QuickSpecs

Overview

Aruba 3810 Switch Series

Models

Aruba 3810M 24G 1-slot Switch	JL071A
Aruba 3810M 48G 1-slot Switch	JL072A
Aruba 3810M 24G PoE+ 1-slot Switch	JL073A
Aruba 3810M 48G PoE+ 1-slot Switch	JL074A
Aruba 3810M 16SFP+ 2-slot Switch	JL075A
Aruba 3810M 40G 8 HPE Smart Rate PoE+ 1-slot Switch	JL076A

Key features

- Powerful Aruba Layer 3 switch series with backplane stacking, low latency and resiliency
- HPE Smart Rate for high-speed multigigabit capacity and PoE+ power
- Modular line rate 10GbE and 40GbE ports for wireless aggregation
- Full PoE+ on all 48 ports for power-hungry high-speed wireless APs
- Ready 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. Rightsize 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, 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, Optimizer, and Protector Applications. Delivers consistent wired and wireless user experience by supporting ClearPass Policy Manager and AirWave Network Management.

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

Overview

- **Switch auto-configuration**
  automatically configures switch for rogue AP detection, add VLAN, and set PoE priority when Aruba AP is detected

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, 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 Hewlett Packard Enterprise Comware CLI users who are using the ProVision 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**

Overview

when Comware commands are entered, CLI help is elicited to formulate the correct ProVision software CLI command

- **Zero-Touch ProVisioning (ZTP)**
  uses settings in DHCP to enable ZTP with Aruba AirWave Network Management
- **Unidirectional Link Detection (UDLD)**
  support 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

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 **http://www.hp.com/networking**)
- **Choice of uplinks**:
  - **SFP+ uplink models**: provide fiber-optic (up to 70 km) or direct-attach-cable (DAC) connectivity
  - **10GBASE-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 Gb/s of stacking throughput; each 4-port stacking module can support up to 42 Gb/s 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
- **HPE ProVision ASIC architecture**

Overview

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 dynamically back each other up 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 24 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 4096 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+
- **Hewlett Packard Enterprise 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

Overview

- **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 static routing, 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 RIPng routing

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 automatically throttle ICMP traffic
- **Virus throttling**

Overview

detects traffic patterns typical of worm-type viruses and either throttles or entirely prevents the virus from spreading across the routed VLANs or bridged interfaces without requiring external appliances

- **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 automatically configure network devices such as IP phones
- **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 (requires the premium license)**

Overview

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 automatically configure a VLAN 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 **http://www.hp.com/networking/warrantysummary** for warranty and support information included with your product purchase.
- **Software releases**
  to find software for your product, refer to **http://www.hp.com/networking/support**; for details on the software releases available with your product purchase, refer to **http://www.hp.com/networking/warrantysummary**

Configuration

Build To Order:

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

Aruba 3810M 24G 1-slot Swch   JL071A
- 24 RJ-45 autosensing 10/100/1000 ports
- 1 open stacking module slot
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 48G 1-slot Swch   JL072A
- 48 RJ-45 autosensing 10/100/1000 ports
- 1 open stacking module slot
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 24G PoE+ 1-slot Swch   JL073A
- 24 RJ-45 autosensing 10/100/1000 PoE+ ports
- 1 open stacking module slot
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 48G PoE+ 1-slot Swch   JL074A
- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 1 open stacking module slot
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 16SFP+ 2-slot Swch   JL075A
- 16 fixed 1000/10000 SFP+ ports   See Configuration
- min=0 \ max=16 SFP+ Transceivers   **NOTE:**1
- 1 open stacking module slot
- 2 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 40G 8SR PoE+ 1-slot Swch   JL076A
- 40 RJ-45 autosensing 10/100/1000 PoE+ ports
- 8 RJ-45 1/2.5/5/XGT PoE+ ports
- 1 open stacking module slot
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Configuration

Configuration Rules:

NOTE 1   **The following Transceivers install into this Switch (For the 1000/10000 SFP+ Ports):**

HP X121 1G SFP LC LH Transceiver	J4860C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X121 1G SFP LC SX Transceiver	J4858C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HP X121 1G SFP RJ45 T Transceiver	J8177C
HP X132 10G SFP+ LC SR Transceiver	J9150A
HP X132 10G SFP+ LC ER Transceiver	J9153A
HP X132 10G SFP+ LC LR Transceiver	J9151A
HP X132 10G SFP+ LC LRM Transceiver	J9152A
HP X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HP X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
HP X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A

