

HP 3600 EI Switch Series



Product overview

The HP 3600 EI Switch Series delivers premium levels of intelligent and resilient performance, security, and reliability for robust switching at the enterprise network edge. The series consists of L3 Fast Ethernet and PoE/PoE+ switches, with advanced features that can accommodate some of the most demanding applications.

The 3600 EI Switch Series offers secure, resilient connectivity and the latest traffic-prioritization technologies to enhance converged networks. Designed for increased flexibility and scalability, the series offers you 24 or 48 10/100 ports, four active SFP-based Gigabit Ethernet ports for stacking and uplinks, and a 24-port 100BASE-FX switch with two or four Gigabit Ethernet SFP slots.

A summary of the highlights of the 3600 EI Switch Series:

- Robust switching at the enterprise network edge
- Advanced L3 and multicast routing
- Intelligent resilient framework (IRF)—automated stack and switching fabric setup
- Integrated and distributed security enforcement
- Enterprise-level non-blocking performance

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 L2, L3, and L4 information; and applies QoS policies such as setting the priority level and rate limiting to selected traffic on a per-port or per-VLAN basis
- Powerful QoS feature
Supports these congestion actions: strict priority queuing, weighted round robin, weighted fair queuing, and weighted random early detection
- Traffic policing
Supports committed access rate and line rate
- RRPP
Enables ultra-high levels of network resiliency, with failover times of less than 50 ms

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 the CLI and Web-browser management interfaces
- Command authorization
Leverages the HWTACACS to link a custom list of CLI commands to an individual network administrator's login; and provides an audit trail
- 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; and supports events, alarms, history, and statistics groups as well as a private alarm extension group
- Local and remote intelligent mirroring
Mirrors traffic from a switch port to a remote switch port anywhere on the network; or mirrors traffic selected by an access control list (ACL) to a local switch port
- Management VLAN
Segments traffic to and from management interfaces, including a CLI/telnet, Web browser interface, and SNMP
- 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
- Device link detection protocol
Monitors the cable between two switches and shuts down the ports on both ends if the cable is broken, helping prevent network problems such as loops

- sFlow (RFC 3176)
Provides scalable ASIC-based wire-speed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes
- IPv6 management
Future-proofs networking, as the switch is capable of being managed whether the attached network is running IPv4 or IPv6; and supports pingv6, tracertv6, Telnetv6, TFTPv6, DNSv6, syslogv6, FTPv6, SNMPv6, dynamic host configuration protocol (DHCP) v6, and RADIUS for IPv6
- Troubleshooting
Enables network problem solving, using ingress and egress port monitoring; and provides visibility into cable problems, using virtual cable tests

Connectivity

- IPv6
 - Telnet
For allowing CLI access via IPv6
 - SNMP
For IPv6 switch management
 - DNS
For IPv6 host management
 - DHCP
For auto 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
- Jumbo packet support
Supports up to 9,216-byte frame sizes to improve the performance of large data transfers
- Gigabit Ethernet uplinks
Are dual-personality ports for 10/100/1000 or mini-GBIC SFP connectivity, increasing connectivity flexibility
- High-density access
Provides up to 48 fixed 10/100BASE-T PoE or non-PoE ports or 24 SFP 100BASE-X ports in an L2/L3 switch
- Ethernet operations, administration, and maintenance (OAM)
Detects the data link layer problems that occur in the “last mile,” using the IEEE 802.3ah OAM standard; and monitors the status of the link between two devices
- IEEE 802.3af 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
- IEEE 802.3at PoE+ support
Simplifies deployment and dramatically reduces installation costs by helping eliminate the time and cost involved in supplying local power at each access point location

Performance

- Non-blocking performance
Enables wire-speed switching with up to 13.1 million pps throughput, using up to 17.6 Gb/s non-blocking switching fabric
- Gigabit Ethernet interface
Provides a connection to the network that helps eliminates network bottlenecks
- Hardware-based wire-speed ACLs
Uses a feature-rich ACL implementation to help ensure high levels of security and ease of administration—without impacting network performance

