Models

HP 3000-24G-PoE+ Wireless Switch	JD449A
HP 3000-10G-PoE+ Wireless Switch	JD450A
HP 3000-8G-PoE+ Wireless Switch	JD444A

Key features

- Unified wired and wireless functions
- PoE+ capability
- Built-in 802.1X and portal authentication servers
- Flexible forwarding modes
- Latest high-speed wireless standards

Product overview

The HP WX3000G Wireless Switch Series comprises wired and wireless unified switches that integrate both a wireless controller and 1000 Mbps Ethernet switch functions. The WX3000G series switches provide 1000 Mbps Ethernet ports, each supporting a maximum power of 25 W, PoE+ (draft), and IEEE 802.11a/b/g/n APs, while delivering unified wired and wireless access control functions. The 3000G-24G-PoE+ wireless switch provides two 10-GbE slots on the rear panel. This relieves the transmission bottleneck at the core of a WLAN network. The WX3000G series switches are suitable for small- and medium-sized enterprise networks, as well as branches of large enterprise networks that require both wired and wireless access services.

Features and benefits

Quality of Service (QoS)

- IEEE 802.1p prioritization: delivers data to devices based on the priority and type of traffic
- Class of service (CoS): sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ

Management

- Automatic radio power adjustment: automatic AP power adjustment features analyze user access status in real time, adapting power requirements based on environmental changes and providing high-quality user access signal coverage
- Automatic radio channel adjustment: intelligent channel switching and real-time interference detection provide the allocation of a high-quality channel to each AP, reducing adjacent channel interference
- Load balancing: intelligent load sharing analyzes the locations of wireless clients in real time, providing high-quality client throughput regardless of location or number of online sessions
- Rogue AP detection: regular scans for rogue APs help confirm that the network is secure
- Enterprise network management: is supported by the Web-based, enterprise-class HP Intelligent Management Center (IMC) network management platform and Wireless Service Management (WSM), which effectively integrate traditionally disparate management tools into one easy-to-use interface
- Secure controller management: securely manages the controller from a single location with IMC or any other SNMP management station; controller supports SNMPv3 as well as SSH and SSL for secure CLI and Web management
- Network Time Protocol (NTP): synchronizes timekeeping among distributed time servers and clients; keeps consistent timekeeping among all clock-dependent devices within the network so that the devices can provide diverse applications based on the consistent time
- AAA server: uses embedded AAA server or external AAA server for local users

Overview

Connectivity

- IEEE 802.3at draft Power over Ethernet (PoE+) support: simplifies deployment and dramatically reduces installation costs by helping to eliminate the time and cost involved in supplying local power at each access point location
- IEEE 802.11h International Telecommunication Union (ITU) compliant: employs Dynamic Frequency Selection (DFS) to automatically select another channel and adjust transmit power to reduce interference with systems such as radar, if detected on that same channel
- Loopback: supports internal loopback testing for maintenance purposes and an increase in availability; loopback detection protects against incorrect cabling or network configurations and can be enabled on a per-port or per-VLAN basis for added flexibility
- Optional 10 Gigabit Ethernet ports for 3000-24G-PoE+ wireless switch: add 10 Gigabit Ethernet connections for uplinks or high-bandwidth server connections through 3000-24G-PoE+ extended slots; flexibly supports XENPAK or XFP-style 10 Gigabit transceivers

Performance

- Built-in 802.1X and portal authentication servers: the WX3000G series provides a built-in IEEE 802.1X authentication server that supports multiple IEEE 802.1X authentication modes, such as TLS, PEAP, and MD5; the series also provides a built-in portal server that can authenticate users having no security authentication client installed; both features are economical and easy-to-use solutions for small- to medium-sized enterprise networks
- Flexible forwarding modes: the WX3000G series supports both distributed forwarding mode and centralized forwarding mode, allowing you to set SSID-based forwarding types as needed; in a wireless network with centralized forwarding mode, all wireless traffic is sent to an AC for processing; if there is a wireless network in which APs are deployed at branches, ACs are deployed at the headquarters, and APs and ACs are connected over a WAN, the distributed mode will be necessary
- Fast roaming: supports Layer 3 roaming and fast roaming, satisfying the most demanding voice service requirements
- High performance: robust switching capacity and wire-speed processing provide powerful forwarding capacity for medium and large enterprise-size wireless LANs (WLANs)