Box Level Integration CTO Models

CTO Solution SKU

HP 38xx CTO Switch Solution   JG501A
- SSP trigger SKU

CTO Switch Chassis

Aruba 3810M 24G 1-slot Swch   JL071A
- 24 RJ-45 autosensing 10/100/1000 ports   See Configuration
- 1 open stacking module slot   **NOTE:**10, 11
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 48G 1-slot Swch   JL072A
- 48 RJ-45 autosensing 10/100/1000 ports   See Configuration
- 1 open stacking module slot   **NOTE:**10, 11
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 24G PoE+ 1-slot Swch   JL073A
- 24 RJ-45 autosensing 10/100/1000 PoE+ ports   See Configuration
- 1 open stacking module slot   **NOTE:**10, 11

Configuration

- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 48G PoE+ 1-slot Swch   JL074A
- 48 RJ-45 autosensing 10/100/1000 PoE+ ports   See Configuration
- 1 open stacking module slot   **NOTE:**10, 11
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 16SFP+ 2-slot Swch   JL075A
- 16 fixed 1000/10000 SFP+ ports   See Configuration
- min=0 \ max=16 SFP+ Transceivers   **NOTE:**1, 10, 11
- 1 open stacking module slot
- 2 open uplink module slot
- 1 Power Supply required (Max 2)
  1U - Height

Aruba 3810M 40G 8SR PoE+ 1-slot Swch   JL076A
- 40 RJ-45 autosensing 10/100/1000 PoE+ ports   See Configuration
- 8 RJ-45 1/2.5/5/XGT PoE+ ports   **NOTE:**10, 11
- 1 open stacking module slot
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Configuration Rules:

NOTE 1   **The following Transceivers install into this Switch (For the 1000/10000 SFP+ Ports):**

HP X121 1G SFP LC LH Transceiver	J4860C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X121 1G SFP LC SX Transceiver	J4858C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HP X121 1G SFP RJ45 T Transceiver	J8177C
HP X132 10G SFP+ LC SR Transceiver	J9150A
HP X132 10G SFP+ LC ER Transceiver	J9153A
HP X132 10G SFP+ LC LR Transceiver	J9151A
HP X132 10G SFP+ LC LRM Transceiver	J9152A
HP X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HP X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
HP X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A

NOTE 10   **If the Switch Chassis is to be Factory Integrated (CTO), Then the #0D1 is required on the**

Configuration

Switch Chassis and integrated to the JG501A - HP 3800 CTO Enablement. (Min 1/Max 1 Switch per SSP)

NOTE 11   If this Switch is selected, Then a Minimum of 1 factory integrated accessory must be ordered and integrated to CTO chassis. See Menu below, option must have a #0D1 to be integrated to the CTO Chassis.

Rack Level Integration CTO Models

Aruba 3810M 24G 1-slot Swch   JL071A
- 24 RJ-45 autosensing 10/100/1000 ports   See Configuration
- 1 open stacking module slot   **NOTE:**10, 11
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 48G 1-slot Swch   JL072A
- 48 RJ-45 autosensing 10/100/1000 ports   See Configuration
- 1 open stacking module slot   **NOTE:**10, 11
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 24G PoE+ 1-slot Swch   JL073A
- 24 RJ-45 autosensing 10/100/1000 PoE+ ports   See Configuration
- 1 open stacking module slot   **NOTE:**10, 11
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 48G PoE+ 1-slot Swch   JL074A
- 48 RJ-45 autosensing 10/100/1000 PoE+ ports   See Configuration
- 1 open stacking module slot   **NOTE:**10, 11
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 16SFP+ 2-slot Swch   JL075A
- 16 fixed 1000/10000 SFP+ ports   See Configuration
- min=0 \ max=16 SFP+ Transceivers   **NOTE:**1, 10, 11
- 1 open stacking module slot
- 2 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Aruba 3810M 40G 8SR PoE+ 1-slot Swch   JL076A
- 40 RJ-45 autosensing 10/100/1000 PoE+ ports   See Configuration
- 8 RJ-45 1/2.5/5/XGT PoE+ ports   **NOTE:**10, 11
- 1 open stacking module slot

