



Aruba 3810 Switch Series

Key features

- Advanced Layer 3 switch series with backplane stacking, low latency and resiliency
- HPE Smart Rate for high-speed multi-gigabit capacity and PoE+ power
- Modular line rate 10GbE and 40GbE ports for wireless aggregation
- Security and network management tools with ClearPass Policy Manager, AirWave and Central support
- Optimized for innovative SDN applications with OpenFlow support

Product overview

The Aruba 3810 Switch Series is an industry-leading mobile campus access solution for enterprises, SMBs, and branch office networks. With HPE Smart Rate multi-gigabit ports for high-speed IEEE 802.11ac devices, the Aruba 3810 will prepare your network for tomorrow. Right-size deployment and back haul capacity with modular 10GbE and 40GbE uplinks.

Full PoE+ provisioning available on 48-ports. Dual, redundant, hot-swappable power supplies and innovative backplane stacking technology delivers resiliency and scalability in a convenient 1U form factor. Advanced Layer 2 and 3 feature set with OSPF, IPv6, IPv4 BGP, Tunneled node, robust QoS, and policy-based routing are included with no software licensing.

With support for OpenFlow, the Aruba 3810 is ready to take advantage of SDN applications such as HPE Network Visualizer, HPE Network Optimizer, and HPE Network Protector applications. The 3810 is easy to deploy and manage with advanced security and network management tools like Aruba ClearPass Policy Manager and Aruba AirWave. With support from Aruba Central, you can quickly set up remote branch sites with little or no IT support.

Features and benefits

Software-defined networking

- OpenFlow

Is a key technology that enables SDN by allowing separation of the data (packet forwarding) and control (routing decision) paths

Unified wired and wireless

- ClearPass Policy Manager support

Unified wired and wireless policies using Aruba ClearPass Policy Manager

- HTTP redirect function

Supports HPE Intelligent Management Center (IMC) bring your own device (BYOD) solution

- Switch auto-configuration

Automatically configures switch for different settings such as VLAN, CoS, PoE max power, and PoE priority when Aruba AP is detected

- User Role

A set of switch-based policies in areas such as security, authentication, and QoS. A User Role can be assigned to a group of users or devices, using switch configuration or ClearPass

- Per-port Tunneled Node

Provide secured tunnel to transport network traffic on a per-port basis to Aruba Controller. Authentication and network policies will be applied and enforced at the Controller

- **New** Static IP Visibility

Allows ClearPass to do accounting for clients with static IP address

Quality of service (QoS)

- 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

- Layer 4 prioritization

Enables prioritization based on TCP/UDP port numbers

- 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

- Bandwidth shaping

- Port-based rate limiting

Provides per-port ingress-/egress-enforced increased bandwidth

- Classifier-based rate limiting

Uses an access control list (ACL) to enforce increased bandwidth for ingress traffic on each port

- Reduced bandwidth

Provides per-port, per-queue egress-based reduced bandwidth

- Remote intelligent mirroring

Mirrors selected ingress/egress traffic based on an ACL, port, MAC address, or VLAN to a local or remote HPE 8200 zl, 6600, 6200 yl, 5400 zl, 5400R, or 3500 Switch anywhere on the network

- Remote monitoring (RMON), Extended RMON (XRMON), and sFlow® v5

Provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events

- Traffic prioritization

Allows real-time traffic classification into eight priority levels that are mapped to eight queues

Management

- Friendly port names

Allows assignment of descriptive names to ports

- 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

- Command authorization

Leverages RADIUS to link a custom list of CLI commands to an individual network administrator's login; an audit trail documents activity

- Multiple configuration files

Stores easily to the flash image

- Dual flash images

Provides independent primary and secondary operating system files for backup while upgrading

- Out-of-band Ethernet management port

Enables management over a separate physical management network; and keeps management traffic segmented from network data traffic

- Comware CLI
 - Comware-compatible CLI
 - Bridges the experience of HPE Comware CLI users who are using the ArubaOS-Switch CLI
 - Display and fundamental Comware CLI commands
 - Are natively embedded in the switch CLI; display output is formatted as on Comware-based switches; fundamental commands provide Comware-familiar initial switch setup
 - Configuration Comware CLI commands
 - When Comware commands are entered, CLI help is elicited to formulate the correct ArubaOS-Switch software CLI command
 - Zero-touch provisioning (ZTP)
 - Simplified installation of the switch infrastructure using Aruba Activate-based or DHCP-based process with AirWave Network Management
 - **New** IP SLA for Voice
 - Monitor quality of voice traffic using UDP Jitter and UDP Jitter for VoIP
 - Unidirectional Link Detection (UDLD)
 - Supports HPE UDLD and DLDP protocols to monitor a cable between two switches and shut down the ports on both ends if a broken link is detected, preventing network problems such as loops
 - **New** Aruba Central support
 - Cloud based management platform offers simple, secure, and cost effective way to manage switches
- Connectivity**
- Jumbo frames
 - On Gigabit Ethernet and 10-Gigabit Ethernet ports, jumbo frames allow high-performance remote backup and disaster-recovery services
 - IEEE 802.3at PoE+
 - Provides up to 30 W per port to IEEE 802.3at-complaint PoE/PoE+-powered devices such as video IP phones, IEEE 802.11n wireless access points, and advanced pan/zoom/tilt security cameras
 - Pre-standard PoE support
 - Detects and provides power to pre-standard PoE devices (refer to the list of supported devices in the product FAQs, which can be accessed at hpe.com/networking)
 - Choice of uplinks
 - SFP+ uplink models
 - Provide fiber-optic (up to 70 km) or direct-attach-cable (DAC) connectivity
 - 10 GBASE-T uplink models
 - Offer 10GbE speeds, using standard RJ-45 connectors and standard twisted-pair cabling up to 100 m
 - Auto-MDIX
 - Provides automatic adjustments for straight-through or crossover cables on all RJ-45 ports

- IPv6
 - IPv6 host
 - Enables switch management in an IPv6 network
 - Dual stack (IPv4 and IPv6)
 - Transitions IPv4 to IPv6, supporting connectivity for both protocols
 - MLD snooping
 - Forwards IPv6 multicast traffic to the appropriate interface
 - IPv6 ACL/QoS
 - Supports ACL and QoS for IPv6 traffic
 - IPv6 routing
 - Supports static, RIPng, OSPFv3 routing protocols
 - 6in4 tunneling
 - Supports encapsulation of IPv6 traffic in IPv4 packets
 - Security
 - Provides RA guard, DHCPv6 protection, dynamic IPv6 lockdown, and ND snooping