Manageability

- Web interface: allows configuration of the switch from any Web browser on the network

Layer 2 switching

- VLAN support and tagging: support IEEE 802.1Q, with 4094 simultaneous VLAN IDs
- GARP VLAN Registration Protocol (GVRP): allows automatic learning and dynamic assignment of VLANs
- Spanning Tree: fully supports standard IEEE 802.1D Spanning Tree Protocol, IEEE 802.1w Rapid Spanning Tree Protocol for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol
- Port mirroring: duplicates port traffic (ingress and egress) to a local or remote monitoring port
- Jumbo packet support: supports up to 4 KB frame size to improve performance of large data transfers

Layer 3 routing

- Layer 3 IP routing (3000G wired features): static IP routing provides basic routing; RIP provides RIPv1 and RIPv2 routing functions

Standards

- Latest high-speed wireless standards: when used with IEEE 802.11n-based APs, provides wireless access six times that of traditional IEEE 802.11a/b/g networks, resulting in expanded coverage and more efficient support for wireless multimedia applications

Security

Overview

- IEEE 802.1X and RADIUS network logins: control port-based access for authentication and accountability
- Web-based authentication: similar to IEEE 802.1X, it provides a browser-based environment to authenticate clients that do not support the IEEE 802.1X supplicant
- Choice of IEEE 802.11i, Wi-Fi Protected Access 2 (WPA2), or WPA: locks out unauthorized wireless access by authenticating users prior to granting network access; robust Advanced Encryption Standard (AES) or Temporal Key Integrity Protocol (TKIP) encryption secures the data integrity of wireless traffic
- Secure Shell (SSHv2): uses external servers to securely log in to a remote device; with authentication and encryption, it protects against IP spoofing and plain text password interception; increases the security of SFTP transfers
- MAC authentication: provides simple authentication based on a user's MAC address; supports local or RADIUS-based authentication
- Secure user isolation: virtual AP services enable the network administrator to provide specific services for different user groups, improving bandwidth and system resources and simplifying network maintenance and management
- Secure access by location: location AP-based user access control helps ensure that wireless users can access and authenticate only to preselected APs, enabling system administrators to control the locations where a wireless user can access the network
- Secure access control by user: media access control (MAC)-based and IEEE 802.1X network access control centralize wireless security through existing Remote Authentication Dial-In User Service (RADIUS) servers to protect the network from unauthorized user access
- Endpoint Admission Defense (EAD): integrated wired and wireless EAD helps ensure that only wireless clients who comply with mandated enterprise security policies access the network, reducing threat levels by infected wireless clients and improving the overall security of the wireless network
- Guest VLAN: similar to IEEE 802.1X, it provides a browser-based environment to authenticated clients via iMC component
- HTTPS management: provides secure Web management
- Public Key Infrastructure (PKI): is used to control access

Scalability

- Pay as you grow: license upgrades allow you to increase support for additional access points without the need to buy additional costly hardware and use additional valuable space in a chassis

Warranty and support

- 1-year warranty: with advance replacement and 30-calendar-day delivery (available in most countries)
- Electronic and telephone support: limited electronic and telephone support is available from HP; refer to: www.hp.com/networking/warranty for details on the support provided and the period during which support is available
- Software releases: refer to: www.hp.com/networking/warranty for details on the software releases provided and the period during which software releases are available for your product(s)

HP 3000-24G-PoE+ Wireless Switch (JD449A)

