## Overview

## Aruba 3810M Switch Series

The Aruba 3810 Switch Series provides performance and resiliency for enterprises, SMBs, and branch office networks. With HPE Smart Rate multi-gigabit ports for high speed access points and loT devices, this advanced Layer 3 network switch delivers a better application experience with low latency, virtualization with resilient stacking technology, and line rate 40GbE for plenty of back haul capacity.

A powerful Aruba ProVision ASIC delivers performance, robust feature support, and value with flexible programmability for the latest applications. The 3810 delivers resiliency and scalability via innovative backplane stacking technology and redundant, hotswappable power supplies all in a convenient $1 \cup$ form factor. It supports an advanced Layer 2 and 3 feature set with OSPF, IPv6, IPv4 BGP, Dynamic Segmentation, robust QoS, and policy-based routing are included with no software licensing.

The 3810 M is easy to deploy, use and manage using Aruba AirWave or Aruba Central. Aruba ClearPass offers centralized security and external captive portal support. The switches offer a limited lifetime warranty.


Aruba 3810M Switch Series

## Models

$\begin{array}{ll}\text { Aruba 3810M 24G 1-slot Switch } & \text { JL071A } \\ \text { Aruba 3810M 48G 1-slot Switch } & \text { JL072A }\end{array}$
JL072A
Aruba 3810M 24G PoE+ 1-slot Switch JLO73A
Aruba 3810M 48G PoE+ 1-slot Switch JL074A
Aruba 3810M 16SFP+ 2-slot Switch JLO75A
Aruba 3810M 40G 8 HPE Smart Rate PoE+ 1-slot Switch JLO76A
Aruba 3810M 48G PoE+ 4SFP+ 680W Switch JL428A
Aruba 3810M 48G PoE+ 4SFP+ 1050W Switch JL429A
Aruba 3810M 24SFP+ 250W Switch
JL430A

## Hewlett Packard

## Overview

## Key features

- Advanced Layer 3 switch series with backplane stacking, dynamic segmentation, low latency and resiliency
- Advanced security and network management via Aruba ClearPass Policy Manager, Aruba AirWave and Aruba Central
- Modular 10 GbE and 40 GbE uplinks for wireless aggregation
- HPE Smart Rate for high-speed multi-gigabit capacity and PoE+ power
- Software-defined ready with REST APIs and OpenFlow support


## Standard Features

## Software-defined networks

- Supports multiple programmatic interfaces

Including REST APIs and Openflow 1.0 and 1.3, to enable automation of network operations, monitoring, and troubleshooting.

## Unified Wired and Wireless Support

- ClearPass Policy Manager support
unified wired and wireless policies using Aruba ClearPass Policy Manager
- Switch auto-configuration

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

- User role

Defines 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-based local user role or download from ClearPass

- Improved network simplicity and security

Aruba Dynamic Segmentation automatically enforces user, device and application-aware policies on Aruba wired and wireless networks. Automated device profiling, role-based access control, and Layer 7 firewall features deliver enhanced visibility and performance for a better overall experience for both IT and end-users alike.

- Dynamic segmentation

Provides a secured tunnel to transport network traffic on a per-port or per-user-role basis to an Aruba Controller. In per-user-role Tunneled Node, users are authenticated with ClearPass Policy Manager which can direct the traffic to be tunneled to Aruba controller or switch locally.

- Static IP visibility
provides a way for ClearPass to do accounting for clients with static IP addresses


## 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
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, $6200 \mathrm{yl}, 5400 \mathrm{zl}$, 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
- Unknown Unicast Rate Limiting
throttles unicast packets with unknown destination addresses and limits flooding on the VLAN


## Standard Features

## Simplified management and configuration

- Flexible management
supports both cloud-based Central and on-premise AirWave without ripping and replacing switching infrastructure
- Aruba Central cloud-based management platform
offers simple, secure, and cost effective way to manage switches
- Built-in programmable and easy to use REST API interface
provides configuration automation for campus networks
- 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
- Zero Touch ProVisioning (ZTP)
simplifies installation of the switch infrastructure using the Aruba Activate-based or a DHCP-based process with AirWave and Central Network Management
- Unidirectional Link Detection (UDLD)
monitors the link between two switches and blocks the ports on both ends of the link if the link goes down at any point between the two devices
- IP service level agreements (SLA) for voice
monitor quality of voice traffic using the UDP jitter and UDP jitter for VoIP tests


## Connectivity

- Jumbo frames on Gigabit Ethernet and 10-Gigabit Ethernet ports
allow high-performance remote backup and disaster-recovery services
- IEEE 802.3at Power over Ethernet (PoE+)
provides up to 30 W per port that allows support of the latest PoE+ capable devices such as IP phones, wireless access points, and security cameras, as well as any IEEE 802.3af compliant end device; eliminates the cost of additional electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments
- Support for pre-standard PoE
detects and provides power to pre-standard PoE devices
- 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
- $\quad$ bin4 tunneling: supports encapsulation of IPv6 traffic in IPv4 packets


## Standard Features

- Security: provides RA guard, DHCPv6 protection, dynamic IPv6 lockdown, and ND snooping


## 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 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: with secondary power supply to enable complete switch power redundancy in case of power line or supply failure
- Secondary power supply increases 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 highspeed 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+
- Aruba 3810M 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 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


## Standard Features

## 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 static routing, OSPFv2, and VRRP


## 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 automatically 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
- Protocol Independent Multicast for IPv6
supports one-to-many and many-to-many media casting use cases such as IPTV over IPv6 networks
- 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 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


## Customer first, customer last support

When your network is important to your business, then your business needs the backing of Aruba Support Services. Partner with Aruba product experts to increase your team productivity, keep pace with technology advances, software releases, and obtain break-fix support.

- Foundation Care for Aruba support services include priority access to Aruba Technical Assistance Center (TAC) engineers $24 \times 7 \times 365$, flexible hardware and onsite support options, and total coverage for Aruba products. Aruba switches with assigned Aruba Central subscriptions benefit with option for additional hardware support only.
- Aruba Pro Care adds fast access to senior Aruba TAC engineers, who are assigned as a single point of contact for case management, reducing the time spent addressing and resolving issues.

For complete details on Foundation Care and Aruba Pro Care, please visit: https://www.arubanetworks.com/supportservices/

## Warranty, Services and Support

- Limited Lifetime Warranty

See https://www.arubanetworks.com/support-services/ product-warranties/ for warranty and support information included with your product purchase

- For Software Releases and Documentation, refer to https://asp.arubanetworks.com/downloads
- For support and services information, visit https://www.arubanetworks.com/support-services/arubacare/


## Standard Features

## Security

- Control plane policing
sets rate limit on control protocols to protect CPU overload from DOS attacks
- 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
- Radius over TLS (RadSec)
- allows users to use a more secure and reliable mode of communications between switch and radius servers over unsecure networks
- 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
- 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


## Standard Features

- Multiple authentication methods
- IEEE 802.1X
authenticates multiple IEEE 802.1X users per port; prevents a user from "piggybacking" on another user's authentication
- Supports web-based authentication
- MAC-based client authentication
- 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
- IEEE 802.1AE MACsec
provides security on a link between two switch ports (1Gbps or 10Gbps) using standard encryption and authentication
- Open authentication role
simplifies first-time deployment of AAA in brownfield deployments by allowing full network access for failed clients and provides instant connectivity as soon as a client is plugged-in
- Critical authentication role
ensures that important infrastructure devices such as IP phones are allowed network access even in the absence of a RADIUS server
- MAC pinning allows non-chatty legacy devices to stay authenticated by pinning client MAC addresses to the port until the clients logoff or get disconnected
- Enrollment over Secure Transport (EST)
enhances the switch PKI infrastructure with a simpler, scalable and more secure method of certificate provisioning, reenrollment and renewal


## Configuration Information

Build To Order: BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or RackShippable solution.