Performance

- Selectable queue configurations
 - Allows for increased performance by selecting the number of queues and associated memory buffering that best meet the requirements of the network applications
- Energy-efficient design
 - 80 PLUS Silver Certified Power Supply
 - Increases power efficiency and savings
 - Energy-efficient Ethernet (EEE) support
 - Reduces power consumption in accordance with IEEE 802.3az
- Meshed stacking technology
 - High-performance stacking
 - Provides up to 336 Gbps of stacking throughput; each 4-port stacking module can support up to 42 Gbps in each direction per stacking port
 - Ring, chain, and mesh topologies
 - Support up to a 10-member ring or chain and 5-member fully meshed stacks; meshed topologies offer increased resiliency vs. a standard ring
 - Virtualized switching
 - Provides simplified management as the switches appear as a single chassis when stacked
- Aruba ProVision ASIC architecture
 - Is designed with the latest ProVision ASIC, providing very low latency, increased packet buffering, and adaptive power consumption

Resiliency and high availability

- Virtual Router Redundancy Protocol (VRRP)

Allows groups of two routers to back each other up dynamically to create highly available routed environments in IPv4 and IPv6 networks
- Nonstop switching and routing

Improves network availability to better support critical applications, such as unified communication and mobility; traffic will continue to be forwarded during failovers, when the backup member of the stack becomes the commander
- IEEE 802.3ad Link Aggregation Protocol (LACP) and Hewlett Packard Enterprise port trunking

Support up to 144 trunks, each with up to 8 links (ports) per trunk
- IEEE 802.1s Multiple Spanning Tree

Provides high link availability in multiple VLAN environments by allowing multiple spanning trees; provides legacy support for IEEE 802.1d and IEEE 802.1w
- Dual hot-swappable power supplies
 - Increased resiliency

Provides secondary power supply to enable complete switch power redundancy in case of power line or supply failure
 - Increased PoE+ power

Provides the secondary power supply to increase the total available PoE+ power
- Distributed trunking

Enables loop-free and redundant network topology without using Spanning Tree Protocol; allows a server or switch to connect to two switches using one logical trunk for redundancy and load sharing
- SmartLink

Provides easy-to-configure link redundancy of active and standby links

Layer 2 switching

- IEEE 802.1ad QinQ

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

Supports the IEEE 802.1Q standard and 4094 VLANs simultaneously
- IEEE 802.1v protocol VLANs

Isolate select non-IPv4 protocols automatically into their own VLANs
- MAC-based VLAN

Provides granular control and security; uses RADIUS to map a MAC address/user to specific VLANs
- Rapid Per-VLAN Spanning Tree (RPVST+)

Allows each VLAN to build a separate spanning tree to improve link bandwidth usage; is compatible with PVST+

- HPE switch meshing

Dynamically load balances across multiple active redundant links to increase available aggregate bandwidth; allows concurrent Layer 3 routing

- GVRP and MVRP

Allows automatic learning and dynamic assignment of VLANs

Layer 3 services

- Loopback interface address

Defines an address in Routing Information Protocol (RIP) and Open Standard Path First (OSPF), improving diagnostic capability

- Route maps

Provide more control during route redistribution; allow filtering and altering of route metrics

- 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

- DHCP server

Centralizes and reduces the cost of IPv4 address management

- Bidirectional Forwarding Detection (BFD)

Enables link connectivity monitoring and reduces network convergence time for OSPFv2, and VRRP

Layer 3 routing

- Static IP routing

Provides manually configured routing for both IPv4 and IPv6 networks

- OSPF

Provides OSPFv2 for IPv4 routing and OSPFv3 for IPv6 routing

- Policy-based routing

Makes routing decisions based on policies set by the network administrator

- Border Gateway Protocol (BGP)

Provides IPv4 Border Gateway Protocol routing, which is scalable, robust, and flexible

- Routing Information Protocol (RIP)

Provides RIPv1, RIPv2, and RIPv3

Security

- Source-port filtering

Allows only specified ports to communicate with each other

- RADIUS/TACACS+

Eases switch management security administration by using a password authentication server

- Secure shell

Encrypts all transmitted data for secure remote CLI access over IP networks

- Secure Sockets Layer (SSL)
Encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- Port security
Allows access only to specified MAC addresses, which can be learned or specified by the administrator
- MAC address lockout
Prevents particular configured MAC addresses from connecting to the network
- Detection of malicious attacks
Monitors 10 types of network traffic and sends a warning when an anomaly that potentially can be caused by malicious attacks is detected
- Secure FTP
Allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- Switch management logon security
Helps secure switch CLI logon by optionally requiring either RADIUS or TACACS+ authentication
- Secure management access
Delivers secure encryption of all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3
- ICMP throttling
Defeats ICMP denial-of-service attacks by enabling any switch port to throttle ICMP traffic automatically
- Identity-driven ACL
Enables implementation of a highly granular and flexible access security policy and VLAN assignment specific to each authenticated network user
- STP BPDU port protection
Blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- Dynamic IP lockdown
Works with DHCP protection to block traffic from unauthorized hosts, preventing IP source address spoofing
- 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
- STP root guard
Protects the root bridge from malicious attacks or configuration mistakes

- Management Interface Wizard
 - Helps secure management interfaces such as SNMP, telnet, SSH, SSL, web, and USB at the desired level
- Security banner
 - Displays a customized security policy when users log in to the switch
- Switch CPU protection
 - Provides automatic protection against malicious network traffic trying to shut down the switch
- ACLs
 - Provide filtering based on the IP field, source/destination IP address/subnet and source/destination TCP/UDP port number on a per-VLAN or per-port basis
- Multiple authentication methods
 - IEEE 802.1X
 - Authenticates multiple IEEE 802.1X users per port; prevents a user from “piggybacking” on another user’s authentication
 - Web-based authentication
 - Authenticates from web browser for clients that do not support 802.1X supplicant
 - MAC-based authentication
 - Authenticates client with the RADIUS server based on client’s MAC address
 - Concurrent authentication modes
 - Enables a switch port to accept up to 32 sessions of 802.1X, web, and MAC authentication
- Private VLAN
 - Provides network security by restricting peer-to-peer communication to prevent a variety of malicious attacks; typically, a switch port can only communicate with other ports in the same community and/or an uplink port, regardless of VLAN ID or destination MAC address

