

Overview

HPE FlexNetwork 3100 SI Switch Series

Models

HPE 3100 8 v2 SI Switch	JG221A
HPE 3100 16 v2 SI Switch	JG222A
HPE 3100 24 v2 SI Switch	JG223A

Key features

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

Product overview

The HPE FlexNetwork 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**
allow assignment of descriptive names to ports
- **Remote configuration and management**
is available through a secure Web browser or a CLI
- **Manager and operator privilege levels**
enable 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**
can be stored to the flash image

Overview

- **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**
automatically adjusts 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**
increase security and performance
- **Spanning Tree/MSTP, RSTP**
provides 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**
support 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**

Overview

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**
securely encrypts 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**
similar to IEEE 802.1X, it provides a browser-based environment to authenticated clients
- **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)**
is an automated device discovery protocol that provides easy mapping of network management applications
- **LLDP-MED**
is a standard extension that automatically configures network devices, including LLDP-capable IP phones
- **IP multicast snooping (data-driven IGMP)**
automatically prevents flooding of IP multicast traffic
- **Multicast VLAN**
allows multiple VLANs to receive the same multicast traffic, reducing network bandwidth demand by eliminating 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

Overview

Warranty and support

- **Limited Lifetime Warranty**

See <http://www.hpe.com/networking/warrantysummary> for warranty and support information included with your product purchase.

- **Software releases**

to find software for your product, refer to <http://www.hpe.com/networking/support>; for details on the software releases available with your product purchase, refer to <http://www.hpe.com/networking/warrantysummary>

Configuration

Build To Order:

BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or Rack-Shippable solution.

HPE 3100 8 v2 SI Switch

- 1 dual-personality 10/100/1000 ports/ SFP 1000 Mbps ports
- min=0 \ max=1 SFP Transceiver
- 8 autosensing 10/100 ports
- 1U - Height

JG221A
See Configuration
NOTE:1, 2

No Power Cord

- No Localized Power Cord Selected

JG221A#AC3

HPE 3100 16 v2 SI Switch

- 2 dual-personality 10/100/1000 ports/ SFP 1000 Mbps ports
- min=0 \ max=2 SFP Transceivers
- 16 autosensing 10/100 ports
- 1U - Height

JG222A
See Configuration
NOTE:1, 2

HPE 3100 24 v2 SI Switch

- 2 dual-personality 10/100/1000 ports/ SFP 1000 Mbps ports
- min=0 \ max=2 SFP Transceivers
- 24 autosensing 10/100 ports
- 1U - Height

JG223A
See Configuration
NOTE:1, 2

No Power Cord

- No Localized Power Cord Selected

JG223A#AC3

Configuration Rules:

Note 1 The following Transceivers install into this switch:

HPE X115 100M SFP LC FX Transceiver	JD102B
HPE X110 100M SFP LC LX Transceiver	JD120B
HPE X120 1G SFP LC BX 10-U Transceiver	JD098B
HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X120 1G SFP LC SX Transceiver	JD118B
HPE X120 1G SFP LC LX Transceiver	JD119B
HPE X115 100M SFP LC BX 10-U Transceiver	JD100A
HPE X115 100M SFP LC BX 10-D Transceiver	JD101A

Note 2 Localization required. (See Localization Menu for list.)

Transceivers

SFP Transceivers

HPE X115 100M SFP LC FX Transceiver	JD102B
HPE X110 100M SFP LC LX Transceiver	JD120B
HPE X120 1G SFP LC BX 10-U Transceiver	JD098B

Configuration

HPE X120 1G SFP LC BX 10-D Transceiver	JD099B
HPE X120 1G SFP LC SX Transceiver	JD118B
HPE X120 1G SFP LC LX Transceiver	JD119B
HPE X115 100M SFP LC BX 10-U Transceiver	JD100A
HPE X115 100M SFP LC BX 10-D Transceiver	JD101A

Switch Options

Rack Mount Kit

System (std 0 // max 2) User Selection (min 2 // max 2) per switch

HPE 3100/4210 16 Rackmount Kit	JD321A See Configuration NOTE:1
HPE 3100/4210 9 Rackmount Kit	JD322A See Configuration NOTE:2

Configuration Rules:

Note 1 This kit is only supported on the JG222A.

Note 2 This kit is only supported on the JG221A.