Configuration

- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U - Height

Configuration Rules:

NOTE 1   The following Transceivers install into this Switch (For the 1000/10000 SFP+ Ports):

HP X121 1G SFP LC LH Transceiver	J4860C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X121 1G SFP LC SX Transceiver	J4858C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HP X121 1G SFP RJ45 T Transceiver	J8177C
HP X132 10G SFP+ LC SR Transceiver	J9150A
HP X132 10G SFP+ LC ER Transceiver	J9153A
HP X132 10G SFP+ LC LR Transceiver	J9151A
HP X132 10G SFP+ LC LRM Transceiver	J9152A
HP X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HP X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
HP X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A

NOTE 10   If switch is 0D1 to Racks, then the J9583A#0D1 is also required.

NOTE 11   If the CTO Switch Chassis needs to be racked, Then the CTO Base Model needs to integrate (with #0D1) to the HP Network Rack.

Enter the following menu selections as integrated to the CTO Model X switch above if order is factory built.

Modules

Stacking Modules

System (std 0 // max=1) User Selection (min 0 / max=1) per Chassis

Aruba 3810M 4-port Stacking Module	JL084A
• min=0 \ max=4 Stacking cables	See Configuration
	NOTE:1

Configuration Rules:

NOTE 1   The following Cables install into this Module: (Use #B01 quoted to switch if switch is CTO) - if applicable

HP 3800 0.5m Stacking Cable	J9578A
HP 3800 1m Stacking Cable	J9665A

Configuration

HP 3800 3m Stacking Cable	J9579A

Uplink Modules

JL071A, JL072A, JL073A, JL074A, JL076A Only System (std 0 // max 1) User Selection (min 0 / max 1) per Chassis

JL075A Only System (std 0 // max 2) User Selection (min 0 / max 2) per Chassis

Aruba 3810M 1QSFP+ 40GbE Module   JL078A
- min=0 \ max=1 QSFP+ Transceiver   See Configuration **NOTE:**1

Aruba 3810M 2QSFP+ 40GbE Module   JL079A
- min=0 \ max=1 QSFP+ Transceiver   See Configuration **NOTE:**1

Aruba 3810M 4SFP+ Module   JL083A
- min=0 \ max=2 SFP+ Transceivers   See Configuration **NOTE:**2

Configuration Rules:

NOTE 1   The following Transceivers install into this Module: (Use #0D1 or #B01 if switch is CTO) - if applicable

HP X142 40G QSFP+ MPO SR4 Transceiver	JH231A
HP X142 40G QSFP+ LC LR4 SM Transceiver	JH232A
HP X142 40G QSFP+ MPO eSR4 300M XCVR	JH233A
HP X242 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable	JH234A
HP X242 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable	JH235A
HP X242 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable	JH236A

NOTE 2   The following Transceivers install into this Switch (For the 1000/10000 SFP+ Ports):

HP X121 1G SFP LC LH Transceiver	J4860C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X121 1G SFP LC SX Transceiver	J4858C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HP X121 1G SFP RJ45 T Transceiver	J8177C
HP X132 10G SFP+ LC SR Transceiver	J9150A
HP X132 10G SFP+ LC ER Transceiver	J9153A
HP X132 10G SFP+ LC LR Transceiver	J9151A
HP X132 10G SFP+ LC LRM Transceiver	J9152A
HP X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HP X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
HP X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A

Configuration

HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A

Remarks: Watson Only Blue **NOTE** - Although these switches are compatible with HPE Smart Rate modules, they do not provid PoE+ power.