Convergence

- IP multicast snooping (data-driven IGMP)
 - Prevents flooding of IP multicast traffic
- LLDP-MED (Media Endpoint Discovery)
 - Defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to configure network devices such as IP phones automatically
- PoE allocations
 - Supports multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user-specified) to allocate PoE power for more efficient energy savings
- IP multicast routing
 - Includes PIM sparse and dense modes to route IP multicast traffic
- Auto-VLAN configuration for voice
 - RADIUS VLAN
 - Uses a standard RADIUS attribute and LLDP-MED to configure a VLAN automatically for IP phones
 - CDPv2
 - Uses CDPv2 to configure legacy IP phones
- Local MAC Authentication
 - Assigns attributes such as VLAN and QoS using locally configured profile that can be a list of MAC prefixes

Warranty and support

- Limited Lifetime Warranty

See [**hpe.com/networking/warrantysummary**](https://www.hpe.com/networking/warrantysummary) for warranty and support information included with your product purchase

- Software releases

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

Aruba 3810 Switch Series

Specifications	Aruba 3810 M 24 G 1-slot Switch (JL071A)	Aruba 3810 M 48 G 1-slot Switch (JL072A)	Aruba 3810 M 24 G PoE+ 1-slot Switch (JL073A)
Included accessories	1 Aruba 3810 Switch Fan Tray (JL088A)	1 Aruba 3810 Switch Fan Tray (JL088A)	1 Aruba 3810 Switch Fan Tray (JL088A)
I/O ports and slots	24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only; Ports 1 - 24 support MACSec 1 open module slot Supports a maximum of 4 SFP+ ports or 1 40GbE ports, with optional module	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only; Ports 1 - 48 support MACSec 1 open module slot Supports a maximum of 4 SFP+ ports or 2 40GbE ports, with optional module	24 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only; Ports 1 - 24 support MACSec 1 open module slot Supports a maximum of 4 SFP+ ports or 1 40GbE ports, with optional module
Additional ports and slots	1 stacking module slot 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 dual-personality (RJ-45 or USB micro-B)	1 stacking module slot 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 dual-personality (RJ-45 or USB micro-B)	1 stacking module slot 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 dual-personality (RJ-45 or USB micro-B)
Power supplies	2 power supply slots 1 minimum power supply required (ordered separately)	2 power supply slots 1 minimum power supply required (ordered separately)	2 power supply slots 1 minimum power supply required (ordered separately)
Fan tray	includes: 1 x JL088A 1 fan tray slot Switch ships with 1 JL088A fan tray installed. Spares ordered separately.	includes: 1 x JL088A 1 fan tray slot Switch ships with 1 JL088A fan tray installed. Spares ordered separately.	includes: 1 x JL088A 1 fan tray slot Switch ships with 1 JL088A fan tray installed. Spares ordered separately.
Physical characteristics			
Dimensions	17.42(w) x 16.98(d) x 1.73(h) in. (44.25 x 43.13 x 4.39 cm) (1U height)	17.42(w) x 16.98(d) x 1.73(h) in. (44.25 x 43.13 x 4.39 cm) (1U height)	17.42(w) x 16.98(d) x 1.73(h) in. (44.25 x 43.13 x 4.39 cm) (1U height)
Weight	12.76 lb (5.79 kg)	13.20 lb (5.99 kg)	13.02 lb (5.91 kg)

Aruba 3810 Switch Series

Specifications (continued)	Aruba 3810 M 24 G 1-slot Switch (JL071A)	Aruba 3810 M 48 G 1-slot Switch (JL072A)	Aruba 3810 M 24 G PoE+ 1-slot Switch (JL073A)
Memory and processor	P2020 Dual Core @ 1.2 GHz, 4 GB DDR3 SDRAM, 1 GB SD Card Dual ARM® Coretex A9 @ 1 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 13.5 MB Internal	P2020 Dual Core @ 1.2 GHz, 4 GB DDR3 SDRAM, 1 GB SD Card Dual ARM Coretex A9 @ 1 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 13.5 MB Internal	P2020 Dual Core @ 1.2 GHz, 4 GB DDR3 SDRAM, 1 GB SD Card Dual ARM Coretex A9 @ 1 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 13.5 MB Internal
Mounting and enclosure	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); Horizontal surface mounting only	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); Horizontal surface mounting only	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); Horizontal surface mounting only
Performance	IPv6 Ready Certified 1000 Mb Latency < 2.8 μS (FIFO 64-byte packets) 10 Gbps Latency < 1.8 μS (FIFO 64-byte packets) 40 Gbps Latency < 1.5 μS (FIFO 64-byte packets) Throughput up to 95.2 Mpps (64-byte packets) Routing/Switching capacity 160 Gbps Switch fabric speed 169 Gbps Routing table size 10000 entries (IPv4), 5000 entries (IPv6) MAC address table size 64000 entries	IPv6 Ready Certified 1000 Mb Latency < 2.8 μS (FIFO 64-byte packets) 10 Gbps Latency < 1.8 μS (FIFO 64-byte packets) 40 Gbps Latency < 1.5 μS (FIFO 64-byte packets) Throughput up to 190.5 Mpps (64-byte packets) Routing/Switching capacity 320 Gbps Switch fabric speed 338 Gbps Routing table size 10000 entries (IPv4), 5000 entries (IPv6) MAC address table size 64000 entries	IPv6 Ready Certified 1000 Mb Latency < 2.8 μS (FIFO 64-byte packets) 10 Gbps Latency < 1.8 μS (FIFO 64-byte packets) 40 Gbps Latency < 1.5 μS (FIFO 64-byte packets) Throughput up to 95.2 Mpps (64-byte packets) Routing/Switching capacity 160 Gbps Switch fabric speed 169 Gbps Routing table size 10000 entries (IPv4), 5000 entries (IPv6) MAC address table size 64000 entries
Environment	Operating temperature 32°F to 113°F (0°C to 45°C) Operating relative humidity 15% to 95% @ 104°F (40°C), noncondensing Nonoperating/Storage temperature -40°F to 158°F (-40°C to 70°C) Nonoperating/Storage relative humidity 15% to 90% @ 149°F (65°C), noncondensing up to 10,000 ft (3 km) Altitude Power: 39 dB, Pressure: 22.8 dB Acoustic	Operating temperature 32°F to 113°F (0°C to 45°C) Operating relative humidity 15% to 95% @ 104°F (40°C), noncondensing Nonoperating/Storage temperature -40°F to 158°F (-40°C to 70°C) Nonoperating/Storage relative humidity 15% to 90% @ 149°F (65°C), noncondensing up to 10,000 ft (3 km) Altitude Power: 38 dB, Pressure: 21.8 dB Acoustic	Operating temperature 32°F to 113°F (0°C to 45°C) Operating relative humidity 15% to 95% @ 104°F (40°C), noncondensing Nonoperating/Storage temperature -40°F to 158°F (-40°C to 70°C) Nonoperating/Storage relative humidity 15% to 90% @ 149°F (65°C), noncondensing up to 10,000 ft (3 km) Altitude Power: 44 dB, Pressure: 27.6 dB Acoustic
Safety	EN 60950/IEC 60950; UL 60950; UL 60950-1; CAN/CSA 22.2 No. 60950; EN 60825; CSA 22.2 60950-1; EN62479:2010; EN 60950-1:2006 +A11:2009 +A1: 2010 +A12:2011+A2:2013; EN 62368-1, Ed. 2; IEC 60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825:2007; EN60850-1:2007/IEC 60825-1; 2007 Class1 Class 1 Laser Products/ Laser Klasse 1; UL 62368-1 Ed.2	EN 60950/IEC 60950; UL 60950; UL 60950-1; CAN/CSA 22.2 No. 60950; EN 60825; CSA 22.2 60950-1; EN62479:2010; EN 60950-1:2006 +A11:2009 +A1: 2010 +A12:2011+A2:2013; EN 62368-1, Ed. 2; IEC 60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825:2007; EN60850-1:2007/IEC 60825-1; 2007 Class1 Class 1 Laser Products/ Laser Klasse 1; UL 62368-1 Ed.2	EN 60950/IEC 60950; UL 60950; UL 60950-1; CAN/CSA 22.2 No. 60950; EN 60825; CSA 22.2 60950-1; EN62479:2010; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; EN 62368-1, Ed. 2; IEC 60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825:2007; EN60850-1:2007/IEC 60825-1; 2007 Class1 Class 1 Laser Products/Laser Klasse 1; UL 62368-1 Ed.2

