6 trunks, with up to 4 ports per trunk; trunking across modules is possible
- **Cisco Fast EtherChannel:** provides higher throughput to other devices that support FEC
- **Spanning Tree Protocol:** provides redundant links while preventing network loops
- **802.1x and RADIUS network login:** controls access and provides authentication and accountability for network security*
- **Port security:** prevents unauthorized access using MAC address lockdown*
- **Hot-swappable modules:** allow you to add or swap modules without interrupting the network
- **Optional redundant power supply:** provides uninterrupted power
- **Lifetime warranty:** for as long as you own the product, with next business day advance replacement (available in most countries)

*Check www.hp.com/go/hpprocurve for availability of this software feature

specifications (continued)**

Environment
Operating
- Temperature: 0ÞC to 55ÞC (32ÞF to 131ÞF)
- Relative humidity: 15 to 95% at 40ÞC (104ÞF), noncondensing

Non-operating/storage
- Temperature: -40ÞC to 70ÞC (-40ÞF to 158ÞF)
- Relative humidity: 15 to 95% at 65ÞC (149ÞF), noncondensing

Maximum altitude: 4.6 Km
Shock and vibration: HP759, HP760 (similar to EN 60068 IEC 68)

Electrical Characteristics
The Switch 4108gl automatically adjusts to any voltage between 100-127 VAC and 200-240 VAC and either 50 or 60 Hz

AC voltage:	100-127 VAC	200-240 VAC
Maximum current:	8.0 A	3.8 A
Frequency range:	50-60 Hz	50-60 Hz

Communications
IEEE 802.Q VLAN tagging; GVRP IEEE 802.1p priority; IEEE 802.1D Spanning Tree; IEEE 802.3x Flow Control; IEEE 802.3ad Link Aggregation Control Protocol; IEEE 802.3z 1000Base-X; RFC 2236 IGMP v2; RFC 783 TFTP; RFC 1542 BootP; RFC 951 BootP; RFC 854 Telnet; RFC 768 UDP; RFC 792 ICMP; RFC 793 TCP; RFC 826 ARP

Safety
EN60950/IEC 950; cUL (CSA950); NOM-019-SCFI-1994; UL 1950 3rd Edition

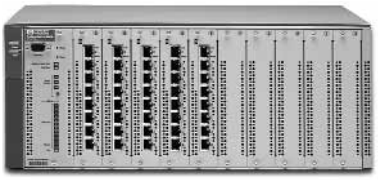
Emissions
EMI: CISPR-22 (1997) Class A

Immunity
Generic: EN 55024 (1997)
ESD: IEC/EN 61000-4-2 (1995); 4 kV CD, 8 kV AD; HP ENV.765.002 10 kV-25 kV AD
Radiated: IEC/EN 61000-4-3 (1995), 3V/m
EFT/Burst: IEC/EN 61000-4-5 (1995), 1 kV/2 kV AC, 1 kV signal, 0.5 kV DC
Conducted: IEC/EN 61000-4-6 (1996), 3V
Power Frequency Magnetic Field: IEC/EN 61000-4-8 (1993), 1 A/m, 50 or 60 Hz
Voltage dips or interruptions: IEC/EN 61000-4-11 (1994), >95% reduction, 0.5 period, 30% reduction, 25 periods
Harmonics and flicker: IEC/EN 61000-3-2, IEC/EN 61000-3-3

**Some product specifications are subject to change. For up-to-date information please visit www.hp.com/go/hpprocurve

hp procurve switch 4000m and 8000m

Managed modular 10/100/Gigabit desktop switches that provide scalable, low-cost switching and all the benefits of HP Proactive Networking. They are ideal for organizations looking for scalable, expandable, low-cost migration to 10/100 switching to the desktop with Gigabit uplinks. The 4000m and 8000m are the easiest way to build high availability networks. The 4000m includes 40 10/100Base-TX autosensing ports. The 8000m provides 10 open module slots.



hp procurve switch 4000m (J4121A)
with 40 10/100Base-TX autosensing ports installed and 5 open module slots

hp procurve switch 8000m (J4110A)
with 10 open module slots

accessories

HP Procurve switch 10/100Base-T module (J4111A)
HP Procurve switch 100Base-FX module (J4112A)*
HP Procurve switch Gigabit-SX module (J4113A)
HP Procurve switch Gigabit-LX module (J4114A)
HP Procurve switch 100/1000Base-T module (J4115B)
HP Procurve switch 10Base-FL module (J4118A)
HP Procurve switch 4000m/8000m redundant power supply (J4119A)

* A redundant power supply (J4119A) is required if more than 5 100Base-FX modules (J4112A) are installed

For accessory information, including port counts, IEEE specs, and compatibility, see pages 20–23.

features and benefits

- **Stacking capability:** single IP address management for a virtual stack of up to 16 switches including the 1600m, 2400m, 2424m, 2512, 2524, 4000m, and 8000m
- **RMON and extended RMON:** provide advanced monitoring capabilities
- **Port monitoring:** allows you to monitor traffic using a switched port so you can view several ports at one time with a network analyzer
- **Web interface:** allows you to configure the switch from any Web browser on the network
- **Protocol filtering:** provides traffic control
- **VLAN support and tagging:** supports up to 30 port-based VLANs and dynamic configuration of 802.1Q VLAN tagging providing security between workgroups
- **Class of Service (CoS) tagging:** sets 802.1p priority field using policy-based management
- **IP multicast (IGMP):** prevents flooding of IP multicast traffic
- **Port security:** prevents unauthorized access using MAC address lockdown
- **Switch meshing:** delivers high availability with high performance
- **Hot swappable modules:** allow you to add or swap modules without interrupting the network
- **Optional redundant power supply:** provides uninterrupted power
- **Spanning Tree Protocol:** provides redundant links while preventing network loops
- **Lifetime warranty:** for as long as you own the product, with next business day advance replacement (available in most countries)
- **Port trunking:** for higher switch-to-switch and switch-to-server throughput and link-level redundancy
- **Cisco Fast EtherChannel®:** provides higher throughput to other devices that support FEC
- **Automatic Broadcast Control (ABC):** minimizes IP and IPX broadcast traffic throughout the network
- **TACACS+:** eases administration of switch management security by using a password authentication server (check www.hp.com/go/hpprocurve for availability of this free software update)