## BTO Models

Rule \# Description
Aruba 3810M 24G 1-slot Switch

- 24 RJ-45 autosensing 10/100/1000 ports
- 1 open stacking module slo $\dagger$
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1U-Height

Aruba 3810M 48G 1-slot Switch

- 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 Switch

- 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)
- $1 U$ - Height

Aruba 3810M 48G PoE+ 1-slot Switch

- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 1 open stacking module slo $\dagger$
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1 - Height

1, 3
Aruba 3810M 16SFP+ 2-slot Switch

- 16 fixed 1000/10000 SFP/SFP+ ports
- min=0 $\backslash \mathrm{max}=16 \mathrm{SFP} / \mathrm{SFP}+$ Transceivers
- 1 open stacking module slo $\dagger$
- 2 open uplink module slot
- 1 Power Supply required (Max 2)
- 1 U - Height

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

- 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)
- 1 - Height


## Configuration Information

Rule \# Description ..... SKU
1,2, 3 Aruba 3810M 48G PoE+4SFP+680W Switch ..... JL428A- Includes 1 3810M 48 Port PoE+ Switch (JL074A)- 48 RJ-45 autosensing 10/100/1000 PoE+ ports- 4 fixed 1000/10000 SFP/SFP+ ports

- min=0 $\backslash \max =4$ SFP/SFP+ Transceivers
- 1 open stacking module slo†
- Includes 1 uplink module (JL083A)
- Includes 1 680W Power Supply (JL086A, Max 2)
- $1 \cup$ - Height
Aruba 3810M 48G PoE+ 4SFP+ 680W Switch PDU NA, JP or TW ..... JL428A\#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)
Aruba 3810M 48G PoE+ 4SFP+ 680W Switch PDU ROW ..... JL428A\#B2C
- C15 PDU Jumper Cord (ROW)
Aruba 3810M 48G PoE+ 4SFP+ 680W Switch United States 220 volt ..... JL428A\#B2E- NEMA L6-20P Cord (NA/MEX/JP/TW)Aruba 3810M 48G PoE+ 4SFP+ 680W SwitchJL428A\#AC3- No Localized Power Cord Selected
- No Localized Power Cord Selected
Aruba 3810M 48G PoE+ 4SFP+ 1050W Switch
JL429A
- Includes 1 3810M 48 Port PoE+ Switch (JL074A)
- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 fixed 1000/10000 SFP/SFP+ ports
- min=0 $\backslash \max =4$ SFP/SFP+ Transceivers
- 1 open stacking module slot
- Includes 1 uplink module (JL083A)
- Includes 1 1050W Power Supply (JL087A, Max 2)
- 1 U - Height
Aruba 3810M 48G PoE+ 4SFP+ 1050W Switch PDU NA, JP or TW
JL429A\#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)
Aruba 3810M 48G PoE+ 4SFP+ 1050W Switch PDU ROW JL429A\#B2C
- C15 PDU Jumper Cord (ROW)
Aruba 3810M 48G PoE+ 4SFP+ 1050W Switch United States 220 volt
JL429A\#B2E
- NEMA L6-20P Cord (NA/MEX/JP/TW)
Aruba 3810M 48G PoE+ 4SFP+ 1050W Switch
JL429A\#AC3
- No Localized Power Cord Selected
Aruba 3810M 24SFP+ 250 W Switch
JL430A
- Includes 1 3810M 16 Port SFP+ Switch (JL075A)
- 16 fixed 1000/10000 SFP/SFP+ ports
- 8 port SFP+ ports on the included modules
- min=0 $\backslash \mathrm{max}=24 \mathrm{SFP} / \mathrm{SFP}+$ Transceivers
- 1 open stacking module slot
- Includes 2 uplink modules (JL083A)
- Includes 1 250W Power Supply (JL085A, Max 2)
- $1 \cup$ - Height
Aruba 3810M 24SFP+ 250W Switch PDU NA, JP or TW
JL430A\#B2B
- C15 PDU Jumper Cord (NA/MEX/TW/JP)
Aruba 3810M 24SFP+ 250 W Switch PDU ROW
JL430A\#B2C
- C15 PDU Jumper Cord (ROW)


## Configuration Information

|  | Aruba 3810M 24SFP+ 250 W Switch United States 220 volt <br> - NEMA L6-20P Cord (NA/MEX/JP/TW) | JL430A\#B2E |
| :---: | :---: | :---: |
|  | Aruba 3810M 24SFP+ 250W Switch | JL430A\#AC3 |
|  | - No Localized Power Cord Selected |  |
|  | Configuration Rules |  |
| Rule \# | Description | SKU |
| 1 | The following Transceivers install into this Switch (For the 1000/10000 SFP+ Ports): |  |
|  | Aruba 1G SFP LC SX 500m OM2 MMF Transceiver | J4858D |
|  | Aruba 1G SFP LC LX 10km SMF Transceiver | J4859D |
|  | Aruba 1G SFP LC LH 70km SMF Transceiver | J4860D |
|  | Aruba 1G SFP RJ45 T 100m Cat5e Transceiver | J8177D |
|  | Aruba 100M SFP LC FX 2km MMF Transceiver | J9054D |
|  | Aruba 10G SFP+ LC SR 300m OM3 MMF Transceiver | J9150D |
|  | Aruba 10G SFP+ LC LR 10km SMF Transceiver | J9151E |
|  | Aruba 10G SFP+ LC LRM 220 m OM2 MMF Transceiver | J9152D |
|  | Aruba 10G SFP+ LC ER 40km SMF Transceiver | J9153D |
|  | Aruba 10G SFP+ to SFP+ 1m Direct Attach Copper Cable | J9281D |
|  | Aruba 10G SFP+ to SFP+ 3 m Direct Attach Copper Cable | J9283D |
|  | Aruba 10G SFP+ to SFP+ 7m Direct Attach Copper Cable | J9285D |
| 2 | Localization required on orders without \#B2B, \#B2C, \#B2E options. |  |
| 3 | The following Transceivers install into this Switch : (For the 1000/10000 SFP+ Ports) |  |
|  | Aruba 1G SFP LC SX 500m MMF TAA Transceiver | JL745A |
|  | Aruba 1G SFP LC LX 10km SMF TAA Transceiver | JL746A |
|  | Aruba 1G SFP RJ45 T 100m Cat5e TAA Transceiver | JL747A |
|  | Aruba 10G SFP+ LC SR 300m MMF TAA Transceiver | JL748A |
|  | Aruba 10G SFP+ LC LR 10km SMF TAA Transceiver | JL749A |

## Configuration Information

## Rack Level Integration CTO Models

Rule \# Description
SKU
10, $11 \quad$ Aruba 3810M 24G 1-slot Switch

- 24 RJ-45 autosensing 10/100/1000 ports
- 1 open stacking module slot
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- $1 \cup$ - Height

10, $11 \quad$ Aruba 3810M 48G 1-slot Switch

- 48 RJ-45 autosensing 10/100/1000 ports
- 1 open stacking module slot
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- $1 U$ - Height

10, 11 Aruba 3810M 24G PoE+ 1-slot Switch

- 24 RJ-45 autosensing 10/100/1000 PoE+ ports
- 1 open stacking module slo $\dagger$
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1 - Height

10, 11
Aruba 3810M 48G PoE+ 1-slot Switch

- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 1 open stacking module slot
- 1 open uplink module slo†
- 1 Power Supply required (Max 2)
- 1U-Height

1, 2, 10, 11 Aruba 3810M 16SFP+ 2-slot Switch

- 16 fixed 1000/10000 SFP/SFP+ ports
- min=0 $\backslash \mathrm{max}=16 \mathrm{SFP} / \mathrm{SFP}+$ Transceivers
- 1 open stacking module slot
- 2 open uplink module slot
- 1 Power Supply required (Max 2)
- $1 \cup$ - Height