Aruba 3810 Switch Series

Specifications (continued)	Aruba 3810 M 24 G 1-slot Switch (JL071A)	Aruba 3810 M 48 G 1-slot Switch (JL072A)	Aruba 3810 M 24 G PoE+ 1-slot Switch (JL073A)
Emissions	FCC Class A; VCCI Class A; EN 55022/ CISPR 22 Class A; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013	FCC Class A; VCCI Class A; EN 55022/ CISPR 22 Class A; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013	FCC Class A; VCCI Class A; EN 55022/ CISPR 22 Class A; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013
Immunity			
Generic EN	EN55022: 2010	EN55022: 2010	EN55022: 2010
ESD	EN55024: 2010	EN55024: 2010	EN55024: 2010
Radiated	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
EFT/Burst	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m
Surge	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line) IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line) IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line) IEC 61000-4-5; 1 kV/2 kV AC
Conducted	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V
Power frequency magnetic field	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	IEC 61000-4-8; 1 A/m, 50 or 60 Hz
Voltage dips and interruptions	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods
Harmonics	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A
Flicker	EN61000-3-3:2008	EN61000-3-3:2008	EN61000-3-3:2008
Management	Aruba AirWave Network Management; IMC—Intelligent Management Center; Command-line interface; web browser; Configuration menu; Out-of-band management (RJ-45 Ethernet); In-line and out-of-band; Out-of-band management (serial RS-232c or micro USB)	Aruba AirWave Network Management; IMC—Intelligent Management Center; Command-line interface; web browser; Configuration menu; Out-of-band management (RJ-45 Ethernet); In-line and out-of-band; Out-of-band management (serial RS-232c or micro USB)	Aruba AirWave Network Management; IMC—Intelligent Management Center; Command-line interface; web browser; Configuration menu; Out-of-band management (RJ-45 Ethernet); In-line and out-of-band; Out-of-band management (serial RS-232c or micro USB)
Services	Refer to the HPE website at hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HPE sales office.	Refer to the HPE website at hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HPE sales office.	Refer to the HPE website at hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HPE sales office.

Aruba 3810 Switch Series

Specifications (continued)	Aruba 3810 M 48 G PoE+ 1-slot Switch (JL074A)	Aruba 3810 M 16SFP+ 2-slot Switch (JL075A)	Aruba 3810 M 40 G 8 HPE Smart Rate PoE+ 1-slot Switch (JL076A)
Included accessories	1 Aruba 3810 Switch Fan Tray (JL088A)	1 Aruba 3810 Switch Fan Tray (JL088A)	1 Aruba 3810 Switch Fan Tray (JL088A)
I/O ports and slots	48 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only; Ports 1—48 support MACSec 1 open module slot Supports a maximum of 4 SFP+ ports or 2 40GbE ports, with optional module	16 SFP+ fixed 1000/10000 SFP+ ports; Duplex: 100BASE-TX: half or full; 1000BASE-T: full only; Ports 1—16 support MACSec 2 open module slots Supports a maximum of 8 SFP+ ports or 2 40GbE ports, with optional module	40 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only; Ports 1—40 support MACSec 8 RJ-45 HPE Smart Rate Multi-Gigabit ports; Ports 1—8 support MACSec 1 open module slot Supports a maximum of 4 SFP+ ports or 2 40GbE ports, with optional module
Additional ports and slots	1 stacking module slot 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 dual-personality (RJ-45 or USB micro-B)	1 stacking module slot 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 dual-personality (RJ-45 or USB micro-B)	1 stacking module slot 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 dual-personality (RJ-45 or USB micro-B)
Power supplies	2 power supply slots 1 minimum power supply required (ordered separately)	2 power supply slots 1 minimum power supply required (ordered separately)	2 power supply slots 1 minimum power supply required (ordered separately)
Fan tray	includes: 1 x JL088A 1 fan tray slot Switch ships with 1 JL088A fan tray installed. Spares ordered separately.	includes: 1 x JL088A 1 fan tray slot Switch ships with 1 JL088A fan tray installed. Spares ordered separately.	includes: 1 x JL088A 1 fan tray slot Switch ships with 1 JL088A fan tray installed. Spares ordered separately.
Physical characteristics			
Dimensions	17.42(w) x 16.98(d) x 1.73(h) in. (44.25 x 43.13 x 4.39 cm) (1U height)	17.42(w) x 16.98(d) x 1.73(h) in. (44.25 x 43.13 x 4.39 cm) (1U height)	17.42(w) x 16.98(d) x 1.73(h) in. (44.25 x 43.13 x 4.39 cm) (1U height)
Weight	13.62 lb (6.18 kg)	13.28 lb (6.02 kg)	13.61 lb (6.17 kg)
Memory and processor	P2020 Dual Core @ 1.2 GHz, 4 GB DDR3 SDRAM, 1 GB SD Card Dual ARM Coretex A9 @ 1 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 13.5 MB Internal	P2020 Dual Core @ 1.2 GHz, 4 GB DDR3 SDRAM, 1 GB SD Card Dual ARM Coretex A9 @ 1 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 13.5 MB Internal	P2020 Dual Core @ 1.2 GHz, 4 GB DDR3 SDRAM, 1 GB SD Card Dual ARM Coretex A9 @ 1 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 13.5 MB Internal
Mounting and enclosure	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); Horizontal surface mounting only	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); Horizontal surface mounting only	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); Horizontal surface mounting only