Ports	24 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	4 SFP dual-personality ports; Duplex: full only; (4 10/100/1000Base-T and 1000Base-X Gigabit Ethernet combination)	
	2 extended module slots	
	1 RJ-45 serial console port	
Physical characteristics	Dimensions	16.89(d) x 17.32(w) x 1.72(h) in. (42.9 x 44 x 4.36 cm) (1U height)
	Weight	15.87 lb. (7.2 kg)
Memory and processor	Processor	Dual core @ 750 MHz, 64 MB flash, 512 MB DDR2 SDRAM
Mounting	EIA standard 19-in. telco rack or equipment cabinet (hardware included)	
Performance	Switch fabric speed	1 Gbps
	MAC address table size	2000 entries
Environment	Operating temperature	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
Electrical characteristics	Maximum heat dissipation	333 BTU/hr (351.32 kJ/hr)
	Voltage	100-240 VAC
	DC Voltage	-48 VDC to -60 VDC
	Power Inputs	100 W (without external PoE device); AC: 470 W; DC (with external RPS): 700 W
	Frequency	50 / 60 Hz
	Notes	Supports PoE on 24 ports. The internal power supply can offer up to 370 W, so the device supports 24 ports for PoE at the same time. Supports PoE+ on 24 ports, with each port offering up to 25 W. Because the internal power supply can offer up to 370 W, the device supports 14 ports for PoE+ at the same time. When an RPS external power supply is adopted, the device supports 24 ports for PoE+ at the same time.
Safety	UL 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; GOST; C-Tick; NOM; IEC 60950-1 (with CB report)	
Emissions	EN 55022; VCCI; ICES-003; AS/NZS CISPR 22; EN 300 386; FCC Part 15; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC	
Immunity	EN	EN 61000-4-2:1995+A1:1998+A2:2001; EN 61000-4-3:2006; EN 61000-4-4:2004; EN 61000-4-5:2006; EN 61000-4-6: 1996 +A1:2001:A2:2007; EN 61000-4-8:2001; EN 61000-4-11:2004; EN 55024:1998+ A1:2001 + A2:2003
Management	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; SNMP Manager; Telnet; HTTPS; RMON1; FTP; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	

Technical Specifications

Features	The 3000-24G-PoE+ wireless switch supports 24 APs by default. With a 12 AP license upgrade (up to two 12 AP license upgrades are supported), it can support up to 48 APs.
Notes	Maximum number of users: 1000; maximum number of users supported by local authentication: 1000; maximum number of SSIDs that can be configured: 64; maximum number of users supported by local portal authentication: 1000; number of ACLs: 2.
Services	3-year, parts only, global next-day advance exchange (UW884E) 3-year, 4-hour onsite, 13x5 coverage for hardware (UW885E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UW888E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UW891E) 3-year, 24x7 SW phone support, software updates (UW894E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR710E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR711E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR712E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UW886E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UW889E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW892E) 4-year, 24x7 SW phone support, software updates (UW895E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UW887E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UW890E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW893E) 5-year, 24x7 SW phone support, software updates (UW896E) 3 Yr 6 hr Call-to-Repair Onsite (UW897E) 4 Yr 6 hr Call-to-Repair Onsite (UW898E) 5 Yr 6 hr Call-to-Repair Onsite (UW899E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR714E) 1-year, 24x7 software phone support, software updates (HR713E) Refer to the HP website at: www.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 3000-10G-PoE+ Wireless Switch (JD450A)

Ports	8 RJ-45 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only	
	2 SFP 1000 Mbps ports	
	1 RJ-45 serial console port	
Physical characteristics	Dimensions	10.59(d) x 11.81(w) x 1.72(h) in. (26.9 x 30 x 4.36 cm) (1U height)
	Weight	6.39 lb. (2.9 kg)
Memory and processor	Processor	Dual core @ 750 MHz, 64 MB flash, 512 MB DDR2 SDRAM
Mounting	EIA standard 19-in. telco rack or equipment cabinet (hardware included)	
Performance	Switch fabric speed	1 Gbps
	MAC address table size	2000 entries
Environment	Operating temperature	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	5% to 95%, noncondensing