10, 11
Aruba 3810M 40G 8 HPE Smart Rate PoE+ 1-slot Switch

- 40 RJ-45 autosensing 10/100/1000 PoE+ ports
- 8 RJ-45 1/2.5/5/XGT PoE+ ports
- 1 open stacking module slo $\dagger$
- 1 open uplink module slot
- 1 Power Supply required (Max 2)
- 1 - Height


## Configuration Information

## Rule \# Description <br> SKU

1, 2, 3, 4, 10, Aruba 3810M 48G PoE+ 4SFP+ 680W Switch
11

- Includes 1 3810M 48 Port PoE+ Switch (JL074A)
- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 fixed 1000/10000 SFP/SFP+ ports
- min=0 $\backslash$ max=4 SFP/SFP+ Transceivers
- 1 open stacking module slo $\dagger$
- Includes 1 uplink module (JL083A)
- Includes 1 680W Power Supply (JL086A, Max 2)
- 1 - Height

PDU Cable NA/MEX/TW/JP
JL428A \#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW
JL428A \#B2C

- C15 PDU Jumper Cord (ROW)

High Volt Power Supply to Wall Power Cord
JL428A \#B2E

- NEMA L6-20P Cord (NA/MEX/JP/TW)

Aruba 3810M 48G PoE+4SFP+680W Switch

- No Localized Power Cord Selected
$1,3,4,10$,
Aruba 3810M 48G PoE+ 4SFP+ 1050W Switch
JL428A\#AC3

JL429A

- Includes 1 3810M 48 Port PoE+ Switch (JL074A)
- 48 RJ-45 autosensing 10/100/1000 PoE+ ports
- 4 fixed 1000/10000 SFP/SFP+ ports
- min=0 $\backslash \mathrm{max}=4$ SFP/SFP+ Transceivers
- 1 open stacking module slo $\dagger$
- Includes 1 uplink module (JL083A)
- Includes 1 1050W Power Supply (JL087A, Max 2)
- 1 - Height

PDU Cable NA/MEX/TW/JP
JL429A \#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

High Volt Power Supply to Wall Power Cord

- NEMA L6-20P Cord (NA/MEX/JP/TW)

No Power Cord
JL429A \#AC3

- No Localized Power Cord Selected
$1,3,4,10$, Aruba 3810M 24SFP+ 250 W Switch

JL430A

- Includes 1 3810M 16 Port SFP+ Switch (JL075A)
- 16 fixed 1000/10000 SFP/SFP+ ports
- 8 port SFP+ ports on the included modules
- min=0 $\backslash \mathrm{max}=24$ SFP/SFP+ Transceivers
- 1 open stacking module slo†
- Includes 2 uplink modules (JL083A)
- Includes 1 250W Power Supply (JL085A, Max 2)
- $1 \cup$ - Height


## Configuration Information

PDU Cable NA/MEX/TW/JPJL430A \#B2B- C15 PDU Jumper Cord (NA/MEX/TW/JP)PDU Cable ROWJL430A \#B2C- C15 PDU Jumper Cord (ROW)High Volt Power Supply to Wall Power CordJL430A \#B2E

- NEMA L6-20P Cord (NA/MEX/JP/TW)No Power CordJL430A \#AC3- No Localized Power Cord Selected
Configuration Rules
Rule \# Description ..... SKU
The following Transceivers install into this Switch (For the 1000/10000 SFP+ Ports):
Aruba 1G SFP LC SX 500m OM2 MMF Transceiver ..... J4858D
Aruba 1G SFP LC LX 10km SMF Transceiver ..... J4859D
Aruba 1G SFP LC LH 70km SMF Transceiver ..... J4860D
Aruba 1G SFP RJ45 T 100m Cat5e Transceiver ..... J8177D
Aruba 100M SFP LC FX 2km MMF Transceiver ..... J9054D
Aruba 10G SFP+ LC SR 300m OM3 MMF Transceiver ..... J9150D
Aruba 10G SFP+ LC LR 10km SMF Transceiver ..... J9151E
Aruba 10G SFP+ LC LRM 220m OM2 MMF Transceiver ..... J9152D
Aruba 10G SFP+ LC ER 40km SMF Transceiver ..... J9153D
Aruba 10G SFP+ to SFP+1m Direct Attach Copper Cable ..... J9281D
Aruba 10G SFP+ to SFP+ 3m Direct Attach Copper Cable ..... J9283D
Aruba 10G SFP+ to SFP+ 7 m Direct Attach Copper Cable ..... J9285D
2 The following Transceivers install into this Switch : (For the 1000/10000 SFP+ Ports)Aruba 1G SFP LC SX 500m MMF TAA TransceiverJL745A
Aruba 1G SFP LC LX 10km SMF TAA Transceiver ..... JL746A
Aruba 1G SFP RJ45 T 100m Cat5e TAA Transceiver ..... JL747A
Aruba 10G SFP+ LC SR 300m MMF TAA Transceiver ..... JL748A
Aruba 10G SFP+ LC LR 10km SMF TAA Transceiver ..... JL749A

When Switches are Factory Racked with this power supply, Then \#B2B, or \#B2C should be the Defaulted Power Cable option on the Power Supplies. (See Drop down remark in "Internal Power Supplies" section.)
If switch is OD1 to Racks, then the J9583A\#0D1 is also required.
If the CTO Switch Chassis needs to be racked, Then the CTO Base Model needs to integrate (with \#OD1) to the HPE Network Rack.

- 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)
- Watson Blue Notes: It is recommended that both power supplies match for full redundancy in the case of a fully populated switch, but not required.
- Clic UNB - If an option is ordered with \#OD1/\#B01, then the switch must have \#0D1 option.


## Configuration Information

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

## Modules

## Stacking Modules

Rule \# Description SKU
System (std $0 / / \max =1$ ) User Selection (min $0 / \max =1$ ) per Chassis
1
Aruba 3810M 4-port Stacking Module
JL084A

- min=1 $\backslash \max =4$ Stacking cables


## Configuration Rules

1

One of the following Stacking Cables must be selected:
Aruba 3800/3810M 0.5m Stacking Cable J9578A
Aruba 3800/3810M 1m Stacking Cable
Aruba 3800/3810M 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
- JL428A, JL429A Only System (std 1 // max 1) User Selection (min 0 / max 0) per Chassis
- JL430A Only System (std 2 // max 2) User Selection (min 0 / max 0) per Chassis

Aruba 3810M/2930M 1-port QSFP+ 40GbE Module
JL078A

- min=0 $\backslash \max =1$ QSFP+ Transceiver

Aruba 3810M 2QSFP+ 40GbE Module JL079A

- min=0 $\backslash \max =2$ QSFP+ Transceiver

Aruba 3810M 4 HPE Smart Rate PoE+ Module
JL081A

- $4 \times$ HPE Smart Rate Ports

Aruba 3810M/2930M 4-port 100M/1G/10G SFP+ MACsec Module JL083A

- $\min =0 \backslash \max =4 \mathrm{SFP} / \mathrm{SFP}+$ Transceivers


## Configuration Rules

The following Transceivers install into this Module: (Use \#OD1 or \#B01 if switch is CTO) - if applicable
HPE X142 40G QSFP+ MPO SR4 Transceiver JH231A
HPE X142 40G QSFP+ LC LR4 SM Transceiver JH232A
HPE X142 40G QSFP+ MPO eSR4 300M Transceiver JH233A
HPE X242 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable JH234A
HPE $\times 242$ 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable JH235A
HPE X242 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable JH236A
Aruba 40G QSFP+ LC Bidirectional 150m MMF 2-strand Transceiver JL308A
2 The following Transceivers install into this Switch (For the 1000/10000 SFP+ Ports):
Aruba 1G SFP LC SX 500m OM2 MMF Transceiver
J4858D
Aruba 1G SFP LC LX 10km SMF Transceiver J4859D
Aruba 1G SFP LC LH 70km SMF Transceiver J4860D
Aruba 1G SFP RJ45 T 100m Cat5e Transceiver J8177D
Aruba 100M SFP LC FX 2km MMF Transceiver J9054D
Aruba 10G SFP+ LC SR 300m OM3 MMF Transceiver J9150D
Aruba 10G SFP+ LC LR 10km SMF Transceiver J9151E
Aruba 10G SFP+ LC LRM 220m OM2 MMF Transceiver J9152D
Aruba 10G SFP+ LC ER 40km SMF Transceiver J9153D
Aruba 10G SFP+ to SFP+ 1m Direct Attach Copper Cable J9281D