Aruba 3810 Switch Series

Specifications (continued)	Aruba 3810 M 48 G PoE+ 1-slot Switch (JL074A)	Aruba 3810 M 16SFP+ 2-slot Switch (JL075A)	Aruba 3810 M 40 G 8 HPE Smart Rate PoE+ 1-slot Switch (JL076A)
Performance			
1000 Mb Latency	IPv6 Ready Certified < 2.8 μS (FIFO 64-byte packets)	IPv6 Ready Certified < 2.8 μS (FIFO 64-byte packets)	IPv6 Ready Certified < 2.8 μS (FIFO 64-byte packets)
10 Gbps Latency	< 1.8 μS (FIFO 64-byte packets)	< 1.8 μS (FIFO 64-byte packets)	< 1.8 μS (FIFO 64-byte packets)
40 Gbps Latency	< 1.5 μS (FIFO 64-byte packets)	< 1.5 μS (FIFO 64-byte packets)	< 1.5 μS (FIFO 64-byte packets)
Throughput	up to 190.5 Mpps (64-byte packets)	up to 285.7 Mpps (64-byte packets)	up to 273.8 Mpps (64-byte packets)
Routing/Switching capacity	320 Gbps	480 Gbps	480 Gbps
Switch fabric speed	338 Gbps	508 Gbps	508 Gbps
Routing table size	10000 entries (IPv4), 5000 entries (IPv6)	10000 entries (IPv4), 5000 entries (IPv6)	10000 entries (IPv4), 5000 entries (IPv6)
MAC address table size	64000 entries	64000 entries	64000 entries
Environment			
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	15% to 95% @ 104°F (40°C), noncondensing	15% to 95% @ 104°F (40°C), noncondensing	15% to 95% @ 104°F (40°C), 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	15% to 90% @ 149°F (65°C), noncondensing	15% to 90% @ 149°F (65°C), noncondensing	15% to 90% @ 149°F (65°C), noncondensing
Altitude	up to 10,000 ft (3 km)	up to 10,000 ft (3 km)	up to 10,000 ft (3 km)
Acoustic	Power: 47 dB, Pressure: 29.4 dB	Power: 39 dB, Pressure: 22.3 dB	Power: 49 dB, Pressure: 31.5 dB
Safety			
	EN 60950/IEC 60950; UL 60950; UL 60950-1; CAN/CSA 22.2 No. 60950; EN 60825; CSA 22.2 60950-1; EN62479:2010; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; EN 62368-1, Ed. 2; IEC 60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825:2007; EN60850-1:2007/IEC 60825-1: 2007 Class1 Class 1 Laser Products/Laser Klasse 1; UL 62368-1 Ed.2	EN 60950/IEC 60950; UL 60950; UL 60950-1; CAN/CSA 22.2 No. 60950; EN 60825; CSA 22.2 60950-1; EN62479:2010; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; EN 62368-1, Ed. 2; IEC 60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825:2007; EN60850-1:2007/IEC 60825-1: 2007 Class1 Class 1 Laser Products/Laser Klasse 1; UL 62368-1 Ed.2	EN 60950/IEC 60950; UL 60950; UL 60950-1; CAN/CSA 22.2 No. 60950; EN 60825; CSA 22.2 60950-1; EN62479:2010; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; EN 62368-1, Ed. 2; IEC 60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825:2007; EN60850-1:2007/IEC 60825-1: 2007 Class1 Class 1 Laser Products/Laser Klasse 1; UL 62368-1 Ed.2

Aruba 3810 Switch Series

Specifications (continued)	Aruba 3810 M 48 G PoE+ 1-slot Switch (JL074A)	Aruba 3810 M 16SFP+ 2-slot Switch (JL075A)	Aruba 3810 M 40G 8 HPE Smart Rate PoE+ 1-slot Switch (JL076A)
Emissions	FCC Class A; VCCI Class A; EN 55022/ CISPR 22 Class A; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013	FCC Class A; VCCI Class A; EN 55022/ CISPR 22 Class A; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013	FCC Class A; VCCI Class A; EN 55022/ CISPR 22 Class A; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013
Immunity			
Generic	EN55022: 2010	EN55022: 2010	EN55022: 2010
EN	EN55024: 2010	EN55024: 2010	EN55024: 2010
ESD	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m
EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
Surge	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC
Conducted	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V
Power frequency magnetic field	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	IEC 61000-4-8; 1 A/m, 50 or 60 Hz
Voltage dips and interruptions	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods
Harmonics	EN61000-3-2:2006 +A1:2009	EN61000-3-2:2006 +A1:2009	EN61000-3-2:2006 +A1:2009
Flicker	+A2:2009 Class A EN61000-3-3:2008	+A2:2009 Class A EN61000-3-3:2008	+A2:2009 Class A EN61000-3-3:2008
Management	Aruba AirWave Network Management; IMC—Intelligent Management Center; Command-line interface; web browser; Configuration menu; Out-of-band management (RJ-45 Ethernet); In-line and out-of-band; Out-of-band management (serial RS-232c or micro USB)	Aruba AirWave Network Management; IMC—Intelligent Management Center; Command-line interface; web browser; Configuration menu; Out-of-band management (RJ-45 Ethernet); In-line and out-of-band; Out-of-band management (serial RS-232c or micro USB)	Aruba AirWave Network Management; IMC—Intelligent Management Center; Command-line interface; web browser; Configuration menu; Out-of-band management (RJ-45 Ethernet); In-line and out-of-band; Out-of-band management (serial RS-232c or micro USB)
Services	Refer to the HPE website at hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HPE sales office.	Refer to the HPE website at hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HPE sales office.	Refer to the HPE website at hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HPE sales office.