Resiliency and high availability

- Separate data and control paths
Separates control from services and keeps service processing isolated; and increases security and performance
- External redundant power supply
Provides high reliability
- SmartLink
Allows 50 ms failover between links
- Spanning tree protocol (STP)/multiple STP (MSTP)/rapid STP (RSTP)
Provides redundant links while helping prevent network loops
- IRF
Creates virtual resilient switching fabrics, where two or more switches perform as a single L2 switch and L3 router; switches don't have to be co-located and can be part of a disaster-recovery system; servers or switches can be attached using the standard link-aggregation control protocol (LACP) for automatic load balancing and high availability; it can help eliminate the need for complex protocols such as STP, equal-cost multipath (ECMP), or virtual router redundancy protocol (VRRP)—simplifying network operations
- IEEE 802.3ad LACP
Supports up to 24 trunks, each with 8 links per trunk; and provides support for static or dynamic groups
- VRRP
Allows groups of two routers to dynamically back each other up to create highly available routed environments in IPv4 and IPv6 networks
- IRF capability
Provides single IP address management for a resilient virtual switching fabric of up to nine switches

Manageability

- RMON
Provides advanced monitoring and reporting capabilities for statistics, history, alarms, and events

L2 switching

- 16/32k MAC address table
Provides access to many L2 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
- IEEE 802.1ad Q-in-Q and selective Q-in-Q
Increase the scalability of an Ethernet network by providing a hierarchical structure; and 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 an L2 network

L3 services

- Address resolution protocol (ARP)
Determines the MAC address of another IP host in the same subnet
- DHCP
Simplifies the management of large IP networks and supports both clients and servers; DHCP relay enables DHCP operation across subnets

- Loopback interface address
Defines an address in the routing information protocol (RIP) and open standard path first (OSPF), improving the diagnostic capability
- User datagram protocol (UDP) helper function
Allows UDP broadcasts to be directed across router interfaces to specific IP unicast or subnet broadcast addresses; and helps prevent server spoofing for UDP services such as DHCP
- Route maps
Provide more control during route redistribution; and allow filtering and altering of route metrics

L3 routing

- IPv4 routing protocols
Support static routes, RIP, OSPF, ISIS, and BGP
- IPv6 routing protocols
Provide routing of IPv6 at wire speeds; and support static routes, RIPng, OSPFv3, ISIS for IPv6, and BGP4+ for IPv6
- IPv6 tunneling
Allows a smooth transition from IPv4 to IPv6 by encapsulating IPv6 traffic over an existing IPv4 infrastructure
- ECMP
Enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth
- Bidirectional forwarding detection
Enables link connectivity monitoring and reduces network convergence time for the RIP, OSPF, BGP, IS-IS, VRRP, and IRF
- Protocol-independent multicast (PIM)-source specific multicast (SSM), PIM-dense mode (DM), and PIM-sparse mode (SM) (for IPv4 and IPv6)
Support IP multicast address management and inhibition of DoS attacks
- Multicast source discovery protocol (MSDP)
Is used for inter-domain multicast applications, allowing multiple PIM-SM domains to interoperate
- IGMPv1, v2, and v3
Allow individual hosts to be registered on a particular VLAN

Security

- ACL enablement
Provides IP L2 to L4 traffic filtering; and supports VLAN ACL and port 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 a 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 the 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
Assigns users automatically 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; and protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **Guest VLAN**
Provides a browser-based environment to authenticated clients that are similar to IEEE 802.1X
- **Endpoint admission defense**
Assigns 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 helps prevent malicious attackers from obtaining user information
- **STP bridge protocol data units (BPDUs) port protection**
Blocks BPDUs on ports that do not require BPDUs, mitigating 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, mitigating denial-of-service attacks
- **Dynamic ARP protection**
Blocks ARP broadcasts from unauthorized hosts, helping prevent eavesdropping or theft of network data
- **IP source guard**
Filters packets on a per-port basis, which helps prevent illegal packets from being forwarded
- **RADIUS/HWTACACS**
Eases switch management security administration by using a password authentication server
- **Multiple customer edge**
Facilitates MPLS VPN network integration with support for up to 63 VPNs
- **ICMP throttling**
Defeats ICMP denial-of-service attacks by enabling any switch port to automatically throttle ICMP traffic