specifications

Ports
Switch 4000m:
40 RJ-45 10/100Base-TX ports (IEEE 802.3 Type 10Base-T; 802.3u Type 100Base-TX)
5 open module slots
Switch 8000m:
10 open module slots
Both:
One RS-232C DB-9 console port
Physical Characteristics
Dimensions: 44.2 x 33.5 x 17.8 cm (17.4 x 13.2 x 7 in)
Weight
– 4000m: 10.4 kg (22.9 lb)
– 8000m: 9.4 kg (20.7 lb)
Memory & Processor
Packet buffer size: 512 KB per port (10/100 ports); 4 MB per port (Gigabit ports)
RAM/ROM capacity: 16 MB
Processor type & speed: Intel i960JD @ 66 MHz
Flash capacity: 2 MB
Mounting
Mounts in a standard 19-in rack (hardware included)

Management
HP Toptools for hubs & switches included
SNMPv1/v2c
RMON groups: 1 (statistics), 2 (history), 3 (alarm), and 9 (events)
Extended RMON
RFC 1493 Bridge MIB
Performance
Latency: <10 μs (LIFO)
Throughput: 4.67 million pps (64-byte packets)
Backplane speed: 3.8 Gbps
Address table size: 10,000 entries
Environment
Operating
– Temperature: 0°C to 55°C (32°F to 131°F)
– Relative humidity: 15 to 95% @ 40°C (104°F), noncondensing
Non-operating/storage
– Temperature: -40°C to 70°C (-40°F to 158°F)
– Relative humidity: 90% @ 65°C (149°F), noncondensing
Shock & Vibration: EN 60068 (IEC 68)

Electrical Characteristics
Heat dissipation/hour: 535 BTU/hr
Maximum wattage: 157 W
Voltage: 100–127 VAC/200–240 VAC
Current: 2.0 A max/1.0 A max
Frequency: 50/60 Hz
Communications
IEEE 802.1p Priority; IEEE 802.1D Spanning Tree; IEEE 802.1Q VLANs; IEEE 802.3x Flow Control
Safety
EN 60950/IEC 950; UL 1950; CSA 950; complies with NOM-019-SCFI-1994
Emissions
FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A
Immunity
Generic: EN 50082-1
ESD: IEC 801-2; 4 kV CD, 8 kV AD
Radiated: IEC 801-3; 3 V/m
EFT/Burst: IEC 801-4; 1.0 kV (power line), 0.5 kV (signal line)

hp procurve switch 2424m

A stackable, managed 24-port, expandable 10/100 Ethernet desktop switch that offers reliable connectivity and high availability features. The HP Procurve switch 2424m includes 1 open module slot for Gigabit stacking and uplinks.

hp procurve switch 2424m (J4093A)
with 24 10/100Base-TX autosensing ports and 1 open module slot on the back for stacking or port expansion

accessories

HP Procurve switch 2424m Gigabit stacking module (J4130A)*
HP Procurve switch Gigabit stacking kit (J4116A)**
HP Procurve Gigabit-SX transceiver (J4131A)**
HP Procurve Gigabit-LX transceiver (J4132A)**
HP Procurve switch 10/100Base-T module (J4111A)
HP Procurve switch 100Base-FX module (J4112A)
HP Procurve switch Gigabit-SX module (J4113A)
HP Procurve switch Gigabit-LX module (J4114A)
HP Procurve switch 100/1000Base-T module (J4115B)
HP Procurve switch 10Base-FL module (J4118A)

* You can stack up to 7 HP Procurve switch 2424m units by installing the 2-port HP Procurve switch 2424m Gigabit stacking module (J4130A) and HP Procurve switch Gigabit stacking kit (J4116A) (One stacking module is required for each switch, and for every n switches, you need n-1 stacking kits) The switch 2424m Gigabit stacking module can also be used as a dual Gigabit uplink module with the HP Procurve Gigabit-SX transceiver (J4131A) and/or the HP Procurve Gigabit-LX transceiver (J4132A)

** Requires HP Procurve switch 2424m Gigabit stacking module (J4130A)

For accessory information, including port counts, IEEE specs, and compatibility, see pages 20–23.

features and benefits

- **Stacking capability:** single IP address management for a virtual stack of up to 16 switches including the 1600m, 2400m, 2424m, 2512, 2524, 4000m, and 8000m
- **RMON and extended RMON:** provide advanced monitoring capabilities
- **Port monitoring:** allows you to monitor traffic using a switched port so you can view several ports at one time with a network analyzer
- **Web interface:** allows you to configure the switch from any Web browser on the network
- **Protocol filtering:** provides traffic control
- **VLAN support and tagging:** supports up to 30 port-based VLANs and dynamic configuration of 802.1Q VLAN tagging providing security between workgroups
- **Class of Service (CoS) tagging:** sets 802.1p priority field using policy-based management
- **IP multicast (IGMP):** prevents flooding of IP multicast traffic
- **Port security:** prevents unauthorized access using MAC address lockdown
- **Switch meshing:** delivers high availability with high performance
- **Hot swappable modules:** allow you to add or swap modules without interrupting the network
- **Spanning Tree Protocol:** provides redundant links while preventing network loops
- **Lifetime warranty:** for as long as you own the product, with next business day advance replacement (available in most countries)
- **Port trunking:** for higher switch-to-switch and switch-to-server throughput and link-level redundancy
- **Cisco Fast EtherChannel®:** provides higher throughput to other devices that support FEC
- **Automatic Broadcast Control (ABC):** minimizes IP and IPX broadcast traffic throughout the network
- **TACACS+:** eases administration of switch management security by using a password authentication server (check www.hp.com/go/hpprocurve for availability of this free software update)