Aruba 3810 Switch Series

Specifications	Aruba 3810M 48G PoE+ 4SFP+ 680W Switch (JL428A)	Aruba 3810M 48G PoE+ 4SFP+ 1050W Switch (JL429A)	Aruba 3810M 24SFP+ 250W Switch (JL430A)
Included accessories	1 Aruba 3810 Switch Fan Tray (JL088A) 1 Aruba 3810M 4SFP+ Module (JL083A) 1 Aruba X372 54VDC 680W 100-240VAC Power Supply (JL086A)	1 Aruba 3810 Switch Fan Tray (JL088A) 1 Aruba 3810M 4SFP+ Module (JL083A) 1 Aruba X372 54VDC 1050W 110-240VAC Power Supply (JL087A)	1 Aruba 3810 Switch Fan Tray (JL088A) 2 Aruba 3810M 4SFP+ Module (JL083A) 1 Aruba X371 12VDC 250W 100-240VAC Power Supply (JL085A)
I/O Ports	48 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only; Ports 1—48 support MACSec Supports a maximum of 4 SFP+ ports or 2 40GbE ports, with optional module	48 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only; Ports 1—48 support MACSec Supports a maximum of 4 SFP+ ports or 2 40GbE ports, with optional module	24 SFP+ fixed 1000/10000 SFP+ ports; Duplex: 100BASE-TX: half or full; 1000BASE-T: full only; Ports 1—24 support MACSec Supports a maximum of 24 SFP+ ports or 2 40GbE ports, with optional module(s)
Additional ports and slots	1 stacking module slot 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 dual-personality (RJ-45 or USB micro-B)	1 stacking module slot 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 dual-personality (RJ-45 or USB micro-B)	1 stacking module slot 1 RJ-45 serial console port 1 RJ-45 out-of-band management port 1 dual-personality (RJ-45 or USB micro-B)
Power supplies	2 power supply slots 1 power supply included 1 minimum power supply required (ordered separately)	2 power supply slots 1 power supply included 1 minimum power supply required (ordered separately)	2 power supply slots 1 power supply included 1 minimum power supply required (ordered separately)
Fan tray	Includes: 1 x JL088A 1 fan tray slot Switch ships with 1 JL088A fan tray installed. Spares ordered separately.	Includes: 1 x JL088A 1 fan tray slot Switch ships with 1 JL088A fan tray installed. Spares ordered separately.	Includes: 1 x JL088A 1 fan tray slot Switch ships with 1 JL088A fan tray installed. Spares ordered separately.
Physical characteristics			
Dimensions	17.42(w) x 16.98(d) x 1.73(h) in. (44.25 x 43.13 x 4.39 cm) (1U height)	17.42(w) x 16.98(d) x 1.73(h) in. (44.25 x 43.13 x 4.39 cm) (1U height)	17.42(w) x 16.98(d) x 1.73(h) in. (44.25 x 43.13 x 4.39 cm) (1U height)
Weight	15.82 lb (7.18 kg)	15.94 lb (7.23 kg)	15.56 lb (7.06 kg)
Memory and processor	P2020 Dual Core @ 1.2 GHz, 4 GB DDR3 SDRAM, 1 GB SD Card Dual ARM Coretex A9 @ 1 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 13.5 MB Internal	P2020 Dual Core @ 1.2 GHz, 4 GB DDR3 SDRAM, 1 GB SD Card Dual ARM Coretex A9 @ 1 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 13.5 MB Internal	P2020 Dual Core @ 1.2 GHz, 4 GB DDR3 SDRAM, 1 GB SD Card Dual ARM Coretex A9 @ 1 GHz, 2 GB DDR3 SDRAM; Packet buffer size: 13.5 MB Internal
Mounting and enclosure	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); Horizontal surface mounting only	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); Horizontal surface mounting only	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); Horizontal surface mounting only
Performance			
1000 Mb Latency	IPv6 Ready Certified	IPv6 Ready Certified	IPv6 Ready Certified
10 Gbps Latency	< 2.8 μS (FIFO 64-byte packets)	< 2.8 μS (FIFO 64-byte packets)	< 2.8 μS (FIFO 64-byte packets)
40 Gbps Latency	< 1.8 μS (FIFO 64-byte packets)	< 1.8 μS (FIFO 64-byte packets)	< 1.8 μS (FIFO 64-byte packets)
Throughput	< 1.5 μS (FIFO 64-byte packets)	< 1.5 μS (FIFO 64-byte packets)	< 1.5 μS (FIFO 64-byte packets)
Routing/Switching capacity	up to 190.5 Mpps (64-byte packets)	up to 190.5 Mpps (64-byte packets)	up to 285.7 Mpps (64-byte packets)
Switch fabric speed	320 Gbps	320 Gbps	480 Gbps
Routing table size	338 Gbps	338 Gbps	508 Gbps
MAC address table size	10000 entries (IPv4), 5000 entries (IPv6) 64000 entries	10000 entries (IPv4), 5000 entries (IPv6) 64000 entries	10000 entries (IPv4), 5000 entries (IPv6) 64000 entries

