

# HP 3100 EI Switch Series



## Key features

- Comprehensive security control policies
- High reliability with improved backup redundancy
- Simplified deployment and ease of use
- Highly expandable and highly reliable
- Diversified management modes and maintenance

## Product overview

HP 3100 EI series switches are Layer 2 Ethernet switches designed for enterprise networks demanding high security and intelligence. They provide 10/100 Mbps downlink and 1000 Mbps uplink Ethernet ports, and serve as access devices for 100 Mbps-to-desktop applications in enterprise networks. In metropolitan area networks or various industry networks, they connect end users or aggregate client devices with 10/100 Mbps connections, converging at a higher-capacity switch with 1000 Mbps interfaces. Features include advanced Quality of Service (QoS), rate limiting, QinQ (virtual LAN [VLAN]/VPN), SSHv2, Multicast VLAN Registration (MVR), Virtual Cable Tester (VCT), HGMP V2, GARP VLAN Registration Protocol (GVRP), access control list (ACL), media access control (MAC)-IP-port binding, Endpoint Admission Defense, voice and protocol-based VLAN, Internet Group Management Protocol snooping, and Power over Ethernet (PoE).

## Features and benefits

### Quality of Service (QoS)

- Broadcast control
  - Allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic
- Advanced classifier-based QoS
  - Classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a per-port or per-VLAN basis
- Powerful QoS feature
  - Supports the following congestion actions: strict priority queuing (SP), weighted round robin (WRR) queuing, and SP+WRR
- Traffic policing
  - Supports Committed Access Rate (CAR) and line rate

## Management

- Friendly port names
  - Allows assignment of descriptive names to ports
- Remote configuration and management
  - Enables 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 HWTACACS to link a custom list of CLI commands to an individual network administrator's login; also provides an audit trail
- Secure Web GUI
  - Provides a secure, easy-to-use graphical interface for configuring the module via HTTPS
- Multiple configuration files
  - Stores easily to the 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
- Local and Remote Intelligent Mirroring
  - Mirror traffic from a switch port to a local or remote switch port anywhere on the network; mirror ACL-selected traffic to a local switch port
- Device Link Detection Protocol (DLDP)
  - Monitors a cable between two switches and shuts down the ports on both ends if the cable is broken, preventing network problems such as loop
- 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**

- **NEW** IPv6 (on v2 products)
  - Telnet v6
    - To allow IPv6 management
  - DNSv6 Client
    - For IPv6 host management
  - SNMPv6
    - For IPv6 switch management
  - DHCPv6 Client
    - For automatic IPv6 address configuration of a switch
- 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
- IEEE 802.3af Power over Ethernet (PoE)
  - Provides up to 15.4 W per port to IEEE 802.3af-compliant PoE-powered devices such as IP phones, wireless access points, and security cameras
- Ethernet operations, administration, and maintenance (OAM)
  - Detects data link layer problems that occurred in the “last mile” using the IEEE 802.3ah OAM standard; monitors the status of the link between two devices

### **Performance**

- Hardware-based wire speed access control lists (ACLs)
  - Help provide high levels of security and ease of administration without impacting network performance with a feature-rich TCAM-based ACL implementation
- 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
- External redundant power supply
  - Provides high reliability
- Smart link
  - Allows 50 ms failover between links
- 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); supports up to 13 trunks, each with up to 8 links (ports) per trunk
- Device Link Detection Protocol (DLDP)
  - Monitors link connectivity and shuts down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks

### Layer 2 switching

- **NEW** PVST+ on v2 products
  - Provides greater interoperability
- 8k MAC addresses
  - Provide access to many Layer 2 devices
- VLAN support and tagging
  - Supports the IEEE 802.1Q, with 4,094 simultaneous VLAN IDs; supports port-based VLANs, MAC-based VLANs, and protocol-based VLANs
- GARP VLAN Registration Protocol
  - Allows automatic learning and dynamic assignment of VLANs
- IEEE 802.1ad QinQ and selective QinQ
  - Increase the scalability of an Ethernet network by providing a hierarchical structure; connect multiple LANs on a high-speed campus or metro network
- Gigabit Ethernet port aggregation
  - Allows grouping of ports to increase overall data throughput to a remote device
- Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) protocol snooping
  - Controls and manages the flooding of multicast packets in a Layer 2 network

### Layer 3 services

- Address Resolution Protocol (ARP)
  - Determines the MAC address of another IP host in the same subnet
- Dynamic Host Configuration Protocol (DHCP)
  - Simplifies the management of large IP networks and supports client and server
- Loopback interface address
  - Defines an address in Routing Information Protocol (RIP) and Open Standard Path First (OSPF), improving diagnostic capability