Convergence

- **IEEE 802.1ab LLDP**
Facilitates easy mapping using network management applications with LLDP-automated device discovery protocol
- **LLDP-media endpoint discovery (MED)**
Is a standard extension that automatically configures network devices, including LLDP-capable IP phones
- **LLDP-Cisco discovery protocol (CDP) compatibility**
Receives and recognizes CDP packets from Cisco's IP phones for seamless interoperation
- **PoE allocations**
Supports multiple methods—automatic, IEEE 802.3af class, LLDP-MED, or user specified—to allocate PoE power for more efficient energy use
- **Voice VLAN**
Assigns VLAN and priority for IP phones automatically, simplifying network configuration and maintenance
- **IP multicast snooping (data-driven IGMP)**
Helps prevent flooding of IP multicast traffic

- Multicast VLAN
Allows multiple VLANs to receive the same multicast traffic, reducing network bandwidth demand by mitigating multiple streams to each VLAN
- PIM
Supports PIM-DM and PIM-SM; is used for multicast applications
- MSDP
Allows multiple PIM-SM domains to interoperate; is used for inter-domain multicast applications

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

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 for duration details
- Electronic and telephone support (for Limited Lifetime Warranty 2.0)
Limited 24x7 telephone support is provided by HP for the first three years; limited electronic and telephone support during business hours is provided by HP for the complete warranty period; to reach our support centers, visit hp.com/networking/contact-support; for details on the duration of support provided with your product purchase, visit hp.com/networking/warrantysummary
- Software releases
To find software for your product, visit hp.com/networking/support; for details on the software releases available with your product purchase, visit hp.com/networking/warrantysummary

HP 3600 EI Switch Series

Specifications



HP 3600-24 v2 EI Switch (JG299A)



HP 3600-48 v2 EI Switch (JG300A)



HP 3600-24-PoE+ v2 EI Switch (JG301B)

Ports	24 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 4 SFP 1000 Mb/s ports 2 dual-personality 1000 Mb/s ports (IEEE 802.3ab Type 1000BASE-T) 1 RJ-45 serial console port	48 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full 4 SFP 1000 Mb/s ports 2 dual-personality 1000 Mb/s ports (IEEE 802.3ab Type 1000BASE-T) 1 RJ-45 serial console port	24 RJ-45 autosensing 10/100 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3at PoE+); Duplex: half or full 4 SFP 1000 Mb/s ports 2 dual-personality 1000 Mb/s ports (IEEE 802.3ab Type 1000BASE-T) 1 RJ-45 serial console port
Physical characteristics			
Dimensions	17.32(w) x 10.24(d) x 1.72(h) in. (43.99 x 26.01 x 4.37 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)	17.32(w) x 16.54(d) x 1.72(h) in. (43.99 x 42.01 x 4.37 cm) (1U height)
Weight	11.02 lb (5 kg)	11.02 lb (5 kg)	22.05 lb (10 kg)
Memory and processor	256 MB SDRAM, 128 MB flash; packet buffer size: 2 MB	256 MB SDRAM, 128 MB flash; packet buffer size: 4 MB	256 MB SDRAM, 128 MB flash; packet buffer size: 2 MB
Mounting	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)	Mounts in an EIA-standard 19 in. Telco rack or equipment cabinet (hardware included)
Performance			
100 Mb Latency	< 6 μ s	< 6 μ s	< 6 μ s
1000 Mb Latency	< 5 μ s	< 5 μ s	< 5 μ s
Throughput	9.5 million pps	13.1 million pps	9.5 million pps
Routing/Switching capacity	12.8 Gb/s	17.6 Gb/s	12.8 Gb/s
Routing table size	12000 entries (IPv4)	12000 entries (IPv4)	12000 entries (IPv4)
MAC address table size	32000 entries	32000 entries	32000 entries
Environment			
Operating temperature	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)
Operating relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing	5% to 95%, 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
Acoustic	Low-speed fan: 42.8 dB, High-speed fan: 49.9 dB	Low-speed fan: 43.5 dB, High-speed fan: 55.0 dB	Low-speed fan: 44.7 dB, High-speed fan: 53.8 dB

HP 3600 EI Switch Series (Continued)

Specifications (Continued)