## Configuration Information

|  | Aruba 10G SFP+ to SFP+ 3m Direct Attach Copper Cable | J9283D |
| :---: | :---: | :---: |
|  | Aruba 10G SFP+ to SFP+7m Direct Attach Copper Cable | J9285D |
| 3 | This module is only available for the following switches: |  |
|  | Aruba 3810M 48G 1-slot Switch | JL072A |
|  | Aruba 3810M 48G PoE+ 1-slot Switch | JL074A |
|  | Aruba 3810M 40 G 8 HPE Smart Rate PoE+ 1-slot Switch | JL076A |
| 4 | The following Transceivers install into this Switch (Use \#OD1 qutoed to switch if switch is CTO) - if applicable : |  |
|  | Aruba 1G SFP LC SX 500m MMF TAA Transceiver | JL745A |
|  | Aruba 1G SFP LC LX 10km SMF TAA Transceiver | JL746A |
|  | Aruba 1G SFP RJ45 T 100m Cat5e TAA Transceiver | JL747A |
| 5 | The following Transceivers install into this Switch (Use \#OD1 qutoed to switch if switch is CTO) - if applicable : |  |
|  | Aruba 10G SFP+ LC SR 300m MMF TAA Transceiver | JL748A |
|  | Aruba 10G SFP+ LC LR 10km SMF TAA Transceiver | JL749A |
| Notes: | Although all 3810M/2930M Switches are compatible with the 4 Port HPE Smart Rate module, non PoE switches do not provide PoE power to the HPE Smart Rate Module. |  |
| Transceivers |  |  |
| Remarks | Description | SKU |
|  | SFP Transceivers |  |
|  | Aruba 100M SFP LC FX 2km MMF Transceiver | J9054D |
|  | Aruba 1G SFP LC SX 500m OM2 MMF Transceiver | J4858D |
|  | Aruba 1G SFP LC LX 10km SMF Transceiver | J4859D |
|  | Aruba 1G SFP LC LH 70km SMF Transceiver | J4860D |
|  | Aruba 1G SFP RJ45 T 100m Cat5e Transceiver | J8177D |
|  | Aruba 1G SFP LC SX 500m MMF TAA Transceiver | JL745A |
|  | Aruba 1G SFP LC LX 10km SMF TAA Transceiver | JL746A |
|  | Aruba 1G SFP RJ45 T 100m Cat5e TAA Transceiver | JL747A |
|  | SFP+ Transceivers |  |
|  | Aruba 10G SFP+ LC SR 300m OM3 MMF Transceiver | J9150D |
|  | Aruba 10G SFP+ LC LR 10km SMF Transceiver | J9151E |
|  | Aruba 10G SFP+ LC LRM 220m OM2 MMF Transceiver | J9152D |
|  | Aruba 10G SFP+ LC ER 40km SMF Transceiver | J9153D |
|  | Aruba 10G SFP+ LC SR 300m MMF TAA Transceiver | JL748A |
|  | Aruba 10G SFP+ LC LR 10km SMF TAA Transceiver | JL749A |
|  | Aruba 10G SFP+ to SFP+ 1m Direct Attach Copper Cable | J9281D |
|  | Aruba 10G SFP+ to SFP+3m Direct Attach Copper Cable | J9283D |
|  | Aruba 10G SFP+ to SFP+ 7m Direct Attach Copper Cable | J9285D |
|  | QSFP+ Transceivers |  |
|  | HPE X142 40G QSFP+ MPO SR4 Transceiver | JH231A |
|  | HPE X142 40G QSFP+ LC LR4 SM Transceiver | JH232A |
|  | HPE X142 40G QSFP+ MPO eSR4 300M Transceiver | JH233A |
|  | Aruba 40G QSFP+ LC Bidirectional 150m MMF 2-strand Transceiver | JL308A |
|  | HPE X242 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable | JH234A |
|  | HPE X242 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable | JH235A |
|  | HPE X242 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable | JH236A |

## Configuration Information

## Internal Power Supplies

System (std $0 / /$ max=2) User Selection (min $1 /$ max=2) per Switch
For JL428A, JL429A, JL430A System (std 1 // max=2) User Selection (min 0 / max=1) per Switch

Rule \#
1, 3, 4

2, 3, 4

2, 3, 4

1

2

3
4

Description
Aruba X371 12VDC 250W 100-240VAC Power Supply

- 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)

- No Power Cord

JL085A \#AC3
No Localized Power Cord Selected
Aruba X372 54VDC 680W 100-240VAC Power Supply
JL086A
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

- NEMA L6-2OP Cord (NA/MEX/JP/TW)

No Power Cord

- No Localized Power Cord Selected

Aruba X372 54VDC 1050W 110-240VAC Power Supply
JL087A
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)

No Power Cord
JL087A \#AC3

- No Localized Power Cord Selected


## Configuration Rules

If this Power supply is selected, Then JL071A, JL072A, JL075A, JL430A must be the switch its installed into.
If this Power supply is selected, Then JL073A, JL074A, JL076A, JL428A, JL429A must be the switch its installed into.

Localization required on orders without \#B2B or \#B2C options.
When Switches are Factory Racked with this power supply, Then \#B2B, or \#B2C should be the Defaulted Power Cable option on the Power Supplies. (See Drop down remark in "Internal Power Supplies" section.)

## Configuration Information

Notes: - 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)
- No Localized Power Cord Selected - \#AC3 Option
- Watson Blue Notes: It is recommended that both power supplies match for full redundancy in the case of a fully populated switch, but not required.


## Cables

| Remarks | Description | SKU |
| :--- | :--- | :---: |
|  | Stacking Cables |  |
|  | $($ std $0 / /$ max 99) User Selection (min 0 // max 99) per switch | J9578A |
|  | Aruba 3800/3810M 0.5m Stacking Cable | J9665A |
|  | Aruba 3800/3810M 1m Stacking Cable | J9579A |

## Console Cables

(std $0 / / \max 99$ ) User Selection (min $0 / / \max 99$ ) per switch
Aruba X2C2 RJ45 to DB9 Console Cable JL448A

Multi-Mode Cables

| (std $O$ // max 99) User Selection (min $0 / /$ max 99) per switch |  |
| :--- | :--- |
| HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable | AJ833A |
| HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable | AJ834A |
| HPE LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable | AJ835A |
| HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable | AJ836A |
| HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable | AJ837A |
| HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable | AJ838A |
| HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable | AJ839A |
| 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 | QK7344 |
| 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 |