### Security

- Access control lists (ACLs)
  - Provide IP Layer 2 to Layer 4 traffic filtering; support global ACL, VLAN ACL, and IPv6 ACL
- Multiple user authentication methods
  - IEEE 802.1X
    - Uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards
  - Web-based authentication
    - Provides a browser-based environment, similar to IEEE 802.1X, to authenticate clients that do not support the IEEE 802.1X supplicant
  - MAC-based authentication
    - Authenticates the client with the RADIUS server based on the client's MAC address
- Identity-driven security and access control
  - Per-user ACLs
    - Permits or denies user access to specific network resources based on user identity and time of day, allowing multiple types of users on the same network to access specific network services without risking network security or allowing unauthorized access to sensitive data
  - Automatic VLAN assignment
    - Automatically assigns users to the appropriate VLAN based on their identities

- 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
- Endpoint Admission Defense (EAD)
  - Provides security policies to users accessing a network
- 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
- DHCP protection
  - Blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- Dynamic ARP protection
  - Blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- IP Source Guard
  - Filters packets on a per-port basis, which prevents illegal packets from being forwarded
- RADIUS/HWTACACS
  - Eases switch management security administration by using a password authentication server

### **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
- LLDP-CDP compatibility
  - Receives and recognizes CDP packets from Cisco's IP phones for seamless interoperation
- IEEE 802.3af Power over Ethernet
  - Provides up to 15.4 W per port to PoE-powered devices such as IP phones, wireless access points, and video cameras
- PoE allocations
  - Supports multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user-specified) to allocate PoE power for more efficient energy savings
- Voice VLAN
  - Automatically assigns VLAN and priority for IP phones, simplifying network configuration and maintenance

- Multicast VLAN

Allows multiple VLANs to receive the same IPv4 or IPv6 multicast traffic, lessening network bandwidth demand by reducing or eliminating multiple streams to each VLAN

- IGMP/MLD snooping

Effectively controls and manages the flooding of multicast packets in a Layer 2 network

### **Device support**

- Cisco pre-standard PoE support

Detects and provides power to Cisco's pre-standard PoE devices such as wireless LAN access points and IP phones

### **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 2.0

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 (for Limited Lifetime Warranty 2.0)

Limited 24x7 telephone support is available from HP for the first 3 years; 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 EI Switch Series

### Specifications



|   | HP 3100-8 V2 EI Switch (JD318B)   | HP 3100-16 V2 EI Switch (JD319B)  | HP 3100-24 V2 EI Switch (JD320B)  |
|---|---|---|---|
| <b>I/O ports and slots</b>              | <p>8 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full</p> <p>1 dual-personality port; auto-sensing 10/100/1000BASE-T or SFP</p> <p>1 RJ45 serial console port</p> | <p>16 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full</p> <p>2 dual-personality ports; auto-sensing 10/100/1000BASE-T or SFP</p> <p>1 RJ45 serial console port</p> | <p>24 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full</p> <p>2 dual-personality ports; auto-sensing 10/100/1000BASE-T or SFP</p> <p>1 RJ45 serial console port</p> |
| <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                                  | 3.97 lb (1.8 kg)  | 5.51 lb (2.5 kg)  | 7.72 lb (3.5 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)  | Requires angle mounting set if rack mounted (not included)  | Mounts in an EIA-standard 19 in. Telco rack or equipment cabinet (hardware included)  |
| <b>Performance</b>                      |   |   |   |
| 100 Mb Latency                          | < 6 μs (64-byte packets)  | < 6 μs (64-byte packets)  | < 6 μs (64-byte packets)  |
| 1000 Mb Latency                         | < 5 μs (64-byte packets)  | < 5 μs (64-byte packets)  | < 5 μs (64-byte packets)  |
| Throughput                              | up to 2.6 million pps   | up to 5.3 million pps   | up to 6.5 million pps   |
| Routing/Switching capacity              | 3.6 Gb/s  | 7.2 Gb/s  | 8.8 Gb/s  |
| Routing table size                      | 16 entries (IPv4)   | 16 entries (IPv4)   | 16 entries (IPv4)   |
| MAC address table size                  | 8192 entries  | 8192 entries  | 8192 entries  |
| <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%, non-condensing  | 10% to 90%, non-condensing  | 10% to 90%, non-condensing  |
| Non-operating/Storage temperature       | -40°F to 158°F (-40°C to 70°C)  | -40°F to 158°F (-40°C to 70°C)  | -40°F to 158°F (-40°C to 70°C)  |
| Non-operating/Storage relative humidity | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   |
| Acoustic                                | N/A (fanless)   | N/A (fanless)   | N/A (fanless)   |