Technical Specifications

	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
Electrical characteristics	Maximum heat dissipation	165 BTU/hr (174.08 kJ/hr)
	Voltage	100-240 VAC
	Power Inputs	50 W (without external PoE device); 180 W (with PoE)
	Frequency	50 / 60 Hz
	Notes	Supports PoE power supply on 8 ports at the same time (IEEE 802.3af). Supports PoE+ power supply on 8 ports, with each port providing up to 25 W. Because the internal power supply can offer up to 125 W, the device can support PoE+ power supply on 4 ports at the same time.
Safety	UL 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; GOST; C-Tick; NOM; IEC 60950-1 (with CB report)	
Emissions	EN 55022; VCCI; ICES-003; AS/NZS CISPR 22; EN 300 386; FCC Part 15; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC	
Immunity	EN	EN 61000-4-2:1995+A1:1998+A2:2001; EN 61000-4-3:2006; EN 61000-4-4:2004; EN 61000-4-5:2006; EN 61000-4-6: 1996 +A1:2001:A2:2007; EN 61000-4-8:2001; EN 61000-4-11:2004; EN 55024:1998+ A1:2001 + A2:2003
Management	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; SNMP Manager; Telnet; HTTPS; RMON1; FTP; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Features	The 3000-10G-PoE+ wireless switch supports 12 APs by default. With a 12 AP license upgrade (up to one 12 AP license upgrade is supported), it can support up to 24 APs.	
Notes	Maximum number of users: 1000; maximum number of users supported by local authentication: 1000; maximum number of SSIDs that can be configured: 64; maximum number of users supported by local portal authentication: 1000; number of ACLs: 2.	
Services	3-year, parts only, global next-day advance exchange (UW884E) 3-year, 4-hour onsite, 13x5 coverage for hardware (UW885E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UW888E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UW891E) 3-year, 24x7 SW phone support, software updates (UW894E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR710E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR711E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR712E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UW886E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UW889E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW892E) 4-year, 24x7 SW phone support, software updates (UW895E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UW887E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UW890E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW893E) 5-year, 24x7 SW phone support, software updates (UW896E) 3 Yr 6 hr Call-to-Repair Onsite (UW897E) 4 Yr 6 hr Call-to-Repair Onsite (UW898E) 5 Yr 6 hr Call-to-Repair Onsite (UW899E)	

1-year, 6 hour Call-To-Repair Onsite for hardware (HR714E)
1-year, 24x7 software phone support, software updates (HR713E)

Refer to the HP website at: www.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 3000-8G-PoE+ Wireless Switch (JD444A)

Ports	8 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, 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	10.59(d) x 11.81(w) x 1.72(h) in. (26.9 x 30 x 4.36 cm) (1U height)
	Weight	6.39 lb. (2.9 kg)
Memory and processor	Processor	Dual core @ 750 MHz, 64 MB flash, 512 MB DDR2 SDRAM
Mounting	EIA standard 19-in. telco rack or equipment cabinet (hardware included)	
Performance	Switch fabric speed	1 Gbps
	MAC address table size	2000 entries
Environment	Operating temperature	32°F to 113°F (0°C to 45°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
Electrical characteristics	Maximum heat dissipation	130 BTU/hr (137.15 kJ/hr)
	Voltage	100-240 VAC
	Power Inputs	40 W (without external PoE device); 140 W (with PoE)
	Frequency	50 / 60 Hz
	Notes	PoE power supply is available on the first 4 ports on the front panel (IEEE 802.3af). Supports PoE+ power supply on the first 4 ports on the front panel, with each port providing up to 25 W. The internal power supply can offer up to 125 W in total.
Safety	UL 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; Anatel; GOST; C-Tick; NOM; IEC 60950-1 (with CB report)	
Emissions	EN 55022; VCCI; ICES-003; AS/NZS CISPR 22; EN 300 386; FCC Part 15; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC	
Immunity	EN	EN 61000-4-2:1995+A1:1998+A2:2001; EN 61000-4-3:2006; EN 61000-4-4:2004; EN 61000-4-5:2006; EN 61000-4-6: 1996 +A1:2001:A2:2007; EN 61000-4-8:2001; EN 61000-4-11:2004; EN 55024:1998+ A1:2001 + A2:2003
Management	IMC - Intelligent Management Center; command-line interface; Web browser; configuration menu; SNMP Manager; Telnet; HTTPS; RMON1; FTP; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB	
Features	The 3000-8G-PoE+ wireless switch supports 8 APs by default; no license is needed.	