Transceivers

SFP Transceivers

HP X121 1G SFP LC LH Transceiver	J4860C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X121 1G SFP LC SX Transceiver	J4858C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HP X121 1G SFP RJ45 T Transceiver	J8177C

SFP+ Transceivers

HP X132 10G SFP+ LC ER Transceiver	J9153A
HP X132 10G SFP+ LC SR Transceiver	J9150A
HP X132 10G SFP+ LC LR Transceiver	J9151A
HP X132 10G SFP+ LC LRM Transceiver	J9152A
HP X242 10G SFP+ SFP+ 1m DAC Cable	J9281B#B01
HP X242 10G SFP+ SFP+ 3m DAC Cable	J9283B#B01
HP X242 10G SFP+ SFP+ 7m DAC Cable	J9285B#B01
HP X244 10G XFP SFP+ 1m DAC Cable	J9300A#B01
HP X244 10G XFP SFP+ 3m DAC Cable	J9301A#B01
HP X244 10G XFP SFP+ 5m DAC Cable	J9302A#B01

QSFP+ Transceivers

HP X142 40G QSFP+ MPO SR4 Transceiver	JH231A
HP X142 40G QSFP+ LC LR4 SM Transceiver	JH232A
HP X142 40G QSFP+ MPO eSR4 300M XCVR	JH233A
HP X242 40G QSFP+ to QSFP+ 1m DAC Cable	JH234A#B01
HP X242 40G QSFP+ to QSFP+ 3m DAC Cable	JH235A#B01
HP X242 40G QSFP+ to QSFP+ 5m DAC Cable	JH236A#B01

Internal Power Supplies

System (std 1 // max=2) User Selection (min 0 / max=1) per Switch

Aruba X371 12VDC 250W PS	JL085A
	See Configuration
	NOTE:1, 3, 4

Configuration

PDU Cable NA/MEX/TW/JP	JL085A #B2B
• C15 PDU Jumper Cord (NA/MEX/TW/JP)	

PDU Cable ROW	JL085A #B2C
• C15 PDU Jumper Cord (ROW)	

High Volt Power Supply to Wall Power Cord	JL085A #B2E
• NEMA L6-20P Cord (NA/MEX/JP/TW)	

Aruba X372 54VDC 680W PS   JL086A
                                    See Configuration
                                    NOTE:2, 3, 4

PDU Cable NA/MEX/TW/JP	JL086A #B2B
• C15 PDU Jumper Cord (NA/MEX/TW/JP)	

PDU Cable ROW	JL086A #B2C
• C15 PDU Jumper Cord (ROW)	

High Volt Power Supply to Wall Power Cord	JL086A #B2E
• NEMA L6-20P Cord (NA/MEX/JP/TW)	

Aruba X372 54VDC 1050W PS   JL087A
                                    See Configuration
                                    NOTE:2, 3, 4

PDU Cable NA/MEX/TW/JP	JL087A #B2B
• C15 PDU Jumper Cord (NA/MEX/TW/JP)	

PDU Cable ROW	JL087A #B2C
• C15 PDU Jumper Cord (ROW)	

High Volt Power Supply to Wall Power Cord	JL087A #B2E
• NEMA L6-20P Cord (NA/MEX/JP/TW)	

Configuration Rules:

NOTE 1   If this Power supply is selected, then JL071A, JL072A, JL075A must be the switch its installed into.

NOTE 2   If this Power supply is selected, Then JL073A, JL074A, JL076A must be the switch its installed into.

NOTE 3   Localization required on orders without #B2B or #B2C options.

NOTE 4   When Switches are Factory Racked with this power supply, Then #B2B, or #B2C should

Configuration

be the Defaulted Power Cable option on the Power Supplies. (See Drop down remark in "Internal Power Supplies" section.)

Remarks: Drop down under power supply should offer the following options and results:
Switch/Router/Power Supply to PDU Power Cord - #B2B in North America, Mexico, Taiwan, and Japan or #B2C ROW. (Watson Default B2B or B2C for Rack Level CTO)
Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)
High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)

Cables

Stacking Cables

HP E3800 0.5m Stacking Cable	J9578A#B01
HP E3800 1m Stacking Cable	J9665A#B01
HP E3800 3m Stacking Cable	J9579A#B01