	HP 3600-24 v2 EI Switch (JG299A)	HP 3600-48 v2 EI Switch (JG300A)	HP 3600-24-PoE+ v2 EI Switch (JG301B)
Electrical characteristics			
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Maximum heat dissipation	106 BTU/hr (111.83 kJ/hr)	147 BTU/hr (155.08 kJ/hr)	143 BTU/hr (150.86 kJ/hr)
Voltage	100–240 VAC	100–240 VAC	100–240 VAC
DC voltage	-48 to -60 VDC	-48 to -60 VDC	-52 to -55 VDC
Maximum power rating	31 W	43 W	795 W
PoE power			720 W
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.	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. 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).With AC input, the maximum power consumption is 465 W; PoE is 370 W. With DC input, the maximum power consumption is 795 W; PoE is 720 W.
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	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
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 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
Management			
	Intelligent Management Center (IMC); command-line interface; Web browser; SNMP Manager	Intelligent Management Center (IMC); command-line interface; Web browser; SNMP Manager	Intelligent Management Center (IMC); command-line interface; Web browser; SNMP Manager
Services			
	Refer to the HP website at hp.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 HP sales office.	Refer to the HP website at hp.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 HP sales office.	Refer to the HP website at hp.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 HP sales office.

HP 3600 EI Switch Series (Continued)

Specifications (Continued)



HP 3600-48-PoE+ v2 EI Switch (JG302B)



HP 3600-24-SFP v2 EI Switch (JG303A)

Ports	48 RJ-45 autosensing 10/100 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3at PoE+); Duplex: half or full 4 SFP 1000 Mb/s ports 2 dual-personality 1000 Mb/s ports (IEEE 802.3ab Type 1000BASE-T) 1 RJ-45 serial console port	24 SFP 100 Mb/s ports 4 SFP 1000 Mb/s ports 2 dual-personality 1000 Mb/s ports (IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 1 RJ-45 serial console port
Physical characteristics		
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	22.05 lb (10 kg)	11.02 lb (5 kg)
Memory and processor	256 MB SDRAM, 128 MB flash; packet buffer size: 4 MB	256 MB SDRAM, 128 MB flash; packet buffer size: 2 MB
Mounting	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)
Performance		
100 Mb Latency	< 6 μ s	< 6 μ s
1000 Mb Latency	< 5 μ s	< 5 μ s
Throughput	up to 13.1 million pps	up to 9.5 million pps
Routing/Switching capacity	17.6 Gb/s	12.8 Gb/s
Routing table size	12000 entries (IPv4)	12000 entries (IPv4)
MAC address table size	32000 entries	32000 entries
Environment		
Operating temperature	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)
Operating relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
Nonoperating/Storage temperature	-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
Acoustic	Low-speed fan: 43.5 dB, High-speed fan: 55 dB	Low-speed fan: 43.5 dB, High-speed fan: 50.1 dB

HP 3600 EI Switch Series (Continued)

Specifications (Continued)

	HP 3600-48-PoE+ v2 EI Switch (JG302B)	HP 3600-24-SFP v2 EI Switch (JG303A)
Electrical characteristics		
Frequency	50/60 Hz	50/60 Hz
Maximum heat dissipation	198 BTU/hr (208.89 kJ/hr)	205 BTU/hr (216.27 kJ/hr)
Voltage	100–240 VAC	100–240 VAC
DC voltage	-52 to -55 VDC	-48 to -60 VDC
Maximum power rating	440 W	60 W
PoE power	320 W	
Notes	<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). With AC input, the maximum power consumption is 440 W, PoE is 320 W. With DC input, the maximum power consumption is 820 W, PoE is 720 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>
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	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 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
Management		
	Intelligent Management Center (IMC); command-line interface; Web browser; SNMP Manager	Intelligent Management Center (IMC); command-line interface; Web browser; SNMP Manager
Services		
	Refer to the HP website at hp.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 HP sales office.	Refer to the HP website at hp.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 HP sales office.

HP 3600 EI Switch Series (Continued)

Specifications (Continued)

Standards and Protocols

(applies to all products in series)

Device management

RFC 1157 SNMPv1/v2c
 RFC 2578-2580 SMIv2
 RFC 3417 (SNMP Transport Mappings)
 RFC 1901-1907 SNMPv2c, SMIv2 and Revised MIB-II RFC 2819 (RMON groups Alarm, Event, History and Statistics only)
 HTML and telnet management
 RFC 2573 (SNMPv3 Applications)
 RFC 3410 (Management Framework)
 RFC 3416 (SNMP Protocol Operations v2)
 Multiple Configuration Files SNMP v3 and RMON RFC support