Aruba 3810 Switch Series

Specifications (continued)	Aruba 3810M 48G PoE+ 4SFP+ 680W Switch (JL428A)	Aruba 3810M 48G PoE+ 4SFP+ 1050W Switch (JL429A)	Aruba 3810M 24SFP+ 250W Switch (JL430A)
Environment			
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	15% to 95% @ 104°F (40°C), noncondensing	15% to 95% @ 104°F (40°C), noncondensing	15% to 95% @ 104°F (40°C), 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	15% to 90% @ 149°F (65°C), noncondensing up to 10,000 ft (3 km)	15% to 90% @ 149°F (65°C), noncondensing up to 10,000 ft (3 km)	15% to 90% @ 149°F (65°C), noncondensing up to 10,000 ft (3 km)
Altitude	Power: 47 dB, Pressure: 29.4 dB	Power: 47 dB, Pressure: 29.4 dB	Power: 39 dB, Pressure: 22.3 dB
Acoustic			
Safety	EN 60950/IEC 60950; UL 60950; UL 60950-1; CAN/CSA 22.2 No. 60950; EN 60825; CSA 22.2 60950-1; EN62479:2010; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; EN 62368-1, Ed. 2; IEC 60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825:2007; EN60850-1:2007/IEC 60825-1:2007 Class1 Class 1 Laser Products/Laser Klasse 1; UL 62368-1 Ed.2	EN 60950/IEC 60950; UL 60950; UL 60950-1; CAN/CSA 22.2 No. 60950; EN 60825; CSA 22.2 60950-1; EN62479:2010; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; EN 62368-1, Ed. 2; IEC 60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825:2007; EN60850-1:2007/IEC 60825-1:2007 Class1 Class 1 Laser Products/Laser Klasse 1; UL 62368-1 Ed.2	EN 60950/IEC 60950; UL 60950; UL 60950-1; CAN/CSA 22.2 No. 60950; EN 60825; CSA 22.2 60950-1; EN62479:2010; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; EN 62368-1, Ed. 2; IEC 60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825:2007; EN60850-1:2007/IEC 60825-1:2007 Class1 Class 1 Laser Products/Laser Klasse 1; UL 62368-1 Ed.2
Emissions	FCC Class A; VCCI Class A; EN 55022/ CISPR 22 Class A; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013	FCC Class A; VCCI Class A; EN 55022/ CISPR 22 Class A; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013	FCC Class A; VCCI Class A; EN 55022/ CISPR 22 Class A; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013
Immunity			
Generic	EN55022: 2010	EN55022: 2010	EN55022: 2010
EN	EN55024: 2010	EN55024: 2010	EN55024: 2010
ESD	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m	IEC 61000-4-3; 3 V/m
EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
Surge	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC	IEC 61000-4-5; 1 kV/2 kV AC
Conducted	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V	IEC 61000-4-6; 3 V
Power frequency magnetic field	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	IEC 61000-4-8; 1 A/m, 50 or 60 Hz	IEC 61000-4-8; 1 A/m, 50 or 60 Hz
Voltage dips and interruptions	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods	IEC 61000-4-11; >95% reductions, 0.5 period; 30% reduction, 25 periods
Harmonics	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A
Flicker	EN61000-3-3:2008	EN61000-3-3:2008	EN61000-3-3:2008
Management	Aruba AirWave Network Management; IMC—Intelligent Management Center; Command-line interface; web browser; Configuration menu; Out-of-band management (RJ-45 Ethernet); In-line and out-of-band; Out-of-band management (serial RS-232c or micro USB)	Aruba AirWave Network Management; IMC—Intelligent Management Center; Command-line interface; web browser; Configuration menu; Out-of-band management (RJ-45 Ethernet); In-line and out-of-band; Out-of-band management (serial RS-232c or micro USB)	Aruba AirWave Network Management; IMC—Intelligent Management Center; Command-line interface; web browser; Configuration menu; Out-of-band management (RJ-45 Ethernet); In-line and out-of-band; Out-of-band management (serial RS-232c or micro USB)
Services	Refer to the HPE website at hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HPE sales office.	Refer to the HPE website at hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HPE sales office.	Refer to the HPE website at hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HPE sales office.

Standards and protocols
(applies to all products in series)

BGP	RFC 1997 BGP Communities Attribute RFC 2918 Route Refresh Capability	RFC 4271 A Border Gateway Protocol 4 (BGP-4) RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP)	RFC 4724 Graceful Restart Mechanism for BGP RFC 5492 Capabilities Advertisement with BGP-4
Denial of service protection		CPU DoS Protection	
Device management	RFC 1591 DNS (client) HTML and telnet management	RFC 2576 (Coexistence between SNMP V1, V2, V3) RFC 2579 (SMIPv2 Text Conventions)	RFC 2580 (SMIPv2 Conformance) RFC 3416 (SNMP Protocol Operations v2) RFC 3417 (SNMP Transport Mappings)
General protocols	IEEE 802.1ad Q-in-Q IEEE 802.1AX-2008 Link Aggregation IEEE 802.1D MAC Bridges IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1s Multiple Spanning Trees IEEE 802.1v VLAN classification by Protocol and Port IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3af Power over Ethernet IEEE 802.3x Flow Control RFC 768 UDP RFC 783 TFTP Protocol (revision 2) RFC 792 ICMP	RFC 793 TCP RFC 826 ARP RFC 854 TELNET RFC 868 Time Protocol RFC 951 BOOTP RFC 1058 RIPv1 RFC 1350 TFTP Protocol (revision 2) RFC 1519 CIDR RFC 1542 BOOTP Extensions RFC 1918 Address Allocation for Private Internet RFC 2030 Simple Network Time Protocol (SNTP) v4 RFC 2131 DHCP RFC 2453 RIPv2 RFC 2548 (MS-RAS-Vendor only)	RFC 3046 DHCP Relay Agent Information Option RFC 3575 IANA Considerations for RADIUS RFC 3576 Ext to RADIUS (CoA only) RFC 3768 VRRP RFC 4675 RADIUS VLAN & Priority RFC 5798 VRRP (exclude Accept Mode and sub-sec timer) RFC 5880 Bidirectional Forwarding Detection RFC 5905 Network Time Protocol Version 4: Protocol and Algorithms Specification UDLD (Uni-directional Link Detection)
IP multicast	RFC 3376 IGMPv3	RFC 3973 PIM Dense Mode	RFC 4601 PIM Sparse Mode
IPv6	RFC 1981 IPv6 Path MTU Discovery RFC 2080 RIPng for IPv6 RFC 2081 RIPng Protocol Applicability Statement RFC 2082 RIP-2 MD5 RFC 2375 IPv6 Multicast Address Assignments RFC 2460 IPv6 Specification RFC 2464 Transmission of IPv6 over Ethernet Networks RFC 2710 Multicast Listener Discovery (MLD) for IPv6 RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only) RFC 3019 MLDv1 MIB RFC 3315 DHCPv6 (client only) RFC 3484 Default Address Selection for IPv6	RFC 3587 IPv6 Global Unicast Address Format RFC 3596 DNS Extension for IPv6 RFC 3810 MLDv2 (host joins only) RFC 4022 MIB for TCP RFC 4087 IP Tunnel MIB RFC 4113 MIB for UDP RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers RFC 4251 SSHv6 Architecture RFC 4252 SSHv6 Authentication RFC 4253 SSHv6 Transport Layer RFC 4254 SSHv6 Connection RFC 4291 IP Version 6 Addressing Architecture RFC 4293 MIB for IP RFC 4294 IPv6 Node Requirements	RFC 4419 Key Exchange for SSH RFC 4443 ICMPv6 RFC 4541 IGMP & MLD Snooping Switch RFC 4861 IPv6 Neighbor Discovery RFC 4862 IPv6 Stateless Address Auto-configuration RFC 5095 Deprecation of Type 0 Routing Headers in IPv6 RFC 5340 OSPFv3 for IPv6 RFC 5453 Reserved IPv6 Interface Identifiers RFC 5519 Multicast Group Membership Discovery MIB (MLDv2 only) RFC 5722 Handling of Overlapping IPv6 Fragments RFC 6620 FCFS SAVI draft-ietf-savi-mix