specifications

Ports
24 RJ-45 10/100Base-TX ports (IEEE 802.3 Type 10Base-T; 802.3u Type 100Base-TX)
One open module slot
One RS-232C DB-9 console port
Physical Characteristics
Dimensions: 44.2 x 33.5 x 6.6 cm (17.4 x 13.2 x 2.6 in)
Weight: 4.7 kg (10.4 lb)
Memory & Processor
Packet buffer size: 256 KB per port (10/100 ports); 4 MB per port (Gigabit ports)
RAM/ROM capacity: 10 MB
Processor type & speed: Intel i960JF @ 33 MHz
Flash capacity: 2 MB
Mounting
Mounts in a standard 19-in rack (hardware included)
Management
HP Toptools for hubs & switches included
SNMPv1/v2c
RMON groups: 1 (statistics), 2 (history), 3 (alarm), and 9 (events)
Extended RMON
RFC 1493 Bridge MIB

Performance
Latency: <10 μs (LIFO)
Throughput: 4.67 million pps (64-byte packets)
Backplane speed: 3.2 Gbps
Address table size: 10,000 entries
Environment
Operating
– Temperature: 0°C to 55°C (32°F to 131°F)
– Relative humidity: 15 to 95% @ 40°C (104°F), noncondensing
Non-operating/storage
– Temperature: -40°C to 70°C (-40°F to 158°F)
– Relative humidity: 90% @ 65°C (149°F), noncondensing
Shock & Vibration: EN 60068 (IEC 68)
Electrical Characteristics
Heat dissipation/hour: 358 BTU/hr
Maximum wattage: 105 W
Voltage: 100–127 VAC/200–240 VAC
Current: 2.0 A max/1.0 A max
Frequency: 50/60 Hz

Communications
IEEE 802.1p Priority; IEEE 802.1D Spanning Tree; IEEE 802.1Q VLANs; IEEE 802.3x Flow Control
Safety
EN 60950/IEC 950; UL 1950; CSA 950; complies with NOM-019-SCFI-1994
Emissions
FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A
Immunity
Generic: EN 50082-1
ESD: IEC 801-2; 4 kV CD, 8 kV AD
Radiated: IEC 801-3; 3 V/m
EFT/Burst: IEC 801-4; 1.0 kV (power line), 0.5 kV (signal line)

hp procurve switch 2524 and 2512

Low-cost, stackable, managed 24- and 12-port switches with 10/100 autosensing per port and 2 open transceiver slots for Gigabit or 100Base-FX. The HP Procurve switch 2524 and 2512 offer HP Auto-MDIX on all 10/100 and 100/1000 ports and high availability features. The HP Procurve switch 2524 and 2512 are ideal for low-cost migration to 10/100 managed switching with uplinks.

hp procurve switch 2524 (J4813A)
with 24 10/100Base-TX autosensing ports, HP Auto-MDIX, and 2 open transceiver slots for Gigabit or 100Base-FX (shown with optional transceivers installed)

hp procurve switch 2512 (J4812A)
with 12 10/100Base-TX autosensing ports, HP Auto-MDIX, and 2 open transceiver slots for Gigabit or 100Base-FX (shown with optional transceiver installed)

accessories

HP Procurve switch Gigabit stacking kit (J4116A)
HP Procurve Gigabit-SX transceiver (J4131A)
HP Procurve Gigabit-LX transceiver (J4132A)
HP Procurve 100/1000-T transceiver (J4834A)
HP Procurve 100-FX SC transceiver (J4853A)

For accessory information, including port counts, IEEE specs, and compatibility, see pages 20-23.

features and benefits

- **9.6 Gbps switch fabric integrated on-chip:** high performance switch design with a non-blocking architecture
- **HP Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100 and 100/1000 ports
- **Stacking capability:** single IP address management for a virtual stack of up to 16 switches including the 1600m, 2400m, 2424m, 2512, 2524, 4000m, and 8000m
- **RMON and extended RMON:** provide advanced monitoring capabilities
- **Web interface:** allows you to configure the switch from any Web browser on the network
- **IEEE 802.3ad standard trunking:** allows redundant connections between devices to be combined for more aggregate bandwidth between devices supporting LACP (Link Aggregation Control Protocol)
- **VLAN support and tagging:** supports up to 30 port-based VLANs and dynamic configuration of 802.1Q VLAN tagging providing security between workgroups
- **Group VLAN Registration Protocol (GVRP):** allows automatic learning of VLANs which eliminates manual configuration of VLANs
- **IP multicast (IGMP):** prevents flooding of IP multicast traffic
- **Port security:** keeps the network and the users secure from tampering by unauthorized users
- **Spanning Tree Protocol:** provides redundant links while preventing network loops
- **Lifetime warranty:** for as long as you own the product, with next business day advance replacement (available in most countries)
- **IEEE 802.1p prioritization:** delivers data to devices based on the priority and type of traffic
- **TACACS+:** eases administration of switch management security by using a password authentication server (check www.hp.com/go/hpprocurve for availability of this free software update)
- **802.1x and RADIUS network login:** controls access and provides authentication and accountability for network security (check www.hp.com/go/hpprocurve for availability of this free software update)
- **Cisco Fast EtherChannel®:** provides higher throughput to other devices that support FEC

specifications*

Ports
Switch 2524:
  24 RJ-45 10/100Base-TX ports
  (IEEE 802.3 Type 10Base-T; 802.3u Type 100Base-TX)
Switch 2512:
  12 RJ-45 10/100Base-TX ports
  (IEEE 802.3 Type 10Base-T; 802.3u Type 100Base-TX)
Both:
  Two open transceiver slots
  One RS-232C DB-9 console port
Physical Characteristics
Dimensions: 44.2 x 20.3 x 4.6 cm (17.4 x 8.0 x 1.8 in)
Weight: 2.7 kg (6.0 lb)
Memory & Processor
Packet buffer size: 6 MB shared packet buffers
RAM/ROM capacity: 26 MB
Processor type & speed: ARM7TDMI @ 62.5 MHz
Flash capacity: 2 MB
Mounting
Mounts in a standard 19-in rack (hardware included)