## Configuration Information

| Switch Enclosure Options |  |  |
| :---: | :---: | :---: |
| Remarks | Description | SKU |
|  | Mounting Kit |  |
|  | (std 0 // max 1) User Selection (min $0 / / \mathrm{max} 1$ ) per switch |  |
|  | Aruba X414 1U Universal 4-post Rack Mount Kit | J9583B |
| Notes: | 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 |  |
| Software |  |  |
| Remarks | Description | SKU |
|  | Central |  |
|  | Aruba Central 63xx/38xx Switch Foundation 1 year Subscription E-STU | Q9Y78AAE |
|  | Aruba Central $63 \mathrm{xx} / 38 \mathrm{xx}$ Switch Foundation 3 year Subscription E-STU | Q9Y79AAE |
|  | Aruba Central 63xx/38xx Switch Foundation 5 year Subscription E-STU | Q9Y80AAE |
|  | Aruba Central $63 \times x / 38 x x$ Switch Foundation 7 year Subscription E-STU | Q9Y81AAE |
|  | Aruba Central 63xx/38xx Switch Foundation 10 year Subscription E-STU | R3K02AAE |
| Notes: | Add the Central Cloud Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > Cloud Services |  |
|  | Aruba Central On-Premises Switch 63xx or 38xx Foundation 1 year Subscription E-STU | R6U83AAE |
|  | Aruba Central On-Premises Switch 63xx or 38xx Foundation 3 year Subscription E-STU | R6U84AAE |
|  | Aruba Central On-Premises Switch 63xx or 38xx Foundation 5 year Subscription E-STU | R6U85AAE |
|  | Aruba Central On-Premises Switch 63xx or 38xx Foundation 7 year Subscription E-STU | R6U86AAE |
|  | Aruba Central On-Premises Switch 63xx or 38xx Foundation 10 year Subscription E-STU | R6U87AAE |
|  | Aruba Central On-Premises 63xx or 38xx Switch Foundation 1 year Subscription COP only TAC E-STU | R8M05AAE |
|  | Aruba Central On-Premises 63xx or 38xx Switch Foundation 3 year Subscription COP only TAC E-STU | R8M06AAE |
|  | Aruba Central On-Premises 63xx or 38xx Switch Foundation 5 year Subscription COP only TAC E-STU | R8M07AAE |
|  | Aruba Central On-Premises $63 x x$ or $38 x x$ Switch Foundation 7 year Subscription COP only TAC E-STU | R8M08AAE |
|  | Aruba Central On-Premises 63xx or 38xx Switch Foundation 10 year Subscription COP only TAC E-STU | R8M09AAE |
| Notes: | Add the Central On-Prem Skus to the Aruba Catalog as Standalone: <br> Aruba > Network Management > Central > On-Prem Services |  |

## Related Options

Aruba 3810M Switch Series accessories
Rule \# Description ..... SKU
Modules
Aruba 3810M 4-port Stacking Module ..... JL084A
Aruba 3810M/2930M 1-port QSFP+ 40GbE Module ..... JL078A
Aruba 3810M 2QSFP+ 40GbE Module ..... JL079A
Transceivers
Aruba 100M SFP LC FX 2km MMF Transceiver ..... J9054D
Aruba 1G SFP RJ45 T 100m Cat5e Transceiver ..... J8177D
Aruba 1G SFP LC SX 500m OM2 MMF Transceiver ..... J4858D
Aruba 1G SFP LC LX 10km SMF Transceiver ..... J4859D
Aruba 1G SFP LC LH 70km SMF Transceiver ..... J4860D
Aruba 10G SFP+ LC SR 300m OM3 MMF Transceiver ..... J9150D
Aruba 10G SFP+ LC LR 10km SMF Transceiver ..... J9151E
Aruba 10G SFP+ LC LRM 220m OM2 MMF Transceiver ..... J9152D
Aruba 10G SFP+ LC ER 40km SMF Transceiver ..... J9153D
Aruba 10G SFP+ to SFP+ 1m Direct Attach Copper Cable ..... J9281D
Aruba 10G SFP+ to SFP+ 3 m Direct Attach Copper Cable ..... J9283D
Aruba 10G SFP+ to SFP+ 7m Direct Attach Copper Cable ..... J9285D
Aruba 40G QSFP+ LC Bidirectional 150m MMF 2-strand Transceiver ..... JL308A
HPE X142 40G QSFP+ MPO SR4 Transceiver ..... JH231A
HPE X142 40G QSFP+ LC LR4 SM Transceiver ..... JH232A
HPE X142 40G QSFP+ MPO eSR4 300M Transceiver ..... JH233A
HPE X242 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable ..... JH234A
HPE X242 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable ..... JH235A
HPE X242 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable ..... JH236A
Cables
Aruba X2C2 RJ45 to DB9 Console Cable ..... JL448A
Aruba 3800/3810M 0.5m Stacking Cable ..... J9578A
Aruba 3800/3810M 1m Stacking Cable ..... J9665A
Aruba 3800/3810M 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
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

## 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 slo $\dagger$ <br> Supports a maximum of 4 SFP+ ports or 1 40GbE ports, with optional module |  |
| Additional ports and slots | 1 stacking module slo $\dagger$ <br> 1 RJ-45 serial console port <br> 1 RJ-45 out-of-band management port <br> 1 dual-personality (RJ-45 or USB micro-B) |  |
| Power supplies | 2 power supply slots <br> 1 minimum power supply required (ordered separately) |  |
| Fan tray | includes: $1 \times$ JL088A <br> 1 fan tray slot <br> Switch ships with 1 JL088A fan tray installed. Spares ordered separately, |  |
| Physical characteristics | Dimensions | $\begin{aligned} & 17.42(\mathrm{w}) \times 16.98(\mathrm{~d}) \times 1.73(\mathrm{~h}) \text { in }(44.25 \times 43.13 \times 4.39 \mathrm{~cm})(1 \mathrm{U} \\ & \text { height) } \end{aligned}$ |
|  | Weight | $12.76 \mathrm{lb}(5.79 \mathrm{~kg})$ |
| 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 ¢ (FIFO 64-byte packets) |
|  | 10 Gbps Latency | < $1.8 \mu \mathrm{~s}$ (FIFO 64-byte packets) |
|  | 40 Gbps Latency | < $1.5 \mu \mathrm{~s}$ (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 | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.45^{\circ} \mathrm{C}\right)$ |
|  | Operating relative humidity | $15 \%$ to 95\% @ 104 ${ }^{\circ} \mathrm{F}$ ( $40^{\circ} \mathrm{C}$ ), noncondensing |
|  | Non-operating/Storage temperature | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
|  | Non-operating/Storage relative humidity | 15\% to 90\% @ 149 ${ }^{\circ} \mathrm{F}\left(65^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Altitude | up to $10,000 \mathrm{ft}(3 \mathrm{~km}$ ) |
|  | Acoustic | Power: 39 dB, Pressure: 22.8 dB |
|  | Primary Airflow Direction | Front-to-side and front-to-rear |

Technical Specifications

| Electrical Characteristics | Frequency | 50/60Hz |
| :--- | :--- | :--- |
|  | Voltage | JLO85A PSU: 100-127/200-240 VAC |