Standards and protocols
(applies to all products in series)

MIBs	IEEE 802.1ap (MSTP and STP MIB's only) IEEE 8021-Bridge-MIB (2008) IEEE 8021-Q-Bridge-MIB (2008) RFC 1155 Structure & ID of Mgmt Info for TCP/IP Internets RFC 1213 MIB II RFC 1493 Bridge MIB RFC 1724 RIPv2 MIB RFC 1850 OSPFv2 MIB RFC 2021 RMONv2 MIB RFC 2096 IP Forwarding Table MIB RFC 2578 Structure of Management Information Version 2 (SMIv2) RFC 2613 SMON MIB	RFC 2618 RADIUS Client MIB RFC 2620 RADIUS Accounting MIB RFC 2665 Ethernet-Like-MIB RFC 2668 802.3 MAU MIB RFC 2674 802.1p and IEEE 802.1Q Bridge MIB RFC 2737 Entity MIB (Version 2) RFC 2787 VRRP MIB RFC 2863 The Interfaces Group MIB RFC 2925 Ping MIB RFC 2932 IP (Multicast Routing MIB) RFC 2933 IGMP MIB RFC 3411 SNMP Management Frameworks	RFC 3412 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP) RFC 3413 Simple Network Management Protocol (SNMP) Applications 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 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP) RFC 4836 Managed Objects for 802.3 Medium Attachment Units (MAU) RFC 7331 BFD MIB
Network management	IEEE 802.1AB Link Layer Discovery Protocol (LLDP) RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)	RFC 3176 sFlow RFC 5424 Syslog Protocol ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)	SNMPv1/v2c/v3 XRMON
OSPF	RFC 2328 OSPFv2 RFC 3101 OSPF NSSA	RFC 3623 Graceful OSPF Restart (Unplanned Outages only)	RFC 5340 OSPFv3 for IPv6
QoS/CoS	RFC 2474 DiffServ Precedence, including 8 queues/port RFC 2475 DiffServ Architecture	RFC 2597 DiffServ Assured Forwarding (AF)	RFC 2598 DiffServ Expedited Forwarding (EF)
Security	IEEE 802.1X Port Based Network Access Control RFC 1321 The MD5 Message-Digest Algorithm RFC 1492 TACACS+ RFC 2818 HTTP Over TLS	RFC 2865 RADIUS (client only) RFC 2866 RADIUS Accounting RFC 3579 RADIUS Support For Extensible Authentication Protocol (EAP)	Secure Sockets Layer (SSL) SSHv2 Secure Shell

Aruba 3810 Switch Series

Modules	<p>Aruba 3810 M 4-port Stacking Module (JL084A) Aruba 3810 M 4SFP+ Module (JL083A) Aruba 3810 M 1QSFP+ 40GbE Module (JL078A) Aruba 3810 M 2QSFP+ 40GbE Module (JL079A)</p>
Transceivers	<p>HPE X111 100 M SFP LC FX Transceiver (J9054C) HPE X121 1 G SFP LC SX Transceiver (J4858C) HPE X121 1 G SFP LC LX Transceiver (J4859C) HPE X121 1 G SFP LC LH Transceiver (J4860C) HPE X121 1 G SFP RJ45 T Transceiver (J8177C) HPE X122 1 G SFP LC BX-D Transceiver (J9142B) HPE X122 1 G SFP LC BX-U Transceiver (J9143B) HPE X132 10 G SFP+ LC SR Transceiver (J9150A) HPE X132 10 G SFP+ LC LR Transceiver (J9151A) HPE X132 10 G SFP+ LC LRM Transceiver (J9152A) HPE X132 10 G SFP+ LC ER Transceiver (J9153A) HPE X142 40 G QSFP+ MPO SR4 Transceiver (JH231A) HPE X142 40 G QSFP+ MPO CSR4 300M Transceiver (JH233A) HPE X142 40 G QSFP+ LC LR4 SM Transceiver (JH232A) HPE X242 10 G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281B) HPE X242 10 G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283B) HPE X242 10 G SFP+ to SFP+ 7m Direct Attach Copper Cable (J9285B) HPE X244 10 G XFP to SFP+ 1m Direct Attach Copper Cable (J9300A) HPE X244 10 G XFP to SFP+ 3m Direct Attach Copper Cable (J9301A) HPE X244 10 G XFP to SFP+ 3m Direct Attach Copper Cable (J9302A) HPE X242 40 G QSFP+ to QSFP+ 1m Direct Attach Copper Cable (JH234A) HPE X242 40 G QSFP+ to QSFP+ 3m DAC Cable (JH235A) HPE X242 40 G QSFP+ to QSFP+ 5m DAC Cable (JH236A)</p>
Cables	<p>HPE 3800 0.5m Stacking Cable (J9578A) HPE 3800 1m Stacking Cable (J9665A) HPE 3800 3m Stacking Cable (J9579A) HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable (QK732A) HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable (QK733A) HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable (QK734A) HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable (QK735A) HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable (QK736A) HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable (QK737A)</p>
Power supply	<p>Aruba X371 12VDC 250W 100–240VAC Power Supply (JL085A) Aruba X372 54VDC 680W 100–240VAC Power Supply (JL086A) Aruba X372 54VDC 1050W 110–240VAC Power Supply (JL087A)</p>
Fan tray	<p>Aruba 3810 Switch Fan Tray (JL088A)</p>
Mounting kit	<p>HPE X410 1U Universal 4-post Rack Mounting Kit (J9583A)</p>

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