Management
HP Toptools for hubs & switches included
SNMPv1/v2c
RMON groups: 1 (statistics), 2 (history), 3 (alarm), and 9 (events)
Extended RMON
RFC 1493 Bridge MIB
RFC 2674 802.1Q Bridge MIB
Performance
Latency: <10 μs (LIFO)
Throughput: 6.6 million pps (64-byte packets)
Switch fabric speed: 9.6 Gbps
Address table size: 4,096 entries
Environment
Operating
– Temperature: 0°C to 55°C (32°F to 131°F)
– Relative humidity: 15 to 95% @ 40°C (104°F), noncondensing
Non-operating/storage
– Temperature: -40°C to 70°C (-40°F to 158°F)
– Relative humidity: 90% @ 65°C (149°F), noncondensing
Shock & Vibration: HP759, HP760 (similar to EN 60068, IEC 68)

Electrical Characteristics
Heat dissipation/hour: 123 BTU/hr
Maximum wattage: 36 W
Voltage: 100-127 VAC/200-240 VAC
Current: 2.4 A max/1.2 A max
Frequency: 50/60 Hz
Communications
IEEE 802.1p Priority; IEEE 802.1D Spanning Tree; IEEE 802.1Q VLANs; IEEE 802.3x Flow Control; IEEE 802.3ad Link Aggregation
Safety
EN 60950/IEC 950; UL 1950: CSA 950; complies with NOM-019-SCFI-1994
Emissions
FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A
Immunity
Generic: EN 50082-1
ESD: IEC/EN 61000-4-2; 4 kV CD, 8 kV AD
Radiated: IEC/EN 61000-4-3; 3 V/m
EFT/Burst: IEC/EN 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)

*Some product specifications are subject to change. For up-to-date information please visit www.hp.com/go/hpprocurve

hp procurve switch 2324 and 2312

Low-cost, unmanaged 24- and 12-port switches with 10/100 autosensing per port and 2 open transceiver slots for media flexibility. The HP Procurve switch 2324 and 2312 are ideal for low-cost, unmanaged 10/100 connectivity with uplinks.

hp procurve switch 2324 (J4818A)
with 24 10/100Base-TX autosensing ports, HP Auto-MDIX, and 2 open transceiver slots for Gigabit or 100Base-FX (shown with optional transceivers installed)

hp procurve switch 2312 (J4817A)
with 12 10/100Base-TX autosensing ports, HP Auto-MDIX, and 2 open transceiver slots for Gigabit or 100Base-FX (shown with optional transceiver installed)

accessories

HP Procurve switch Gigabit stacking kit (J4116A)
HP Procurve Gigabit-SX transceiver (J4131A)
HP Procurve Gigabit-LX transceiver (J4132A)
HP Procurve 100/1000-T transceiver (J4834A)
HP Procurve 100-FX SC transceiver (J4853A)

For accessory information, including port counts, IEEE specs, and compatibility, see pages 20-23.

features and benefits

- **9.6 Gbps switch fabric integrated on-chip:** high performance switch design with a non-blocking architecture
- **HP Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100 and 100/1000 ports
- **Media-flexible uplink ports:** provides Gigabit or 100-FX ports for uplinks or server connections
- **10/100 autosensing per port:** automatically detects and sets the speed for any 10Base-T or 100Base-TX device
- **Flow Control:** ensures reliable communication during full-duplex operation
- **Unmanaged:** provides plug-and-play simplicity
- **Lifetime warranty:** for as long as you own the product, with next business day advance replacement (available in most countries)
- **Comprehensive LED display with per-port indicators:** provides an at-a-glance view of status, activity, speed, and full-duplex operation
- **Half/full duplex auto-negotiating capability on every port:** double the throughput of every port

specifications*

Ports
Switch 2324:
24 RJ-45 10/100Base-TX ports
(IEEE 802.3 Type 10Base-T; 802.3u Type 100Base-TX)
Switch 2312:
12 RJ-45 10/100Base-TX ports
(IEEE 802.3 Type 10Base-T; 802.3u Type 100Base-TX)
Both:
Two open transceiver slots
One RS-232C DB-9 download port
Physical Characteristics
Dimensions: 44.2 x 20.3 x 4.6 cm (17.4 x 8.0 x 1.8 in)
Weight: 2.7 kg (6.0 lb)
Memory & Processor
Packet buffer size: 6 MB shared packet buffers
RAM/ROM capacity: 26 MB
Processor type & speed: ARM7TDMI @ 62.5 MHz
Flash capacity: 2 MB
Mounting
Mounts in a standard 19-in rack (hardware included)

Performance
Latency: <10 μs (LIFO)
Throughput: 6.6 million pps (64-byte packets)
Switch fabric speed: 9.6 Gbps
Address table size: 4,096 entries
Environment
Operating
– Temperature: 0°C to 55°C (32°F to 131°F)
– Relative humidity: 15 to 95% @ 40°C (104°F), noncondensing
Non-operating/storage
– Temperature: -40°C to 70°C (-40°F to 158°F)
– Relative humidity: 90% @ 65°C (149°F), noncondensing
Shock & Vibration: HP759, HP760 (similar to EN 60068, IEC 68)
Electrical Characteristics
Heat dissipation/hour: 123 BTU/hr
Maximum wattage: 36 W
Voltage: 100-127 VAC/200-240 VAC
Current: 2.4 A max/1.2 A max
Frequency: 50/60 Hz