## HP 3100 EI Switch Series (continued)

### Specifications (continued)

|                                   | HP 3100-8 V2 EI Switch (JD318B)   | HP 3100-16 V2 EI Switch (JD319B)  | HP 3100-24 V2 EI Switch (JD320B)  |
|-----------------------------------|---|---|---|
| <b>Electrical characteristics</b> |   |   |   |
| Frequency                         | 50/60 Hz  | 50/60 Hz  | 50/60 Hz  |
| Maximum heat dissipation          | 31 BTU/hr   | 41 BTU/hr   | 44 BTU/hr   |
| AC voltage                        | 100–240 VAC   | 100–240 VAC   | 100–240 VAC   |
| Maximum power rating              | 9 W   | 12 W  | 13 W  |
|                                   | <b>Notes</b><br>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>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; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; 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; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; RoHS Compliance   | UL 60950; NOM-019-SCFI Mexico; EN 60950: 2000, ZB and ZC Deviations; IEC 60950: 1999, Corr Feb 2000, all national deviations; AS/NZS 60950: 2000 Australia, Russian GOST Safety Approval  |
| <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.   |



## HP 3100 EI Switch Series

### Specifications (continued)



|   | <b>HP 3100-24-PoE v2 EI Switch (JD313B)</b>   | <b>HP 3100-48 V2 Switch (JG315B)</b>  |
|---|---|---|
| <b>I/O ports and slots</b>              | <p>24 autosensing 10/100 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3af PoE); Duplex: half or full</p> <p>2 dual-personality ports; auto-sensing 10/100/1000BASE-T or SFP</p> <p>1 RJ45 serial console port</p> | <p>48 RJ45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full</p> <p>2 SFP dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)</p> <p>4 SFP fixed Gigabit Ethernet SFP ports</p> <p>1 RJ45 serial console port</p> |
| <b>Physical characteristics</b>         |   |   |
| Dimensions                              | 17.32(w) x 16.54(d) x 1.72(h) in. (44 x 42 x 4.36 cm) (1U height)   | 17.32(w) x 10.24(d) x 1.72(h) in. (43.99 x 26.01 x 4.37 cm) (1U height)   |
| Weight                                  | 14.33 lb (6.5 kg)   | 7.72 lb (3.5 kg)  |
| <b>Memory and processor</b>             | 128 MB SDRAM, 16 MB flash; packet buffer size: 384 KB   | 256 MB SDRAM, 128 MB flash; packet buffer size: 4 MB  |
| <b>Mounting and enclosure</b>           | Mounts in an EIA-standard 19 in. Telco rack or equipment cabinet (hardware included)  | Mounts in an EIA-standard 19 in. Telco rack or equipment cabinet (hardware included)  |
| <b>Performance</b>                      |   |   |
| 100 Mb Latency                          | < 6 $\mu$ s (64-byte packets)   | < 6 $\mu$ s (64-byte packets)   |
| 1000 Mb Latency                         | < 5 $\mu$ s (64-byte packets)   | < 5 $\mu$ s (64-byte packets)   |
| Throughput                              | up to 6.5 million pps   | 13.1 million pps  |
| Routing/Switching capacity              | 8.8 Gb/s  | 17.6 Gb/s   |
| Routing table size                      |   | 32 entries (IPv4)   |
| MAC address table size                  | 8192 entries  | 32000 entries   |
| <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)   |
| Operating relative humidity             | 10% to 90%, non-condensing  | 10% to 90%, non-condensing  |
| Non-operating/Storage temperature       | -40°F to 158°F (-40°C to 70°C)  | -40°F to 158°F (-40°C to 70°C)  |
| Non-operating/Storage relative humidity | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   |
| Acoustic                                | Low-speed fan: 42.2 dB, High-speed fan: 51.5 dB   | Low-speed fan: 43.2 dB, High-speed fan: 50.0 dB   |