Technical Specifications

| 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 <br> 1 open module slot <br> Supports a maximum of 4 SFP+ ports or 240 GbE ports, with optional module |  |
| Additional ports and slots | 1 stacking module slo $\dagger$ <br> 1 RJ-45 serial console port <br> 1 RJ-45 out-of-band management port <br> 1 dual-personality (RJ-45 or USB micro-B) |  |
| Power supplies | 2 power supply slots <br> 1 minimum power supply required (ordered separately) |  |
| Fan tray | includes: $1 \times$ JL088A <br> 1 fan tray slo† <br> Switch ships with 1 JL088A fan tray installed. Spares ordered separately. |  |
| Physical characteristics | Dimensions | $\begin{aligned} & 17.42(\mathrm{w}) \times 16.98(\mathrm{~d}) \times 1.73(\mathrm{~h}) \text { in }(44.25 \times 43.13 \times 4.39 \mathrm{~cm})(1 \mathrm{U} \\ & \text { height) } \end{aligned}$ |
|  | Weight | $13.20 \mathrm{lb}(5.99 \mathrm{~kg})$ |
| 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 ¢ (FIFO 64-byte packets) |
|  | 10 Gbps Latency | < $1.8 \mu \mathrm{~s}$ (FIFO 64-byte packets) |
|  | 40 Gbps Latency | < $1.5 \mu \mathrm{~s}$ (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 | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.45^{\circ} \mathrm{C}\right)$ |
|  | Operating relative humidity | 15\% to 95\% @ $104^{\circ} \mathrm{F}\left(40^{\circ} \mathrm{C}\right.$ ), noncondensing |
|  | Non-operating/Storage temperature | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
|  | Non-operating/Storage relative humidity | 15\% to 90\% @ $149^{\circ} \mathrm{F}\left(65^{\circ} \mathrm{C}\right.$ ), noncondensing |
|  | Altitude | up to 10,000 ft (3 km) |
|  | Acoustic | Power: 38 dB, Pressure: 21.8 dB |
|  | Primary Airflow Direction | Front-to-side and front-to-rear |

Technical Specifications

| Electrical Characteristics | Frequency | $50 / 60 \mathrm{~Hz}$ |
| :---: | :---: | :---: |
|  | Voltage | JL085A PSU: 100-127/200-240 VAC |
|  | Current | JL085A PSU (Each): 1A/0.5A |
|  | Max/Idle Power Rating (Switch+ 1 PSU) | 95W/78W |
|  | Second PSU Power Adder | 10W |
|  | Max/Idle Uplink Power | JL078A: 4W/3W |
|  | Adder | JL079A: 7W/3W |
|  |  | JL081A: 4W/3W |
|  |  | JL083A: 11W/4W |
|  | Maximum Heat Dissipation *(Max Case) | 395.56 |
|  | PoE Power (Max Possible) | N/A |
|  | Notes: | - Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst case theoretical maximum numbers provide for planning the infrastructure with fully loaded PoE (if equipped), $100 \%$ traffic, all ports plugged in, and all modules populated. This is a modular product. <br> - *Switch + 2 power supplies + one JL083A Uplink. For most accurate heat dissipation, idle and max power for any combination of chassis and accessories, please consult configurator. |
| Safety | EN 60950/IEC 60950; UL 6 60950-1; EN62479:2010; 62368-1, Ed. 2; IEC 609501:2007 / IEC 60825-1: 2007 | 950; UL 60950-1; CAN/CSA 22.2 No. 60950; EN 60825; CSA 22.2 N 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; EN :2005 Ed.2; Am 1:2009+A2:2013; IEC 60825:2007; EN60850Class1 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; $3 \mathrm{~V} / \mathrm{m}$ |
|  | EFT/Burst | IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line) |
|  | Surge | IEC 61000-4-5; $1 \mathrm{kV} / 2 \mathrm{kV} \mathrm{AC}$ |
|  | Conducted | IEC 61000-4-6; 3 V |
|  | Power frequency magnetic field | IEC 61000-4-8; $1 \mathrm{~A} / \mathrm{m}$, 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.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 Hewlett Packard Enterprise sales office. |  |

Technical Specifications

Aruba 3810M 24G PoE+ 1-slot Switch (JLO73A)

| 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- <br> T/100BASE-TX: half or full; 1000BASE-T: full only; Ports 1-24 support MACSec <br> 1 open module slot <br> Supports a maximum of $4 \mathrm{SFP}+$ ports or 140 GbE ports, with optional module |  |
| Additional ports and slots | 1 stacking module slo $\dagger$ <br> 1 RJ-45 serial console port <br> 1 RJ-45 out-of-band management port <br> 1 dual-personality (RJ-45 or USB micro-B) |  |
| Power supplies | 2 power supply slots <br> 1 minimum power supply required (ordered separately) |  |
| Fan tray | includes: $1 \times$ JL088A <br> 1 fan tray slo† <br> Switch ships with 1 JL088A fan tray installed. Spares ordered separately |  |
| Physical characteristics | Dimensions | $17.42(\mathrm{w}) \times 16.98(\mathrm{~d}) \times 1.73(\mathrm{~h}) \text { in }(44.25 \times 43.13 \times 4.39 \mathrm{~cm})(1 \mathrm{U}$ 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 | < $2.8 \mu$ (FIFO 64-byte packets) |
|  | 10 Gbps Latency | < $1.8 \mu \mathrm{~s}$ (FIFO 64-byte packets) |
|  | 40 Gbps Latency | < $1.5 \mu \mathrm{~s}$ (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 | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.45^{\circ} \mathrm{C}\right)$ |
|  | Operating relative humidity | $15 \%$ to $95 \%$ @ $104^{\circ} \mathrm{F}\left(40^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Non-operating/Storage temperature | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
|  | Non-operating/Storage relative humidity | 15\% to 90\% @ $149^{\circ} \mathrm{F}\left(65^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Altitude | up to 10,000 ft ( 3 km ) |
|  | Acoustic | Power: 44 dB , Pressure: 27.6 dB |
|  | Primary Airflow Direction | Front-to-side and front-to-rear |

Technical Specifications

| Electrical Characteristics | Frequency | $50 / 60 \mathrm{~Hz}$ |
| :---: | :---: | :---: |
|  | Voltage | JL086A PSU: 100-127/200-240 VAC JL087A PSU: 110-127/200-240 VAC |
|  | Current | JL086A PSU (Each): 5A/2.5A JL087A PSU (Each): 8.5A/5A |
|  | Max/Idle Power Rating (Switch+ 1 PSU) | 95W/82W |
|  | Second PSU Power Adder | 10W |
|  | Max/Idle Uplink Power Adder | $\begin{aligned} & \text { JL078A: } 4 \mathrm{~W} / 3 \mathrm{~W} \\ & \text { JL079A: } 7 \mathrm{~W} / 3 \mathrm{~W} \\ & \text { JL081A: } 4 \mathrm{~W} / 3 \mathrm{~W} \\ & \text { JL083A: } 11 \mathrm{~W} / 4 \mathrm{~W} \end{aligned}$ |
|  | Maximum Heat Dissipation *(Max Case) | 395.56 |
|  | PoE Power (Max Possible) | 840W |
|  | Notes: | - Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst case theoretical maximum numbers provide for planning the infrastructure with fully loaded PoE (if equipped), $100 \%$ traffic, all ports plugged in, and all modules populated. This is a modular product. <br> - *Switch + 2 power supplies + one JL083A Uplink. For most accurate heat dissipation, idle and max power for any combination of chassis and accessories, please consult configurator. |
| 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; EN608501:2007 / IEC 60825-1: 2007 Class1 Class 1 Laser Products / Laser Klasse 1; UL 62368-1 Ed. 2 |  |
| Emissions | $\begin{aligned} & \text { FCC Class A; VCCI Class A; EN 55022/CISPR } 22 \text { Class A; EN 60950-1:2006 +A11:2009 +A1:2010 } \\ & \text { +A12:2011+A2:2013 } \end{aligned}$ |  |
| Immunity | Generic | EN55022: 2010 |
|  | EN | EN55024: 2010 |
|  | ESD | IEC 61000-4-2 |
|  | Radiated | IEC 61000-4-3; $3 \mathrm{~V} / \mathrm{m}$ |
|  | EFT/Burst | IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line) |
|  | Surge | IEC 61000-4-5; $1 \mathrm{kV} / 2 \mathrm{kV} \mathrm{AC}$ |
|  | Conducted | IEC 61000-4-6; 3 V |
|  | Power frequency magnetic field | IEC 61000-4-8; $1 \mathrm{~A} / \mathrm{m}, 50$ 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.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 Hewlett Packard Enterprise sales office. |  |