Multi-Mode Cables

HP .5m Multi-mode OM3 LC/LC FC Cable	AJ833A
HP 1m Multi-mode OM3 LC/LC FC Cable	AJ834A
HP 2 m Multimode OM3 LC/LC FC Cable	AJ835A
HP 5 m Multimode OM3 LC/LC FC Cable	AJ836A
HP 15 m Multimode OM3 LC/LC FC Cable	AJ837A
HP 30 m Multimode OM3 LC/LC FC Cable	AJ838A
HP 50 m Multimode OM3 LC/LC FC Cable	AJ839A
HP Premier Flex LC/LC OM4 2f 1m Cbl	QK732A
HP Premier Flex LC/LC OM4 2f 2m Cbl	QK733A
HP Premier Flex LC/LC OM4 2f 5m Cbl	QK734A
HP Premier Flex LC/LC OM4 2f 15m Cbl	QK735A
HP Premier Flex LC/LC OM4 2f 30m Cbl	QK736A
HP Premier Flex LC/LC OM4 2f 50m Cbl	QK737A

Switch Enclosure Options

Rack Mount Kit

HP X410 1U Univ 4-post Rack Mnt Kit	J9583A
	See Configuration
	NOTE:1

Configuration Rules:

Configuration

NOTE 1   If this switch is factory installed in HPE Network Racks, Then the J9583A#0D1 is
                    required.

Fan Tray

Aruba 3810 Switch Fan Tray   JL088A
   • This is a Spare Only

Technical Specifications

Aruba 3810M 24G 1-slot Switch (JL071A)

Included accessories	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 Supports a maximum of 4 SFP+ ports or 1 40GbE ports, with optional module
	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)
Power supplies	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.

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)
	Weight	12.76 lb (5.79 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	
Mounting and enclosure	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
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

Technical Specifications

	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 39 dB, Pressure: 22.8 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
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
Immunity	**Generic**	EN55022: 2010
	EN	EN55024: 2010
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3; 3 V/m
	EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
	Surge	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted	IEC 61000-4-6; 3 V
	Power frequency magnetic field	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
	Harmonics	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A
	Flicker	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)
Services		Refer to the Hewlett Packard Enterprise website at **http://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 Hewlett Packard Enterprise sales office.

Aruba 3810M 48G 1-slot Switch (JL072A)

Included accessories	1 Aruba 3810 Switch Fan Tray (JL088A)
I/O ports and slots	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
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)
Power supplies	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.

Technical Specifications

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)
	Weight	13.20 lb (5.99 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	
Mounting and enclosure	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 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
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
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 38 dB, Pressure: 21.8 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	
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	
Immunity	**Generic**	EN55022: 2010
	EN	EN55024: 2010
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3; 3 V/m
	EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
	Surge	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted	IEC 61000-4-6; 3 V
	Power frequency magnetic field	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

Technical Specifications

	Harmonics	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A
	Flicker	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)
Services		Refer to the Hewlett Packard Enterprise website at **http://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 Hewlett Packard Enterprise sales office.

Aruba 3810M 24G PoE+ 1-slot Switch (JL073A)

Included accessories		1 Aruba 3810 Switch Fan Tray (JL088A)
I/O ports and slots		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)
Power supplies		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
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)
	Weight	13.02 lb (5.91 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
Mounting and enclosure		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
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C)
	Operating relative	15% to 95% @ 104°F (40°C), noncondensing

Technical Specifications

	humidity	
	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
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 48 dB, Pressure: 30.7 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	
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	
Immunity	**Generic**	EN55022: 2010
	EN	EN55024: 2010
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3; 3 V/m
	EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
	Surge	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted	IEC 61000-4-6; 3 V
	Power frequency magnetic field	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
	Harmonics	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A
	Flicker	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)	
Services	Refer to the Hewlett Packard Enterprise website at **http://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 Hewlett Packard Enterprise sales office.	

Aruba 3810M 48G PoE+ 1-slot Switch (JL074A)

Included accessories	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
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)

Technical Specifications

Power supplies	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.	
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)
	Weight	13.62 lb (6.18 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	
Mounting and enclosure	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 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
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
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 42 dB, Pressure: 26 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	
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	
Immunity	**Generic**	EN55022: 2010
	EN	EN55024: 2010
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3; 3 V/m
	EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
	Surge	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted	IEC 61000-4-6; 3 V

Technical Specifications

Power frequency magnetic field	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
Harmonics	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A
Flicker	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)
Services	Refer to the Hewlett Packard Enterprise website at **http://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 Hewlett Packard Enterprise sales office.