General protocols

IEEE 802.1ad Q-in-Q
 IEEE 802.1D MAC Bridges
 IEEE 802.1p Priority
 IEEE 802.1Q VLANs
 IEEE 802.1s (MSTP)
 IEEE 802.1v VLAN classification by Protocol and Port
 IEEE 802.1w Rapid Reconfiguration of Spanning Tree
 IEEE 802.1X PAE
 IEEE 802.3 Type 10BASE-T
 IEEE 802.3ab 1000BASE-T
 IEEE 802.3ac (VLAN Tagging Extension)
 IEEE 802.3ad Link Aggregation Control Protocol (LACP)
 IEEE 802.3af Power over Ethernet
 IEEE 802.3at Power over Ethernet Plus
 IEEE 802.3i 10BASE-T
 IEEE 802.3u 100BASE-X
 IEEE 802.3x Flow Control
 IEEE 802.3z 1000BASE-X
 RFC 768 UDP
 RFC 783 TFTP Protocol (revision 2)
 RFC 791 IP
 RFC 792 ICMP
 RFC 793 TCP
 RFC 826 ARP
 RFC 1058 RIPv1
 RFC 1213 Management Information Base for Network Management of TCP/IP-based internets
 RFC 1812 IPv4 Routing
 RFC 2131 DHCP
 RFC 2236 IGMP Snooping
 RFC 2338 VRRP
 RFC 2453 RIPv2
 RFC 2644 Directed Broadcast Control
 RFC 2665 Definitions of Managed Objects for the Ethernet-like Interface Types
 RFC 2711 IPv6 Router Alert Option
 RFC 3410 Applicability Statements for SNMP
 RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
 RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)
 RFC 3416 Protocol Operations for SNMP
 RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)

IP multicast

RFC 1112 IGMP
 RFC 2236 IGMPv2
 RFC 2362 PIM Sparse Mode
 RFC 3618 Multicast Source Discovery Protocol (MSDP)
 RFC 3973 PIM Dense Mode

HP 3600 EI Switch Series (Continued)

Specifications (Continued)

IPv6	RFC 1881 IPv6 Address Allocation Management
	RFC 1887 IPv6 Unicast Address Allocation Architecture
	RFC 1981 IPv6 Path MTU Discovery
	RFC 2080 RIPng for IPv6
	RFC 2373 IPv6 Addressing Architecture
	RFC 2375 IPv6 Multicast Address Assignments
	RFC 2460 IPv6 Specification
	RFC 2461 IPv6 Neighbor Discovery
	RFC 2462 IPv6 Stateless Address Auto-configuration
	RFC 2463 ICMPv6
	RFC 2464 Transmission of IPv6 over Ethernet Networks
	RFC 2475 IPv6 DiffServ Architecture
	RFC 2710 Multicast Listener Discovery (MLD) for IPv6
	RFC 2711 IPv6 Router Alert Option
	RFC 2740 OSPFv3 for IPv6
	RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers
	RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)
	RFC 2925 Remote Operations MIB (Ping only)
	RFC 3056 Connection of IPv6 Domains via IPv4 Clouds
	RFC 3162 RADIUS and IPv6
	RFC 3306 Unicast-Prefix-based IPv6 Multicast Addresses
	RFC 3307 IPv6 Multicast Address Allocation
	RFC 3315 DHCPv6 (client and relay)
	RFC 3484 Default Address Selection for IPv6
	RFC 3493 Basic Socket Interface Extensions for IPv6
	RFC 3513 IPv6 Addressing Architecture
	RFC 3542 Advanced Sockets API for IPv6
	RFC 3587 IPv6 Global Unicast Address Format
	RFC 3596 DNS Extension for IPv6
	RFC 3810 MLDv2 (host joins only)
	RFC 4113 MIB for UDP
	RFC 4293 MIB for IP
	RFC 4443 ICMPv6
RFC 5340 OSPFv3 for IPv6	

MIBs	RFC 1213 MIB II
	RFC 1493 Bridge MIB
	RFC 1724 RIPv2 MIB
	RFC 1757 Remote Network Monitoring MIB
	RFC 1850 OSPFv2 MIB
	RFC 1907 SNMPv2 MIB
	RFC 2233 Interfaces MIB
	RFC 2571 SNMP Framework MIB
	RFC 2572 SNMP-MPD MIB
	RFC 2573 SNMP-Notification MIB
	RFC 2573 SNMP-Target MIB
	RFC 2574 SNMP USM 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 2863 The Interfaces Group MIB
	RFC 3414 SNMP-User based-SM MIB
RFC 3415 SNMP-View based-ACM MIB	