Technical Specifications

HPE 3100 8 v2 SI Switch (JG221A)

Ports	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 1 RJ-45 serial console port	
Physical characteristics	Dimensions	9.06(w) x 6.3(d) x 1.72(h) in (23.01 x 16 x 4.37 cm) (1U height)
	Weight	6.61 lb (3 kg)
Memory and processor	128 MB SDRAM, 16 MB flash; packet buffer size: 384 KB	
Mounting	Requires angle mounting set if rack mounted (not included)	
Performance	100 Mb Latency	< 6 μ s
	1000 Mb Latency	< 5 μ s
	Throughput	up to 2.7 million pps
	Routing/Switching capacity	3.6 Gbps
Environment	Operating temperature	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 90%, non-condensing
	Non-operating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Non-operating/Storage relative humidity	5% to 95%, non-condensing
Electrical characteristics	Maximum heat dissipation	31 BTU/hr (32.71 kJ/hr)
	Voltage	100 - 240 VAC, rated (depending on power supply chosen)
	Maximum power rating	9 W
	Frequency	50/60 Hz
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	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	
Emissions	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 CISPR22 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	
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	
Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

Technical Specifications

HPE 3100 16 v2 SI Switch (JG222A)

Ports	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 1 RJ-45 serial console port	
Physical characteristics	Dimensions	14.17(w) x 6.3(d) x 1.72(h) in (35.99 x 16 x 4.37 cm) (1U height)
	Weight	6.61 lb (3 kg)
Memory and processor	128 MB SDRAM, 16 MB flash; packet buffer size: 384 KB	
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)	
Performance	100 Mb Latency	< 6 μ s
	1000 Mb Latency	< 5 μ s
	Throughput	5.4 million pps
	Routing/Switching capacity	7.2 Gbps
Environment	Operating temperature	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	10% to 90%, non-condensing
	Non-operating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Non-operating/Storage relative humidity	5% to 95%, non-condensing
Electrical characteristics	Maximum heat dissipation	41 BTU/hr (43.26 kJ/hr)
	Voltage	100 - 240 VAC, rated (depending on power supply chosen)
	Maximum power rating	12 W
	Frequency	50/60 Hz
	Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	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	
Emissions	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 CISPR22 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	
Management Services	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	

HPE 3100 24 v2 SI Switch (JG223A)

Ports	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	
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Technical Specifications

	24 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 1 RJ-45 serial console port
Physical characteristics	<p>Dimensions 17.32(w) x 6.3(d) x 1.72(h) in (43.99 x 16 x 4.37 cm) (1U height)</p> <p>Weight 6.61 lb (3 kg)</p>
Memory and processor	128 MB SDRAM, 16 MB flash; packet buffer size: 384 KB
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
Performance	<p>100 Mb Latency < 6 μs</p> <p>1000 Mb Latency < 5 μs</p> <p>Throughput 6.6 million pps</p> <p>Routing/Switching capacity 8.8 Gbps</p>
Environment	<p>Operating temperature 32°F to 113°F (0°C to 45°C)</p> <p>Operating relative humidity 10% to 90%, non-condensing</p> <p>Non-operating/Storage temperature -40°F to 158°F (-40°C to 70°C)</p> <p>Non-operating/Storage relative humidity 5% to 95%, non-condensing</p>
Electrical characteristics	<p>Maximum heat dissipation 44 BTU/hr (46.42 kJ/hr)</p> <p>Voltage 100 - 240 VAC, rated (depending on power supply chosen)</p> <p>Maximum power rating 13 W</p> <p>Frequency 50/60 Hz</p> <p>Notes Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.</p>
Safety	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
Emissions	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 CISPR22 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
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager
Services	Refer to the Hewlett Packard Enterprise website at http://www.hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.
Standards and protocols	<p>General protocols</p> <p>IEEE 802.1D MAC Bridges</p> <p>IEEE 802.1p Priority</p> <p>IEEE 802.1Q VLANs</p> <p>IEEE 802.1s Multiple Spanning Trees</p> <p>IEEE 802.1w Rapid Reconfiguration of Spanning Tree</p> <p>IEEE 802.3ab 1000BASE-T</p>

(Applies to all products in series)

Technical Specifications

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

MIBs

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

Network management

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

Accessory Product Details

HPE FlexNetwork 3100 SI Switch Series accessories	HPE 3100 8 v2 SI Switch (JG221A)	
	HPE 3100/4210 9 Rackmount Kit	JD322A
	HPE 3100 16 v2 SI Switch (JG222A)	
	HPE 3100/4210 16 Rackmount Kit	JD321A

Summary of Changes

Date	Version History	Action	Description of Change:
30-Sep-2016	From Version 10 to 11	Changed	Document name updated.
01-August-2016	From Version 9 to 10	Changed	Adding #AC3 Option on Configuration section
27-May-2016	From Version 8 to 9	Changed	Product description updated.
01-Dec-2015	From Version 7 to 8	Changed	Overview and Technical Specifications updated
01-Dec-2014	From Version 6 to 7	Changed	Warranty and support updated
05-Oct-2012	From Version 5 to 6	Changed	Features and benefits was revised as were the listing of models (removed 3), and the weight and dimensions in each model specification.
15-Mar-2012	From Version 4 to 5	Changed	Features and benefits was revised and new Models and Accessories were added.
07-Nov-2011	From Version 3 to 4	Changed	The product name was updated throughout the document.
15-Apr-2011	From Version 2 to 3	Removed	Removed the remaining mentions of ProCurve from the QS.
07-Mar-2011	From Version 1 to 2	Changed	Accessories product descriptions and notes and services in Models were revised.



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