Aruba 3810M 16SFP+ 2-slot Switch (JL075A)

Included accessories	1 Aruba 3810 Switch Fan Tray (JL088A)
I/O ports and slots	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
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)
Power supplies	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.
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)
	Weight	13.28 lb (6.02 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
Mounting and enclosure	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 285.7 Mpps (64-byte packets)
	Routing/Switching capacity	480 Gbps
	Switch fabric speed	508 Gbps
	Routing table size	10000 entries (IPv4), 5000 entries (IPv6)

Technical Specifications

	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
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 39 dB, Pressure: 22.3 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
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
Immunity	**Generic**	EN55022: 2010
	EN	EN55024: 2010
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3; 3 V/m
	EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
	Surge	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted	IEC 61000-4-6; 3 V
	Power frequency magnetic field	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
	Harmonics	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A
	Flicker	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)
Services		Refer to the Hewlett Packard Enterprise website at **http://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 Hewlett Packard Enterprise sales office.

Aruba 3810M 40G 8 HPE Smart Rate PoE+ 1-slot Switch (JL076A)

Included accessories	1 Aruba 3810 Switch Fan Tray (JL088A)
I/O ports and slots	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 HP 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

Technical Specifications

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)	
Power supplies	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.	
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)
	Weight	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	
Mounting and enclosure	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 273.8 Mpps (64-byte packets)
	Routing/Switching capacity	480 Gbps
	Switch fabric speed	508 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
	Altitude	up to 10,000 ft (3 km)
	Acoustic	Power: 45 dB, Pressure: 27.9 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	
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	
Immunity	**Generic**	EN55022: 2010
	EN	EN55024: 2010
	ESD	IEC 61000-4-2

Technical Specifications

Radiated	IEC 61000-4-3; 3 V/m	
EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)	
Surge	IEC 61000-4-5; 1 kV/2 kV AC	
Conducted	IEC 61000-4-6; 3 V	
Power frequency magnetic field	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	
Harmonics	EN61000-3-2:2006 +A1:2009 +A2:2009 Class A	
Flicker	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)

Services Refer to the Hewlett Packard Enterprise website at **http://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 Hewlett Packard Enterprise 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

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

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

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

Technical Specifications

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 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 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 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 2597 DiffServ Assured Forwarding (AF)
RFC 2598 DiffServ Expedited Forwarding (EF)

Security
IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
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

Technical Specifications

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
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

Accessories

Aruba 3810 Switch Series accessories

Modules

Aruba 3810M 4-port Stacking Module	JL084A
Aruba 3810M 4SFP+ Module	JL083A
Aruba 3810M 1QSFP+ 40GbE Module	JL078A
Aruba 3810M 2QSFP+ 40GbE Module	JL079A

Transceivers

HP X111 100M SFP LC FX Transceiver	J9054C
HP X121 1G SFP LC SX Transceiver	J4858C
HP X121 1G SFP LC LX Transceiver	J4859C
HP X121 1G SFP LC LH Transceiver	J4860C
HP X121 1G SFP RJ45 T Transceiver	J8177C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HP X132 10G SFP+ LC SR Transceiver	J9150A
HP X132 10G SFP+ LC LR Transceiver	J9151A
HP X132 10G SFP+ LC LRM Transceiver	J9152A
HP X132 10G SFP+ LC ER Transceiver	J9153A
HP X142 40G QSFP+ MPO SR4 Transceiver	JH231A
HP X142 40G QSFP+ MPO eSR4 300M XCVR	JH233A
HP X142 40G QSFP+ LC LR4 SM Transceiver	JH232A
HP X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HP X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
HP X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
HP 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
HP 10G X244 XFP to SFP+ 5m Direct Attach Copper Cable	J9302A
HP X242 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable	JH234A
HP X242 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable	JH235A
HP X242 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable	JH236A

Cables

HP 3800 0.5m Stacking Cable	J9578A
HP 3800 1m Stacking Cable	J9665A
HP 3800 3m Stacking Cable	J9579A
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

Accessories

Power Supply

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

Fan Tray

Aruba 3810 Switch Fan Tray   JL088A

Mounting Kit

HP X410 1U Universal 4-post Rack Mounting Kit   J9583A

f   🐦   in   ✉

Sign up for updates

⭐   Rate this document

To learn more, visit: **http://www.hp.com/networking**

c04843019 - 15438 - Worldwide - V1 - 1-December-2015