HP 3600 EI Switch Series (Continued)

Specifications (Continued)

Network management	<p>IEEE 802.1ab Link Layer Discovery Protocol (LLDP)</p> <p>RFC 1157 SNMPv1</p> <p>RFC 1757 RMON 4 groups: Stats, History, Alarms and Events</p> <p>RFC 1901 Introduction to Community-based SNMPv2</p> <p>RFC 1902 Structure of Management Information for Version 2 of the Simple Network Management Protocol (SNMPv2)</p> <p>RFC 1903 SNMPv2 Textual Conventions</p> <p>RFC 1904 SNMPv2 Conformance</p> <p>RFC 1905 SNMPv2 Protocol Operations</p> <p>RFC 1906 SNMPv2 Transport Mappings</p> <p>RFC 2570 SNMPv3 Overview</p> <p>RFC 2571 An Architecture for Describing SNMP Management Frameworks</p> <p>RFC 2572 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)</p> <p>RFC 2573 SNMP Applications</p> <p>RFC 2574 SNMPv3 User-based Security Model (USM)</p> <p>RFC 2575 SNMPv3 View-based Access Control Model (VACM)</p> <p>RFC 2578 Structure of Management Information Version 2 (SMIv2)</p> <p>RFC 2579 Textual Conventions for SMIv2</p> <p>RFC 2580 Conformance Statements for SMIv2</p> <p>RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm), and 9 (events)</p> <p>RFC 3410 Introduction to Version 3 of the Internet-standard Network Management Framework</p> <p>RFC 3414 SNMPv3 User-based Security Model (USM)</p> <p>RFC 3415 SNMPv3 View-based Access Control Model (VACM)</p> <p>ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)</p> <p>SNMPv1/v2c/v3</p>
OSPF	<p>RFC 1583 OSPFv2</p> <p>RFC 1587 OSPF NSSA</p> <p>RFC 1850 OSPFv2 Management Information Base (MIB), traps</p> <p>RFC 2328 OSPFv2</p>
QoS/CoS	<p>RFC 4594 Configuration Guidelines for DiffServ Service Classes</p>

HP 3600 EI Switch Series accessories

Transceivers

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 X110 100M SFP LC LH40 Transceiver (JD090A)
 HP X110 100M SFP LC LH80 Transceiver (JD091A)
 HP X120 1G SFP LC BX 10-U Transceiver (JD098B)
 HP X120 1G SFP LC BX 10-D Transceiver (JD099B)
 HP X115 100M SFP LC BX 10-U Transceiver (JD100A)
 HP X115 100M SFP LC BX 10-D Transceiver (JD101A)
 HP X120 1G SFP LC SX Transceiver (JD118B)
 HP X120 1G SFP LC LX Transceiver (JD119B)

Cables

HP 3600 Switch SFP Stacking Kit (JD324B)
 HP 0.5m Multi-mode OM3 LC/LC Optical Cable (AJ833A)
 HP 1m Multi-mode OM3 LC/LC Optical Cable (AJ834A)
 HP 2m Multi-mode OM3 LC/LC Optical Cable (AJ835A)
 HP 5m Multi-mode OM3 LC/LC Optical Cable (AJ836A)
 HP 15m Multi-mode OM3 LC/LC Optical Cable (AJ837A)
 HP 30m Multi-mode OM3 LC/LC Optical Cable (AJ838A)
 HP 50m Multi-mode 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 RPS800 Redundant Power Supply (JD183A)
 HP RPS1600 Redundant Power System (JG136A)
 HP RPS1600 1600W AC Power Supply (JG137A)

Power Cords

HP X290 500 V 1m RPS Cable (JD186A)
 HP X290 1000 A JD5 2m RPS Cable (JD187A)
 HP X290 1000 A JD5 Non-PoE 2m RPS Cable (JD188A)
 HP X290 1000 B JD5 2m RPS Cable (JD189A)


HP 3600-24-SFP v2 EI Switch (JG303A)

HP X110 100M SFP LC LX Transceiver (JD120B)
 HP X110 100M SFP LC FX Transceiver (JD102B)
 HP gl/xl/vl Switch Redundant Power Supply (J4839A)

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