

# HP 3100 SI Switch Series



## Key features

- Suitable for enterprise networks and MANs
- 8, 16, 24 x 10/100 downlink ports
- Gigabit Ethernet uplinks
- Link aggregation
- Small size with noise-free design

## Product overview

The HP 3100 SI Switch Series is a low-cost Fast Ethernet switch line that enables organizations to do more with less. Stackable and affordable, this series comprises intelligent, network-manageable Layer 2 Fast Ethernet switches that offer high performance, high port density, and easy installation. These switches provide 10/100 Mbps downlinks and Gigabit Ethernet uplinks, and offer link aggregation that expands bandwidth and enhances connection reliability. In enterprise networks, they can serve as access devices for 100 Mbps-to-desktop applications. In metropolitan area networks (MANs) or industry networks, they can connect end users or aggregate low-end switches through 100 Mbps electrical interfaces in the downlink direction, converging at an IP switching center or a large-capacity Layer 3 switch in the uplink direction via a GbE interface or link aggregation.

## Features and benefits

### Quality of service (QoS)

- Powerful QoS feature
  - Supports the following congestion actions: weighted round robin queuing and HQ+WRR
- Broadcast control
  - Allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic

### Management

- Friendly port names
  - Allows assignment of descriptive names to ports
- Remote configuration and management
  - Enable configuration and management through a secure Web browser or a CLI located on a remote device
- Manager and operator privilege levels
  - Provides read-only (operator) and read/write (manager) access on CLI and Web browser management interfaces
- Command authorization
  - Leverages RADIUS to link a custom list of CLI commands to an individual network administrator's login; an audit trail documents activity
- Secure Web GUI
  - Provides a secure, easy-to-use graphical interface for configuring the module via HTTPS
- Multiple configuration files
  - Are easily stored with a flash image
- Complete session logging
  - Provides detailed information for problem identification and resolution
- SNMPv1, v2c, and v3
  - Facilitate centralized discovery, monitoring, and secure management of networking devices
- Remote monitoring (RMON)
  - Uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group
- IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
  - Advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications
- Management VLAN
  - Segments traffic to and from management interfaces, including CLI/Telnet, a Web browser interface, and SNMP
- Troubleshooting
  - Ingress and egress port monitoring enable network problem solving; virtual cable tests provide visibility into cable problems
- Stacking capability
  - Single IP address management for a stack of up to 16 switches

### **Connectivity**

- Auto-MDIX

Provides automatic adjustments for straight-through or crossover cables on all 10/100 and 10/100/1000 ports

- Flow Control

Provides back pressure using standard IEEE 802.3x, reducing congestion in heavy traffic situations

- Gigabit Ethernet uplinks

Are dual-personality ports for either 10/100/1000 or mini-GBIC SFP connectivity for increased connectivity flexibility

### **Performance**

- Gigabit Ethernet interface

Provides a connection to the network that eliminates the network as a bottleneck

### **Resiliency and high availability**

- Separate data and control paths

Increases security and performance

- Spanning Tree/MSTP, RSTP

Provide redundant links while preventing network loops

- Port trunking

Provides higher switch-to-switch throughput and link-level redundancy, with support for standards-based link aggregation (IEEE 802.3ad)

### **Layer 2 switching**

- 8K MAC addresses

Provide access to many Layer 2 devices

- VLAN support and tagging

Supports IEEE 802.1Q with 4,094 simultaneous VLAN IDs

- GARP VLAN Registration Protocol

Allows automatic learning and dynamic assignment of VLANs

- Gigabit Ethernet port aggregation

Allows grouping of ports to increase overall data throughput to a remote device

- IEEE 802.1ad QinQ

Increases the scalability of an Ethernet network by providing a hierarchical structure; connects multiple LANs on a high-speed campus or metro network

## Security

- IEEE 802.1X

Industry-standard method of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS Server

- MAC-based authentication

Client is authenticated with the RADIUS Server based on the client's MAC address

- Secure management access

Delivers secure encryption of all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3

- Secure FTP

Allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file

- Guest VLAN

Provides a browser-based environment to authenticated clients that is similar to IEEE 802.1X

- Port security

Allows access only to specified MAC addresses, which can be learned or specified by the administrator

- Port isolation

Secures and adds privacy, and prevents malicious attackers from obtaining user information

- STP BPDU port protection

Blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks

- STP root guard

Protects the root bridge from malicious attacks or configuration mistakes

- RADIUS/HWTACACS

Eases switch management security administration by using a password authentication server

- HTTPS management

Provides secure Web management

## Convergence

- IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

Facilitates easy mapping using network management applications with LLDP-automated device discovery protocol

- LLDP-MED

Is a standard extension that automatically configures network devices, including LLDP-capable IP phones

- IP multicast snooping (data-driven IGMP)

Prevents flooding of IP multicast traffic

- Multicast VLAN

Allows multiple VLANs to receive the same multicast traffic, reducing network bandwidth demand by helping eliminate multiple streams to each VLAN

### **Flexibility**

- Fanless design

Enables quiet operation for deployment in open spaces (selected models)

### **Additional information**

- Green initiative support

Provides support for RoHS and WEEE regulations

- Green IT and power

Uses the latest advances in silicon development and shuts off unused ports to improve power efficiency

### **Warranty and support**

- Limited lifetime warranty

Advance hardware replacement with next-business-day delivery (available in most countries). See [hp.com/networking/warrantysummary](http://hp.com/networking/warrantysummary) for duration details

- Electronic and telephone support

Limited electronic and business-hours telephone support is available from HP for the entire warranty period; to reach our support centers, refer to [hp.com/networking/contact-support](http://hp.com/networking/contact-support); for details on the duration of support provided with your product purchase, refer to [hp.com/networking/warrantysummary](http://hp.com/networking/warrantysummary)