Technical Specifications

Notes

Maximum number of users: 1000; maximum number of users supported by local authentication: 1000; maximum number of SSIDs that can be configured: 64; maximum number of users supported by local portal authentication: 1000; number of ACLs: 2.

Services

3-year, parts only, global next-day advance exchange (UW884E)
3-year, 4-hour onsite, 13x5 coverage for hardware (UW885E)
3-year, 4-hour onsite, 24x7 coverage for hardware (UW888E)
3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UW891E)
3-year, 24x7 SW phone support, software updates (UW894E)
1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR710E)
1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR711E)
1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR712E)
4-year, 4-hour onsite, 13x5 coverage for hardware (UW886E)
4-year, 4-hour onsite, 24x7 coverage for hardware (UW889E)
4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW892E)
4-year, 24x7 SW phone support, software updates (UW895E)
5-year, 4-hour onsite, 13x5 coverage for hardware (UW887E)
5-year, 4-hour onsite, 24x7 coverage for hardware (UW890E)
5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW893E)
5-year, 24x7 SW phone support, software updates (UW896E)
3 Yr 6 hr Call-to-Repair Onsite (UW897E)
4 Yr 6 hr Call-to-Repair Onsite (UW898E)
5 Yr 6 hr Call-to-Repair Onsite (UW899E)
1-year, 6 hour Call-To-Repair Onsite for hardware (HR714E)
1-year, 24x7 software phone support, software updates (HR713E)

Refer to the HP website at: www.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.

Standards and protocols (applies to all products in series)

General protocols
RFC 768 UDP
RFC 791 IP
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 854 TELNET
RFC 855 Telnet Option Specification
RFC 858 Telnet Suppress Go Ahead Option
RFC 894 IP over Ethernet
RFC 950 Internet Standard Subnetting Procedure
RFC 959 File Transfer Protocol (FTP)
RFC 1122 Host Requirements
RFC 1141 Incremental updating of the Internet checksum
RFC 1144 Compressing TCP/IP headers for low-speed serial links
RFC 1256 ICMP Router Discovery Protocol (IRDP)
RFC 1321 The MD5 Message-Digest Algorithm
RFC 1334 PPP Authentication Protocols (PAP)
RFC 1350 TFTP Protocol (revision 2)
RFC 1812 IPv4 Routing

MIBs
RFC 1229 Interface MIB Extensions
RFC 1643 Ethernet MIB
RFC 1757 Remote Network Monitoring MIB
RFC 2011 SNMPv2 MIB for IP
RFC 2012 SNMPv2 MIB for TCP
RFC 2013 SNMPv2 MIB for UDP
RFC 2571 SNMP Framework MIB
RFC 2572 SNMP-MPD MIB
RFC 2613 SMON MIB
RFC 2863 The Interfaces Group MIB
RFC 2932IP (Multicast Routing MIB)
RFC 2933 IGMP MIB

Network management
RFC 1155 Structure of Management Information
RFC 1905 SNMPv2 Protocol Operations
RFC 2573 SNMPv3 Applications
RFC 2574 SNMPv3 User-based Security Model (USM)
RFC 2575 VACM for SNMP
SNMPv1/v2c

RFC 1944 Benchmarking Methodology for Network Interconnect Devices
RFC 1994 PPP Challenge Handshake Authentication Protocol (CHAP)
RFC 2104 HMAC: Keyed-Hashing for Message Authentication
RFC 2246 The TLS Protocol Version 1.0
RFC 2284 EAP over LAN
RFC 2644 Directed Broadcast Control
RFC 2864 The Inverted Stack Table Extension to the Interfaces Group MIB
RFC 2866 RADIUS Accounting
RFC 2869 RADIUS Extensions
RFC 3268 Advanced Encryption Standard (AES) Ciphersuites for Transport Layer Security (TLS)
RFC 3619 Ethernet Automatic Protection Switching (EAPS)