Technical Specifications

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- <br> T/100BASE-TX: half or full; 1000BASE-T: full only; Ports $1-48$ support MACSec <br> 1 open module slo† <br> Supports a maximum of $4 \mathrm{SFP}+$ ports or 2 40GbE ports, with optional module |  |
| Additional ports and slots | 1 stacking module slot <br> 1 RJ-45 serial console port <br> 1 RJ-45 out-of-band management port <br> 1 dual-personality (RJ-45 or USB micro-B) |  |
| Power supplies | 2 power supply slots <br> 1 minimum power supply required (ordered separately) |  |
| Fan tray | includes: $1 \times$ JL088A <br> 1 fan tray slo† <br> Switch ships with 1 JL088A fan tray installed. Spares ordered separately. |  |
| Physical characteristics | Dimensions | $17.42(\mathrm{w}) \times 16.98(\mathrm{~d}) \times 1.73(\mathrm{~h}) \text { in }(44.25 \times 43.13 \times 4.39 \mathrm{~cm})(1 \mathrm{U}$ 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 | < $2.8 \mu$ (FIFO 64-byte packets) |
|  | 10 Gbps Latency | < $1.8 \mu \mathrm{~s}$ (FIFO 64-byte packets) |
|  | 40 Gbps Latency | < $1.5 \mu \mathrm{~s}$ (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 | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.45^{\circ} \mathrm{C}\right)$ |
|  | Operating relative humidity | 15\% to $95 \%$ @ $104^{\circ} \mathrm{F}\left(40^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Non-operating/Storage temperature | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
|  | Non-operating/Storage relative humidity | 15\% to 90\% @ $149^{\circ} \mathrm{F}\left(65^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Altitude | up to 10,000 ft ( 3 km ) |
|  | Acoustic | Power: 47 dB, Pressure: 29.4 dB |
|  | Primary Airflow Direction | Front-to-side and front-to-rear |

Technical Specifications

| Electrical Characteristics | Frequency | 50/60Hz |
| :---: | :---: | :---: |
|  | Voltage | JL086A PSU: 100-127/200-240 VAC JL087A PSU: 110-127/200-240 VAC |
|  | Current | JL086A PSU (Each): 5A/2.5A JL087A PSU (Each): 8.5A/5A |
|  | Max/Idle Power Rating (Switch+ 1 PSU) | 135W/103W |
|  | Second PSU Power Adder | 10W |
|  | Max/Idle Uplink Power Adder | $\begin{aligned} & \text { JL078A: } 4 \mathrm{~W} / 3 \mathrm{~W} \\ & \text { JL079A: } 7 \mathrm{~W} / 3 \mathrm{~W} \\ & \text { JL081A: } 4 \mathrm{~W} / 3 \mathrm{~W} \\ & \text { JL083A: } 11 \mathrm{~W} / 4 \mathrm{~W} \end{aligned}$ |
|  | Maximum Heat Dissipation *(Max Case) | 531.96 |
|  | PoE Power (Max Possible) | 1440W |
|  | Notes: | - Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst case theoretical maximum numbers provide for planning the infrastructure with fully loaded PoE (if equipped), $100 \%$ traffic, all ports plugged in, and all modules populated. This is a modular product. <br> - *Switch + 2 power supplies + one JL083A Uplink. For most accurate heat dissipation, idle and max power for any combination of chassis and accessories, please consult configurator. |
| 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; EN608501:2007 / IEC 60825-1: 2007 Class1 Class 1 Laser Products / Laser Klasse 1; UL 62368-1 Ed. 2 |  |
| Emissions | $\begin{aligned} & \text { FCC Class A; VCCI Class A; EN 55022/CISPR } 22 \text { Class A; EN 60950-1:2006 +A11:2009 +A1:2010 } \\ & \text { +A12:2011+A2:2013 } \end{aligned}$ |  |
| Immunity | Generic | EN55022: 2010 |
|  | EN | EN55024: 2010 |
|  | ESD | IEC 61000-4-2 |
|  | Radiated | IEC 61000-4-3; $3 \mathrm{~V} / \mathrm{m}$ |
|  | EFT/Burst | IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line) |
|  | Surge | IEC 61000-4-5; $1 \mathrm{kV} / 2 \mathrm{kV} \mathrm{AC}$ |
|  | Conducted | IEC 61000-4-6; 3 V |
|  | Power frequency magnetic field | IEC 61000-4-8; $1 \mathrm{~A} / \mathrm{m}, 50$ 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.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 Hewlett Packard Enterprise sales office. |  |

Technical Specifications

| 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; <br> Ports 1-16 support MACSec <br> 2 open module slots <br> Supports a maximum of 8 SFP+ ports or 2 40GbE ports, with optional module |  |
| Additional ports and slots | 1 stacking module slot <br> 1 RJ-45 serial console port <br> 1 RJ-45 out-of-band management port <br> 1 dual-personality (RJ-45 or USB micro-B) |  |
| Power supplies | 2 power supply slots <br> 1 minimum power supply required (ordered separately) |  |
| Fan tray | includes: $1 \times$ JL088A <br> 1 fan tray slot <br> Switch ships with 1 JL088A fan tray installed. Spares ordered separately. |  |
| Physical characteristics | Dimensions | $17.42(\mathrm{w}) \times 16.98(\mathrm{~d}) \times 1.73(\mathrm{~h}) \text { in }(44.25 \times 43.13 \times 4.39 \mathrm{~cm})(1 \mathrm{U}$ height) |
|  | Weight | $13.28 \mathrm{lb}(6.02 \mathrm{~kg})$ |
| 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 ¢ (FIFO 64-byte packets) |
|  | 10 Gbps Latency | < $1.8 \mu \mathrm{~s}$ (FIFO 64-byte packets) |
|  | 40 Gbps Latency | < $1.5 \mu \mathrm{~s}$ (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) |
|  | MAC address table size | 64000 entries |
| Environment | Operating temperature | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.45^{\circ} \mathrm{C}\right)$ |
|  | Operating relative humidity | $15 \%$ to $95 \%$ @ $104^{\circ} \mathrm{F}\left(40^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Non-operating/Storage temperature | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
|  | Non-operating/Storage relative humidity | 15\% to 90\% @ $149^{\circ} \mathrm{F}\left(65^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Altitude | up to 10,000 ft (3 km) |
|  | Acoustic | Power: 39 dB , Pressure: 22.3 dB |
|  | Primary Airflow Direction | Front-to-side and front-to-rear |

Technical Specifications

| Electrical Characteristics | Frequency | $50 / 60 \mathrm{~Hz}$ |
| :---: | :---: | :---: |
|  | Voltage | JL085A PSU: 100-127/200-240 VAC |
|  | Current | JL085A PSU (Each): 1A/0.5A |
|  | Max/Idle Power Rating (Switch+ 1 PSU) | 120W/95W |
|  | Second PSU Power Adder | 10W |
|  | Max/Idle Uplink Power Adder | JL078A: 4W/3W JL079A: 7W/3W <br> JL081A: 4W/3W <br> JL083A: 11W/4W |
|  | Maximum Heat Dissipation *(Max Case) | 480.81 |
|  | PoE Power (Max Possible) | N/A |
|  | Notes: | - Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst case theoretical maximum numbers provide for planning the infrastructure with fully loaded PoE (if equipped), $100 \%$ traffic, all ports plugged in, and all modules populated. This is a modular product. <br> - *Switch + 2 power supplies + one JL083A Uplink. For most accurate heat dissipation, idle and max power for any combination of chassis and accessories, please consult configurator |
| 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; EN608501:2007 / IEC 60825-1: 2007 Class1 Class 1 Laser Products / Laser Klasse 1; UL 62368-1 Ed. 2 |  |
| Emissions | $\begin{aligned} & \text { FCC Class A; VCCI Class A; EN 55022/CISPR } 22 \text { Class A; EN 60950-1:2006 +A11:2009 +A1:2010 } \\ & \text { +A12:2011+A2:2013 } \end{aligned}$ |  |
| Immunity | Generic | EN55022: 2010 |
|  | EN | EN55024: 2010 |
|  | ESD | IEC 61000-4-2 |
|  | Radiated | IEC 61000-4-3; $3 \mathrm{~V} / \mathrm{m}$ |
|  | EFT/Burst | IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line) |
|  | Surge | IEC 61000-4-5; $1 \mathrm{kV} / 2 \mathrm{kV} \mathrm{AC}$ |
|  | Conducted | IEC 61000-4-6; 3 V |
|  | Power frequency magnetic field | IEC 61000-4-8; $1 \mathrm{~A} / \mathrm{m}, 50$ 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.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 Hewlett Packard Enterprise sales office. |  |