Communications
IEEE 802.3x Flow Control
Safety
EN 60950/IEC 950; UL 1950: CSA 950; complies with NOM-019-SCFI-1994
Emissions
FCC Class A; EN 55022/CISPR-22 Class A; VCCI Class A
Immunity
Generic: EN 50082-1
ESD: IEC/EN 61000-4-2; 4 kV CD, 8 kV AD
Radiated: IEC/EN 61000-4-3; 3 V/m
EFT/Burst: IEC/EN 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)

*Some product specifications are subject to change. For up-to-date information please visit www.hp.com/go/hpprocurve

hp procurve autosensing 10/100 and 10Base-T hubs

HP Procurve autosensing 10/100 hubs—Low-cost, 24- and 12-port unmanaged hubs with 10/100 per-port autosensing and a built-in bridge. These hubs are ideal for connecting workgroups with a mix of 10 Mbps and 100 Mbps devices as well as for any workgroup that is migrating from 10Base-T to 100Base-TX.
HP Procurve 10Base-T hubs—Cost-effective 24- and 12-port unmanaged 10Base-T hubs provide a simple, efficient way to build a new network or expand an existing one.

hp procurve 10/100 hub 24 (J3295A)
with 24 autosensing 10/100Base-TX ports

hp procurve 10/100 hub 12 (J3294A)
with 12 autosensing 10/100Base-TX ports

hp procurve 10Base-T hub 24 (J3302A)
with 24 10Base-T ports and 1 open transceiver slot for an additional 10 Mbps port

hp procurve 10Base-T hub 12 (J3300A)
with 12 10Base-T ports and 1 open transceiver slot for an additional 10 Mbps port

features and benefits

10/100 hubs:

- **Built-in bridge:** automatically connects 10 Mbps and 100 Mbps devices without requiring additional products, modules, or stacking to operate correctly
- **10/100 autosensing per port:** automatically detects and sets the speed for any 10Base-T or 100Base-TX device
- **MDI/MDI-X cascade port:** makes it easy to add other hubs to the network
- **Comprehensive LED display with per-port indicators:** provides an at-a-glance view of status, activity, and speed
- **Automatic polarity correction and auto-partitioning on all ports:** helps find and fix common network problems
- **Lifetime warranty:** for as long as you own the product, with next business day advance replacement (available in most countries)

10Base-T hubs:

- **MDI/MDI-X cascade port:** makes it easy to add other hubs to the network
- **Lifetime warranty:** for as long as you own the product, with next business day advance replacement (available in most countries)

accessories

10/100 hubs:
None
10Base-T hubs:
HP Advancestack fiber-optic transceiver (J2606A)
HP Advancestack twisted-pair transceiver (J2607A)
HP Advancestack ThinLAN transceiver (J2608A)
HP Advancestack AUI port module (J2609A)

For accessory information, including port counts, IEEE specs, and compatibility, see pages 20-23.

specifications*

Ports
10/100 Hub 24:
  10/100 Autosensing
  24 RJ-45 10/100Base-TX ports (IEEE 802.3 Type 10Base-T; 802.3u Type 100Base-TX Class II)
10-Base-T Hub 24:
  One open transceiver slot
  24 RJ-45 10Base-T ports (IEEE 802.3 Type 10Base-T)
10/100 Hub 12:
  10/100 Autosensing
  12 RJ-45 10/100Base-TX ports (IEEE 802.3 Type 10Base-T; 802.3u Type 100Base-TX Class II)
10-Base-THub 12:
  One open transceiver slot
  12 RJ-45 10Base-T ports (IEEE 802.3 Type 10Base-T)
All:
  Port 1 is MDI/MDI-X
Physical Characteristics
Dimensions: 44.2 x 19.7 x 4.4 cm (17.4 x 7.8 x 1.7 in)
Weight
  Autosensing 10/100: 2.2 kg (4.8 lbs)
  10-Base-T: 2.4 kg (5.3 lbs)
Mounting
Mounts in a standard 19-in rack (hardware included)

Performance
Latency: 1.6 µs (FIFO)
Address table size: 8,000
Environment
Autosensing 10/100 hubs:
  Operating
    –Temperature: 0 °C to 55 °C (32 °F to 131 °F)
    –Relative humidity: 15 to 95% at 40 °C (104 °F), noncondensing
  Non-operating/storage
    –Temperature: -40 °C to 70 °C (-40 °F to 158 °F)
    –Relative humidity: 90% at 65 °C (149 °F), noncondensing
  Shock & Vibration: EN 60068 (IEC 68)
10-Base-T hubs:
  Operating
    –Temperature: 0 °C to 55 °C (32 °F to 131 °F)
    –Relative humidity: 15 to 95% at 40 °C (104 °F), noncondensing
  Non-operating/storage
    –Temperature: -40 °C to 70 °C (-40 °F to 158 °F)
    –Relative humidity: 90% at 65 °C (149 °F),noncondensing
  Shock & Vibration: EN 60068 (IEC 68)