## HP 3100 EI Switch Series (continued)

### Specifications (continued)

|                                   | HP 3100-24-PoE v2 EI Switch (JD313B)   | HP 3100-48 V2 Switch (JG315B)   |
|-----------------------------------|--|---|
| <b>Electrical characteristics</b> |  |   |
| Frequency                         | 50/60 Hz   | 50/60 Hz  |
| Maximum heat dissipation          | 1586 BTU/hr (1673.23 kJ/hr)  | 140 BTU/hr  |
| AC voltage                        | 100–240 VAC  | 100–240 VAC   |
| Maximum power rating              | 465 W  | 41 W  |
| PoE power                         | 370 W  |   |
|                                   | <p><b>Notes</b></p> <p>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> <p>PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS).</p> <p>With DC input, the maximum power is 400 W; PoE power is 370 W.</p> | <p>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>  |
| <b>Safety</b>                     | UL 60950-1; CAN/CSA 22.2 No. 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; Anatel; ULAR; GOST; EN 60950-1/A11; FDA 21 CFR Subchapter J; NOM; 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 |
| <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  |
| <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.   |

## HP 3100 EI Switch Series (continued)

### Specifications (continued)

#### Standards and Protocols

(applies to all products in series)

|                           |   |  |   |
|---------------------------|---|--|---|
| <b>Device management</b>  | RFC 1157 SNMPv1/v2c<br>RFC 1901-1907 SNMPv2c, SMIv2 and Revised MIB-II<br>RFC 2573 (SNMPv3 Applications)<br>RFC 2578-2580 SMIv2   | RFC 2819 (RMON groups Alarm, Event, History and Statistics only)<br>RFC 3410 (Management Framework)<br>RFC 3416 (SNMP Protocol Operations v2)<br>RFC 3417 (SNMP Transport Mappings)  | HTML and telnet management<br>Multiple Configuration Files<br>SNMP v3 and RMON RFC support<br>SSHv1/SSHv2 Secure Shell  |
| <b>General protocols</b>  | IEEE 802.1ad Q-in-Q<br>IEEE 802.1ag Service Layer OAM<br>IEEE 802.1D MAC Bridges<br>IEEE 802.1p Priority<br>IEEE 802.1Q VLANs<br>IEEE 802.1s (MSTP)<br>IEEE 802.1w Rapid Reconfiguration of Spanning Tree<br>IEEE 802.1X PAE  | IEEE 802.3ad Link Aggregation Control Protocol (LACP)<br>IEEE 802.3af Power over Ethernet<br>IEEE 802.3i 10BASE-T<br>IEEE 802.3u 100BASE-X<br>IEEE 802.3x Flow Control<br>IEEE 802.3z 1000BASE-X<br>RFC 768 UDP<br>RFC 783 TFTP Protocol (revision 2)  | RFC 791 IP<br>RFC 792 ICMP<br>RFC 793 TCP<br>RFC 826 ARP<br>RFC 854 TELNET<br>RFC 951 BOOTP<br>RFC 959 File Transfer Protocol (FTP)   |
| <b>IPv6</b>               | RFC 1881 IPv6 Address Allocation Management (v2 models only)<br>RFC 1887 IPv6 Unicast Address Allocation Architecture (v2 models only)<br>RFC 1981 IPv6 Path MTU Discovery (v2 models only)<br>RFC 2080 RIPng for IPv6 (v2 models only)<br>RFC 2373 IPv6 Addressing Architecture (v2 models only)<br>RFC 2375 IPv6 Multicast Address Assignments (v2 models only)<br>RFC 2460 IPv6 Specification (v2 models only)<br>RFC 2461 IPv6 Neighbor Discovery (v2 models only)<br>RFC 2462 IPv6 Stateless Address Auto-configuration (v2 models only)<br>RFC 2463 ICMPv6 (v2 models only) | RFC 2464 Transmission of IPv6 over Ethernet Networks (v2 models only)<br>RFC 2475 IPv6 DiffServ Architecture (v2 models only)<br>RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers (v2 models only)<br>RFC 2925 Definitions of Managed Objects for Remote<br>RFC 2925 Remote Operations MIB (Ping only) (v2 models only) Ping, Traceroute, and Lookup Operations (Ping only) (v2 models only)<br>RFC 3056 Connection of IPv6 Domains via IPv4 Clouds (v2 models only)<br>RFC 3162 RADIUS and IPv6 (v2 models only)<br>RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses (v2 models only)<br>RFC 2464 Transmission of IPv6 over Ethernet Networks (v2 models only) | RFC 2475 IPv6 DiffServ Architecture (v2 models only)<br>RFC 3513 IPv6 Addressing Architecture (v2 models only)<br>RFC 3542 Advanced Sockets API for IPv6 (v2 models only)<br>RFC 3587 IPv6 Global Unicast Address Format (v2 models only)<br>RFC 3596 DNS Extension for IPv6 (v2 models only)<br>RFC 4113 MIB for UDP (v2 models only)<br>RFC 4291 IP Version 6 Addressing Architecture<br>RFC 4443 ICMPv6 (v2 models only)<br>RFC 4861 Neighbor Discovery for IPv6<br>RFC 4862 IPv6 Stateless Address Auto-configuration<br>RFC 5095 Deprecation of Type 0 Routing Headers in IPv6 |
| <b>MIBs</b>               | IEEE 8021-PAE-MIB<br>IEEE 8023-LAG-MIB<br>RFC 1213 MIB II<br>RFC 1493 Bridge MIB<br>RFC 2011 SNMPv2 MIB for IP<br>RFC 2013 SNMPv2 MIB for UDP<br>RFC 2233 Interface MIB<br>RFC 2273 SNMP-NOTIFICATION-MIB   | RFC 2571 SNMP Framework MIB<br>RFC 2572 SNMP-MPD MIB<br>RFC 2573 SNMP-Notification MIB<br>RFC 2618 RADIUS Authentication Client MIB<br>RFC 2620 RADIUS Accounting Client MIB<br>RFC 2665 Ethernet-Like-MIB<br>RFC 2674 802.1p and IEEE 802.1Q Bridge MIB<br>RFC 2819 RMON MIB  | RFC 2925 Ping MIB<br>RFC 3414 SNMP-User based-SM MIB<br>RFC 3418 MIB for SNMPv3<br>RFC 3621 Power Ethernet MIB<br>RFC 3826 AES for SNMP's USM MIB<br>RFC 4133 Entity MIB (Version 3)<br>LLDP-EXT-DOT1-MIB<br>LLDP-EXT-DOT3-MIB<br>LLDP-MIB  |
| <b>Network management</b> | IEEE 802.1AB Link Layer Discovery Protocol (LLDP)   | RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)  | ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)<br>SNMPv1/v2c/v3   |
| <b>QoS/CoS</b>            | IEEE 802.1P (CoS)   | RFC 2474 DSCP DiffServ   |   |