- Software releases

To find software for your product, refer to [hp.com/networking/support](http://hp.com/networking/support); for details on the software releases available with your product purchase, refer to [hp.com/networking/warrantysummary](http://hp.com/networking/warrantysummary)

## HP 3100 SI Switch Series

### Specifications



	HP 3100-8 v2 SI Switch (JG221A)	HP 3100-16 v2 SI Switch (JG222A)	HP 3100-24 v2 SI Switch (JG223A)
<b>I/O ports and slots</b>	1 dual-personality 10/100/1000 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 8 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full	2 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 16 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full	2 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 24 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full
<b>Additional ports and slots</b>	1 RJ-45 serial console port	1 RJ-45 serial console port	1 RJ-45 serial console port
<b>Physical characteristics</b>			
Dimensions	9.06(w) x 6.3(d) x 1.72(h) in (23.01 x 16 x 4.37 cm) (1U height)	14.17(w) x 6.3(d) x 1.72(h) in (35.99 x 16 x 4.37 cm) (1U height)	17.32(w) x 6.3(d) x 1.72(h) in (43.99 x 16 x 4.37 cm) (1U height)
Weight	6.61 lb (3 kg)	6.61 lb (3 kg)	6.61 lb (3 kg)
<b>Memory and processor</b>	128 MB SDRAM, 16 MB flash; packet buffer size: 384 KB	128 MB SDRAM, 16 MB flash; packet buffer size: 384 KB	128 MB SDRAM, 16 MB flash; packet buffer size: 384 KB
<b>Mounting and enclosure</b>	Requires angle mounting set if rack mounted (not included)	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (requires HP 3100/4210-16 Rack Mount Kit [JD321A]).	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
<b>Performance</b>			
100 Mb Latency	< 6 $\mu$ s	< 6 $\mu$ s	< 6 $\mu$ s
1000 Mb Latency	< 5 $\mu$ s	< 5 $\mu$ s	< 5 $\mu$ s
Throughput	2.7 Mpps	5.4 Mpps	6.6 Mpps
Routing/Switching capacity	3.6 Gbps	7.2 Gbps	8.8 Gbps
<b>Environment</b>			
Operating temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Operating relative humidity	10% to 90%, noncondensing	10% to 90%, noncondensing	10% to 90%, noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing	5% to 95%, noncondensing
<b>Electrical characteristics</b>			
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Maximum heat dissipation	31 BTU/hr (32.71 kJ/hr)	41 BTU/hr (43.26 kJ/hr)	44 BTU/hr (46.42 kJ/hr)
AC voltage	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC
Maximum power rating	9 W	12 W	13 W
<b>Notes</b>	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.

	<b>HP 3100-8 v2 SI Switch (JG221A)</b>	<b>HP 3100-16 v2 SI Switch (JG222A)</b>	<b>HP 3100-24 v2 SI Switch (JG223A)</b>
<b>Safety</b>	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance
<b>Emissions</b>	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A
<b>Management</b>	IMC—Intelligent Management Center; command-line interface; Web browser; SNMP Manager	IMC—Intelligent Management Center; command-line interface; Web browser; SNMP Manager	IMC—Intelligent Management Center; command-line interface; Web browser; SNMP Manager
<b>Services</b>	Refer to the HP website at <a href="http://hp.com/networking/services">hp.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	Refer to the HP website at <a href="http://hp.com/networking/services">hp.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	Refer to the HP website at <a href="http://hp.com/networking/services">hp.com/networking/services</a> for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
<b>Standards and Protocols</b> (applies to all products in series)			
<b>General protocols</b>	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 802.3ab 1000BASE-T	IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3i 10BASE-T IEEE 802.3u 100BASE-X IEEE 802.3x Flow Control IEEE 802.3z 1000BASE-X RFC 768 UDP	RFC 791 IP RFC 792 ICMP RFC 793 TCP RFC 826 ARP RFC 854 TELNET RFC 951 BOOTP
<b>MIBs</b>	IEEE 8021-PAE-MIB IEEE 8023-LAG-MIB RFC 1213 MIB II RFC 1493 Bridge MIB RFC 2011 SNMPv2 MIB for IP RFC 2013 SNMPv2 MIB for UDP RFC 2233 Interface MIB RFC 2571 SNMP Framework MIB RFC 2572 SNMP-MPD MIB	RFC 2573 SNMP-Notification MIB RFC 2573 SNMP-Target MIB RFC 2618 RADIUS Authentication Client MIB RFC 2620 RADIUS Accounting Client MIB RFC 2665 Ethernet-Like-MIB RFC 2674 802.1p and IEEE 802.1Q Bridge MIB RFC 2819 RMON MIB	RFC 2925 Ping MIB RFC 3414 SNMP-User based-SM MIB RFC 3415 SNMP-View based-ACM MIB RFC 3418 MIB for SNMPv3 RFC 3826 AES for SNMP's USM MIB RFC 4113 UDP MIB LLDP-EXT-DOT1-MIB LLDP-EXT-DOT3-MIB LLDP-MIB
<b>Network management</b>	IEEE 802.1AB Link Layer Discovery Protocol (LLDP) RFC 1157 SNMPv1	RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)	ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED) SNMPv1/v2c/v3

## HP 3100 SI Switch Series accessories

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**HP 3100-8 v2 SI Switch (JG221A)** HP 3100/4210-9 Rack Mount Kit (JD322A)

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**HP 3100-16 v2 SI Switch (JG222A)** HP 3100/4210-16 Rack Mount Kit (JD321A)

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