Electrical Characteristics
Heat dissipation/hour
  Autosensing 10/100: 55 BTU/hr
  10-Base-T: 119 BTU/hr
Maximum wattage: 35 W
Voltage: 100 –127 VAC 200 –240 VAC
Current
  Autosensing 10/100: 1.0 A max 0.5 A max
  10-Base-T: 0.5 A max 0.3 A max
Frequency: 50/60 Hz
Safety
EN 60950/IEC 950; UL 1950; CSA 950; complies with NOM-019-SCFI-1994
Emissions
With unshielded cables:
EN 55022/CISPR-22 Class A; FCC Class A; VCCI Class A
Immunity
Generic: EN 50082-1
ESD: IEC 801-2; 4 kV CD, 8 kV AD
Radiated: IEC 801-3; 3 V/m
EFT/Burst: IEC 801-4; 1.0 kV (power line), 0.5 kV (signal line)

hp procurve compact switches and hubs

HP Procurve switch 408—Compact, unmanaged 8-port 10/100 switch offers half/full duplex 10/100 autosensing on every port and an MDI/MDI-X port for easy expansion. Ideal for building small networks or connecting peripherals with any combination of 10 Mbps and 100 Mbps devices.
HP Procurve 10Base-T hub 8—Compact, unmanaged hub provides a simple, low-cost way to create a new 10Base-T shared network or to expand an existing network.

n w **hp procurve switch 408 (J4097B)**
now with 8 HP Auto-MDIX ports

hp procurve 10Base-T hub 8 (J4090A)
with 8 10Base-T ports

accessories

mounting kit (5183-7210)

features and benefits

HP Switch 408:

- **Auto-sensing:** 10/100 autosensing per port automatically detects and sets the speed for any 10Base-T or 100Base-TX device
- **HP Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100 ports
- **Flow Control:** ensures reliable communications during full-duplex operation
- **LED display:** comprehensive LED display with per-port indicators allows you to monitor status and activity of every port at a glance
- **Automatic polarity correction:** helps find and fix common cabling problems
- **Switch design:** delivers dedicated bandwidth to each device and uses segmentation to improve network utilization
- **Auto-negotiation:** half/full-duplex auto-negotiation on every port automatically doubles the throughput to each device, up to 200 Mbps
- **Compact:** small footprint allows multiple mounting configurations on a flat surface, side-by-side, or in a standard rack)
- **Lifetime warranty:** for as long as you own the product, with next business day advance replacement (available in most countries)

HP Procurve 10Base-T hub 8:

- **MDI/MDI-X cascade port:** makes it easy to add other hubs or switches to the network
- **LED display:** comprehensive LED display with per-port indicators allows you to monitor status and activity of every port at a glance
- **Compact:** small footprint allows multiple mounting configurations on a flat surface, side-by-side, or in a standard rack)
- **Lifetime warranty:** for as long as you own the product, with next business day advance replacement (available in most countries)

specifications

Ports
Switch 408:
8 RJ-45 10/100Base-TX ports (IEEE 802.3 Type 10Base-T; 802.3u Type 100Base-TX)
all ports HP Auto-MDIX
Hub 8:
8 RJ-45 10Base-T ports (IEEE 802.3 Type 10Base-T)
Port 8: HP Auto-MDIX
Physical Characteristics
Dimensions: 19.9 x 12.1 x 4.0 cm (7.8 x 4.8 x 1.6 in)
Weight: 0.7 kg (1.5 lbs)
Mounting
Mounts in a standard 19-in rack with optional four-way mounting kit (hardware included)
Memory & Processor
Switch 408:
Packet buffer size: 64 KB per port
RAM/ROM capacity: 512 KB
Performance
Switch 408:
Address table size: 1,000

Environment
Operating
–Temperature: 0 °C to 55 °C (32 °F to 131 °F)
–Relative humidity: 15 to 95% at 40 °C (104 °F), noncondensing
Non-operating/storage
–Temperature: -40 °C to 70 °C (-40 °F to 158 °F)
–Relative humidity: 90% at 65 °C (149 °F), noncondensing
Shock & Vibration: EN 60068 (IEC 68)
Electrical Characteristics
Heat dissipation/hour
Switch 408: 52 BTU/hr
Hub 8: 27 BTU/hr
Maximum wattage
Switch 408: 15 W (external power supply)
Hub 8: 8 W (external power supply)
Voltage: 110 –127 VAC 200 –240 VAC
Current
Switch 408: 0.4 A max 0.2 A max
Hub 8: 0.2 A max 0.1 A max
Frequency: 50-60 Hz

Safety
EN 60950/IEC 950; UL 1950; CSA 950; complies with NOM-019-SCFI-1994
Emissions
FCC Class A; EN 55022:1998/CISPR-22:1997 Class A; VCCI Class A
Immunity
Generic
Switch 408: EN 55022:1998/CISPR-22:1997
Hub 8: EN 50082-1
ESD: IEC 61000-4-3:1995; 4 kV CD, 8 kV AD
Radiated: IEC 61000-4-3:1995; 3 V/m
EFT/Burst: IEC 61000-4-4:1995; 1.0 kV (power line), 0.5 kV (signal line)
Surge: IEC 61000-4-5:1995; 1 kV/2 kV AC, 1 kV signal, 0.5 kV DC
Conducted: IEC 61000-4-6:1996; 3 V
Magnetic field: IEC 61000-4-8:1993; 1 A/m, 50 or 60 Hz
Voltage: IEC 61000-4-11:1994; >95% reduction, 0.5 period, 30% reduction, 25 periods
Harmonics: EN 61000-3-2:1995; IEC 6100-3-2:1995
Flicker: EN 61000-3-3:1995; IEC 61000-3-3:199

accessory compatibility

1 Requires transceivers to operate. Transceivers ordered separately.

2 Transceivers insert into HP Procurve switch 2424m Gigabit stacking module (J4130A). Module ordered separately.

3 HP Procurve 9300 mini-GBIC redundant mgmt. module (J4857A) cannot be installed in the same chassis with HP Procurve 9300 mgmt. modules (J4141A, J4144A, J4146A).

4 An HP Procurve switch 4000m/8000m redundant power supply (J4119A) is required if more than 5 HP Procurve switch 100Base-FX modules (J4112A) are installed.

5 Mini-GBICs insert into HP Procurve 9300 mini-GBIC module (J4856A) or HP Procurve 9300 mini-GBIC redundant mgmt. module (J4857A). Modules ordered separately.