## HP 3100 EI Switch Series accessories

(applies to all products in series)

### Transceivers

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

### Cables

HP 3600 Switch SFP Stacking Kit (JD324B)  
 HP 0.5m Multimode OM3 LC/LC Optical Cable (AJ833A)  
 HP 1m Multimode OM3 LC/LC Optical Cable (AJ834A)  
 HP 2m Multimode OM3 LC/LC Optical Cable (AJ835A)  
 HP 5m Multimode OM3 LC/LC Optical Cable (AJ836A)  
 HP 15m Multimode OM3 LC/LC Optical Cable (AJ837A)  
 HP 30m Multimode OM3 LC/LC Optical Cable (AJ838A)  
 HP 50m Multimode OM3 LC/LC Optical Cable (AJ839A)  
 HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable (QK732A)  
 HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable (QK733A)  
 HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable (QK734A)  
 HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable (QK735A)  
 HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable (QK736A)  
 HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable (QK737A)

### Power supply

HP RPS1600 Redundant Power System (JG136A)  
 HP RPS1600 1600W AC Power Supply (JG137A)

### Mounting kit

HP 3100/4210-16 Rack Mount Kit (JD321A)  
 HP 3100/4210-9 Rack Mount Kit (JD322A)  
 HP 3100/4210-16/-8 PoE Rack Mount Kit (JD323A)

### Power cords

HP X290 500 C 1m RPS Cable (JD184A)  
 HP X290 1000 A JD5 2m RPS Cable (JD187A)

## HP 3100 EI Switch model-specific accessories

### HP 3100-24-PoE v2 EI Switch (JD313B)

HP X110 100M SFP LC FX Transceiver (JD102B)  
 HP X110 100M SFP LC LX Transceiver (JD120B)

### HP 3100-48 V2 Switch (JG315B)

HP X125 1G SFP LC LH40 1310nm Transceiver (JD061A)  
 HP X120 1G SFP LC LH40 1550nm Transceiver (JD062A)  
 HP X125 1G SFP LC LH70 Transceiver (JD063B)  
 HP X120 1G SFP RJ45 T Transceiver (JD089B)  
 HP X120 1G SFP LC SX Transceiver (JD118B)  
 HP X120 1G SFP LC LX Transceiver (JD119B)  
 HP X120 1G SFP LC BX 10-U Transceiver (JD098B)  
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