IP multicast
RFC 1112 IGMP
RFC 2236 IGMPv2
RFC 2934 Protocol Independent Multicast MIB for IPv4

QoS/CoS
RFC 2474 DS Field in the IPv4 and IPv6 Headers
RFC 2475 DiffServ Architecture
RFC 3168 The Addition of Explicit Congestion Notification (ECN) to IP
WiFi MultiMedia (WMM), IEEE 802.11e

Security
RFC 3394 Advanced Encryption Standard (AES) Key Wrap Algorithm
RFC 3579 RADIUS Support For Extensible Authentication Protocol (EAP)
WPA (Wi-Fi Protected Access)/WPA2

IKEv1
RFC 3748 - Extensible Authentication Protocol (EAP)

Accessories

HP WX3000 Wireless Switch Series accessories	**Transceivers**	
	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 X110 100M SFP LC FX Transceiver	JD102B
	HP X120 1G SFP LC SX Transceiver	JD118B
	HP X120 1G SFP LC LX Transceiver	JD119B
	HP X110 100M SFP LC LX Transceiver	JD120B
	License	
	HP A-WX3000 12 AP License Upgrade	JD462A
	HP A3000-24G-PoE+ Wireless Switch (JD449A)	
	HP 1-Port 10 GbE XFP A3000 Module	JD339A
	HP X130 10G XFP LC LR Transceiver	JD108B
	HP X130 10G XFP LC SR Transceiver	JD117B

Accessory Product Details

NOTE: Details are not available for all accessories. The following specifications were available at the time of publication.

HP X120 1G SFP LC BX 10-U Transceiver (JD098B) A small form-factor pluggable (SFP) Gigabit LX-BX10-U transceiver that provides a full duplex Gigabit solution up to 10km on a single mode cable.	**Ports**	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-U); Duplex: full only	
	Connectivity	**Connector type**	LC
	Physical characteristics	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • 10km	
		Fiber type	Single Mode
	Notes	TX 1310nm RX 1490nm	
	Services	Refer to the HP website at: www.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 X120 1G SFP LC BX 10-D Transceiver (JD099B) A small form-factor pluggable (SFP) Gigabit LX-BX10-D transceiver that provides a full duplex Gigabit solution up to 10km on a single mode cable.	**Ports**	1 LC 1000BASE-BX10 port (IEEE 802.3ah Type 1000BASE-BX10-D); Duplex: full only	
	Connectivity	**Connector type**	LC
	Physical characteristics	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • Up to 10km	
		Fiber type	Single Mode
	Notes	TX 1490nm RX 1310nm	
	Services	Refer to the HP website at www.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.	

Accessory Product Details

HP X120 1G SFP LC SX Transceiver (JD118B) A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550m on a Multimode fiber.	**Ports**	1 LC 1000BASE-SX port	
	Connectivity	**Connector type**	LC
		Wavelength	850 nm
	Physical characteristics	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Maximum distance: • FDDI Grade distance = 220m • OM1 = 275m • OM2 = 500m • OM3 = Not Specified by standard	
		Cable length	up to 550m
		Fiber type	Multi Mode
	Services	Refer to the HP website at: www.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 X120 1G SFP LC LX Transceiver (JD119B) A small form-factor pluggable (SFP) Gigabig LX transceiver that provides a full duplex Gigabit solution up to 550m on MMF or 10Km on SMF	**Ports**	1 SFP 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX)	
	Connectivity	**Connector type**	LC
		Wavelength	1300 nm
	Physical characteristics	**Dimensions**	2.17(d) x 0.6(w) x 0.46(h) in. (5.51 x 1.52 x 1.17 cm)
		Full configuration weight	0.04 lb. (0.02 kg)
	Electrical characteristics	**Power consumption typical**	0.8 W
		Power consumption maximum	1.0 W
	Cabling	Cable type: Either single mode or multimode; Maximum distance: • 550m for Multimode • 10km for Singlemode	
		Fiber type	Both
	Services	Refer to the HP website at: www.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.	

Accessory Product Details

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