6 Requires mini-GBICs for connectivity. Mini-GBICs ordered separately.

7 Transceivers insert into HP Procurve switch gl transceiver module (J4864A). Module ordered separately.

connectivity modules	HP Procurve 9300 mini-GBIC module (J4856A)[6]	HP Procurve 9300 mini-GBIC redundant mgmt. module (J4857A)[6]	HP Procurve 9300 1000Base-T module (J4842A)	HP Procurve 9300 10/100 module (J4140A)	HP Procurve 9300 100Base-FX module (J4142A)	HP Procurve switch gl 10/100-TX module (J4862A)	HP Procurve switch gl 100/1000-T module (J4863A)	HP Procurve switch gl transceiver module (J4864A)[1]	HP Procurve switch 10/100Base-T module (J4111A)	HP Procurve switch 100Base-FX module (J4112A)[4]	HP Procurve switch Gigabit-SX module (J4113A)	HP Procurve switch Gigabit-LX module (J4114A)	HP Procurve switch 100/1000Base-T module (J4115B)	HP Procurve switch 10Base-FL module (J4118A)	HP Procurve switch 2424m Gigabit stacking module (J4130A)[1]
backbone															
HP Procurve routing switch 9308m (J4138A)	•	•[3]	•	•	•										
HP Procurve routing switch 9304m (J4139A)	•	•[3]	•	•	•										
wiring closet/desktop															
HP Procurve switch 4108gl-bundle (J4861A)						•	•	•							
HP Procurve switch 4108gl (J4865A)						•	•	•							
HP Procurve switch 8000m (J4110A)									•	•	•	•	•	•	
HP Procurve switch 4000m (J4121A)									•	•	•	•	•	•	
HP Procurve switch 2424m (J4093A)									•	•	•	•	•	•	•
HP Procurve switch 1600m (J4120A)									•	•	•	•	•	•	
HP Procurve switch 2524 (J4813A)															
HP Procurve switch 2512 (J4812A)															
HP Procurve switch 2324 (J4818A)															
HP Procurve switch 2312 (J4817A)															
HP Procurve 10Base-T hub 24m (J3303A)															
HP Procurve 10Base-T hub 24 (J3302A)															
HP Procurve 10Base-T hub 12m (J3301A)															
HP Procurve 10Base-T hub 12 (J3300A)															

accessory compatibility (continued)

1 Requires transceivers to operate. Transceivers ordered separately.
2 Transceivers insert into HP Procurve switch 2424m Gigabit stacking module (J4130A). Module ordered separately.
3 HP Procurve 9300 mini-GBIC redundant mgmt. modules (J4845A, J4846A, J4847A, J4857A) cannot be installed in the same chassis with HP Procurve 9300 mgmt. modules (J4141A, J4144A, J4146A).
4 An HP Procurve switch 4000m/8000m redundant power supply (J4119A) is required if more than 5 HP Procurve switch 100Base-FX modules (J4112A) are installed.
5 Mini-GBICs insert into HP Procurve 9300 mini-GBIC module (J4856A) or HP Procurve 9300 mini-GBIC redundant mgmt. module (J4857A). Modules ordered separately.
6 Requires mini-GBICs for connectivity. Mini-GBICs ordered separately.
7 Transceivers insert into HP Procurve switch gl transceiver module (J4864A). Module ordered separately.

	redundant power	HP Procurve 9300 redundant power supply (J4147A)	HP Procurve 4000m/8000m redundant power supply (J4119A)	HP Procurve switch gl redundant power supply (J4839A)	**transceivers/mini-GBICs**	HP Advancestack fiber-optic transceiver (J2606A)	HP Advancestack twisted-pair transceiver (J2607A)	HP Advancestack ThinLAN transceiver (J2608A)	HP Advancestack AUI port module (J2609A)	HP Procurve 100-FX SC transceiver (J4853A)	HP Procurve Gigabit-SX transceiver (J4131A)	HP Procurve Gigabit-LX transceiver (J4132A)	HP Procurve switch Gigabit stacking kit (J4116A)	HP Procurve 100/1000-T transceiver (J4834A)	HP Procurve Gigabit-SX-LC mini-GBIC (J4858A)	HP Procurve Gigabit-LX-LC mini-GBIC (J4858A)
backbone																
HP Procurve routing switch 9308m (J4138A)		•													•[5]	•[5]
HP Procurve routing switch 9304m (J4139A)		•													•[5]	•[5]
wiring closet/desktop																
HP Procurve switch 4108gl-bundle (J4861A)				•						•[7]	•[7]	•[7]	•[7]	•[7]		
HP Procurve switch 4108gl (J4865A)				•						•[7]	•[7]	•[7]	•[7]	•[7]		
HP Procurve switch 8000m (J4110A)			•													
HP Procurve switch 4000m (J4121A)			•													
HP Procurve switch 2424m (J4093A)											•[2]	•[2]	•[2]			
HP Procurve switch 1600m (J4120A)																
HP Procurve switch 2524 (J4813A)										•	•	•	•	•		
HP Procurve switch 2512 (J4812A)										•	•	•	•	•		
HP Procurve switch 2324 (J4818A)										•	•	•	•	•		
HP Procurve switch 2312 (J4817A)										•	•	•	•	•		
HP Procurve 10Base-T hub 24m (J3303A)						•	•	•	•							
HP Procurve 10Base-T hub 24 (J3302A)						•	•	•	•							
HP Procurve 10Base-T hub 12m (J3301A)						•	•	•	•							
HP Procurve 10Base-T hub 12 (J3300A)						•	•	•	•							

accessory features

1 HP Procurve switch 2424m Gigabit stacking module includes 2 open slots that accept the following Gigabit transceivers: J4131A, J4132A, J4116A.

2 HP Procurve switch Gigabit stacking kit includes two transceivers (1 HSSDC-port each) and the interconnecting cable to connect two HP Procurve switch 4108gl, 2424m, 2524, 2512, 2324, 2312 switches.

3 Full duplex only when installed in unmanaged switches.

4 Half or full duplex for 100Base-TX, full duplex for 1000Base-T.

5 HP Procurve 9300 mini-GBIC modules include 8 open slots that accept the following mini-GBICs: J4858A, J4859A.

6 HP Procurve switch gl transceiver module include 3 open slots that accept the following transceivers: J4116A, J4131A, J4132A, J4834A, J4853A.

connectivity modules	HP Procurve 9300 mini-GBIC module (J4856A)[5]	HP Procurve 9300 mini-GBIC redundant mgmt. module (J4857A)[5]	HP Procurve 9300 Gigabit-SX module (J4143A)	HP Procurve 9300 1000Base-T module (J4842A)	HP Procurve 9300 10/100 module (J4140A)	HP Procurve 9300 100Base-FX module (J4142A)	HP Procurve switch gl 10/100-TX module (J4862A)	HP Procurve switch gl 100/1000-T module (J4863A)	HP Procurve switch gl transceiver module (J4864A)[6]	HP Procurve switch 10/100Base-T module (J4111A)	HP Procurve switch 100Base-FX module (J4112A)	HP Procurve switch Gigabit-SX module (J4113A)	HP Procurve switch Gigabit-LX module (J4114A)	HP Procurve switch 100/1000Base-T module (J4115B)	HP Procurve switch 10Base-FL module (J4118A)	HP Procurve switch 2424m Gigabit stacking module (J4130A)[1]
technology																
1000Base-SX (IEEE 802.3z)	up to 8 LC ports[5]	up to 8 LC ports[5]	8 SC ports						up to 3 SC ports[6]			1 SC port				up to 2 SC ports[1]
1000Base-LX (IEEE 802.3z)	up to 8 LC ports[5]	up to 8 LC ports[5]							up to 3 SC ports[6]				1 SC port			up to 2 SC ports[1]
Per port autosensing 100Base-TX (IEEE 802.3u) and 1000Base-T (IEEE 802.3ab)								6 RJ-45 ports	up to 3 RJ-45 ports[6]					1 RJ-45 port		
1000Base-T (IEEE 802.3ab)				8 RJ-45 ports												
Gigabit stacking									up to 3 HSSDC ports							up to 2 HSSDC ports[1]
100Base-FX (IEEE 802.3u)						24 MT-RJ ports			up to 3 SC ports[6]		4 SC ports					
Per port autosensing 10Base-T (IEEE 802.3) and 100Base-TX (IEEE 802.3u)					24 RJ-45 ports		24 RJ-45 ports			8 RJ-45 ports						
10Base-T (IEEE 802.3)																
10Base-FL (IEEE 802.3j)															4 ST ports	
10Base-2 (IEEE 802.3)																
AUI																
other																
Open transceiver slots	8 mini GBIC	8 mini GBIC														2 Giga-bit
Duplex	Full	Full	Full	Full	Half or full	Full	Half or full	Half or full[4]	Half or full[4]	Half or full	Half or full	Full	Full	Half or full[4]	Half or full	Full
Includes management		Yes														

accessory features (continued)

1 HP Procurve switch 2424m Gigabit stacking module includes 2 open slots that accept the following Gigabit transceivers: J4131A, J4132A, J4116A.

2 HP Procurve switch Gigabit stacking kit includes two transceivers (1 HSSDC-port each) and the interconnecting cable to connect two HP Procurve switch 2424m, 2524, 2512, 2324, 2312 switches.

3 Full duplex only when installed in unmanaged switches.

4 Half or full duplex for 100Base-TX, full duplex for 1000Base-T.

5 HP Procurve 9300 mini-GBIC modules include 8 open slots that accept the following mini-GBICs: J4858A, J4859A.

6 HP Procurve switch gl transceiver module include 3 open slots that accept the following transceivers: J4116A, J4131A, J4132A, J4834A, J4853A.

	redundant power	HP Procurve 9300 redundant power supply (J4147A)	HP Procurve 4000m/8000m redundant power supply (J4119A)	HP Procurve switch gl redundant power supply (J4839A)	**transceivers/mini-GBICs**	HP Advancestack fiber-optic transceiver (J2606A)	HP Advancestack twisted-pair transceiver (J2607A)	HP Advancestack ThinLAN transceiver (J2608A)	HP Advancestack AUI port module (J2609A)	HP Procurve 100-FX SC transceiver (J4853A)	HP Procurve Gigabit-SX transceiver (J4131A)	HP Procurve Gigabit-LX transceiver (J4132A)	HP Procurve switch Gigabit stacking kit (J4116A)[2]	HP Procurve 100/1000-T transceiver (J4834A)	HP Procurve Gigabit-SX-LC mini-GBIC (J4858A)	HP Procurve Gigabit-LX-LC mini-GBIC (J4859A)
technology																
1000Base-SX (IEEE 802.3z)											1 SC port				1 LC port	
1000Base-LX (IEEE 802.3z)												1 SC port				1 LC port
Per port autosensing 100Base-TX (IEEE 802.3u) and 1000Base-T (IEEE 802.3ab)														1 RJ-45 port		
1000Base-T (IEEE 802.3ab)																
Gigabit stacking													See note 2			
100Base-FX (IEEE 802.3u)										1 SC port						
Per port autosensing 10Base-T (IEEE 802.3) and 100Base-TX (IEEE 802.3u)																
10Base-T (IEEE 802.3)							1 RJ-45 port									
10Base-FL (IEEE 802.3j)						1 ST port										
10Base-2 (IEEE 802.3)								1 BNC port								
AUI									1 AUI port							
other																
Open transceiver slots																
Duplex										Half or full[3]	Full	Full	Full	Half or full[4]	Full	Full
Includes management																

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