Technical Specifications

| 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 <br> Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE $802.3 a t$ PoE+); Duplex: 10BASE- <br> T/100BASE-TX: half or full; 1000BASE-T: full only; Ports $1-40$ support MACSec <br> 8 RJ-45 HPE Smart Rate Multi-Gigabit ports (100M, 1/2.5/5GBASE-T and 10GBASE-T); Ports 1 <br> - 8 support MACSec <br> 1 open module slot <br> Supports a maximum of 4 SFP+ ports or 2 40GbE ports, with optional module |  |
| Additional ports and slots | 1 stacking module slot <br> 1 RJ-45 serial console port <br> 1 RJ-45 out-of-band management port <br> 1 dual-personality (RJ-45 or USB micro-B) |  |
| Power supplies | 2 power supply slots <br> 1 minimum power supply required (ordered separately) |  |
| Fan tray | includes: $1 \times$ JL088A <br> 1 fan tray slot <br> Switch ships with 1 JL088A fan tray installed. Spares ordered separately. |  |
| Physical characteristics | Dimensions | $17.42(\mathrm{w}) \times 16.98(\mathrm{~d}) \times 1.73(\mathrm{~h})$ in $(44.25 \times 43.13 \times 4.39 \mathrm{~cm})(1 \mathrm{U}$ height $)$ |
|  | Weight | $13.61 \mathrm{lb}(6.17 \mathrm{~kg})$ |
| 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 | < $2.8 \mu$ (FIFO 64-byte packets) |
|  | 10 Gbps Latency | < $1.8 \mu \mathrm{~s}$ (FIFO 64-byte packets) |
|  | 40 Gbps Latency | < $1.5 \mu \mathrm{~s}$ (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 | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.45^{\circ} \mathrm{C}\right)$ |
|  | Operating relative humidity | $15 \%$ to $95 \%$ @ $104^{\circ} \mathrm{F}\left(40^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Non-operating/Storage temperature | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
|  | Non-operating/Storage relative humidity | $15 \%$ to $90 \%$ @ $149^{\circ} \mathrm{F}\left(65^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Altitude | up to $10,000 \mathrm{ft}$ ( 3 km ) |
|  | Acoustic | Power: 49 dB , Pressure: 31.5 dB |
|  | Primary Airflow Direction | Front-to-side and front-to-rear |

Technical Specifications

| Electrical Characteristics | Frequency | $50 / 60 \mathrm{~Hz}$ |
| :---: | :---: | :---: |
|  | Voltage | JL086A PSU: 100-127/200-240 VAC JL087A PSU: 110-127/200-240 VAC |
|  | Current | JL086A PSU (Each): 5A/2.5A JL087A PSU (Each): 8.5A/5A |
|  | Max/Idle Power Rating (Switch+ 1 PSU) | 190W/158W |
|  | Second PSU Power Adder | 10W |
|  | Max/Idle Uplink Power Adder | JL078A: 4W/3W JL079A: 7W/3W <br> JL081A: 4W/3W <br> JL083A: 11W/4W |
|  | Maximum Heat Dissipation *(Max Case) | 719.51 |
|  | PoE Power (Max Possible) | 1440W |
|  | Notes: | - Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst case theoretical maximum numbers provide for planning the infrastructure with fully loaded PoE (if equipped), $100 \%$ traffic, all ports plugged in, and all modules populated. This is a modular product. <br> - *Switch + 2 power supplies + one JL083A Uplink. For most accurate heat dissipation, idle and max power for any combination of chassis and accessories, please consult configurator. |
| 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; EN608501:2007 / 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; $3 \mathrm{~V} / \mathrm{m}$ |
|  | EFT/Burst | IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line) |
|  | Surge | IEC 61000-4-5; $1 \mathrm{kV} / 2 \mathrm{kV} \mathrm{AC}$ |
|  | Conducted | IEC 61000-4-6; 3 V |
|  | Power frequency magnetic field | IEC 61000-4-8; $1 \mathrm{~A} / \mathrm{m}, 50$ 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.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 Hewlett Packard Enterprise sales office. |  |

Technical Specifications

Aruba 3810M 48G PoE+ 4SFP+ 680W Switch (JL428A)

| Included accessories | 1 Aruba 3810M 48G PoE+ 1-slot Switch (JL074A) 1 Aruba X372 54VDC 680W Power Supply (JL086A) <br> 1 Aruba 3810M 4SFP+ Module (JL083A) <br> 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- <br> T/100BASE- TX: half or full; 1000BASE-T: full only; Ports 1-48 support MACSec 1 open module slo $\dagger$ Supports a maximum of $4 \mathrm{SFP}+$ ports or 240 GbE ports, with optional module |  |
| Additional ports and slots | 1 stacking module slot <br> 1 RJ-45 serial console port <br> 1 RJ-45 out-of-band management port <br> 1 dual-personality (RJ-45 or USB micro-B) |  |
| Power supplies | 2 power supply slots <br> 1 minimum power supply required (ordered separately) |  |
| Fan tray | ```includes: 1 x JL088A 1 fan tray slo\dagger Switch ships with 1 JL088A fan tray installed. Spares ordered separately.``` |  |
| Physical characteristics | Dimensions | $\begin{aligned} & 17.42(\mathrm{w}) \times 16.98(\mathrm{~d}) \times 1.73(\mathrm{~h}) \text { in }(44.25 \times 43.13 \times 4.39 \mathrm{~cm})(1 \mathrm{U} \\ & \text { height) } \end{aligned}$ |
|  | Weight | $13.62 \mathrm{lb}(6.18 \mathrm{~kg})$ |
| 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 ¢s (FIFO 64-byte packets) |
|  | 10 Gbps Latency | < $1.8 \mu \mathrm{~s}$ (FIFO 64-byte packets) |
|  | 40 Gbps Latency | < $1.5 \mu \mathrm{~s}$ (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 | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.45^{\circ} \mathrm{C}\right)$ |
|  | Operating relative humidity | 15\% to 95\% @ $104^{\circ} \mathrm{F}\left(40^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Non-operating/Storage temperature | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
|  | Non-operating/Storage relative humidity | 15\% to 90\% @ $149^{\circ} \mathrm{F}\left(65^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Altitude | up to $10,000 \mathrm{ft}$ ( 3 km ) |
|  | Acoustic | Power: 47 dB , Pressure: 29.4 dB |
|  | Primary Airflow Direction | Front-to-side and front-to-rear |

## Technical Specifications

| Electrical Characteristics | Frequency | $50 / 60 \mathrm{~Hz}$ |
| :---: | :---: | :---: |
|  | Voltage | JL085A PSU: 100-127/200-240 VAC |
|  | Current | JL085A PSU (Each): 1A/0.5A |
|  | Max/Idle Power Rating (Switch+ 1 PSU) | 70W/55W |
|  | Second PSU Power Adder | 10W |
|  | Max/Idle Uplink Power Adder | $\begin{aligned} & \text { JLO78A: } 4 \mathrm{~W} / 3 \mathrm{~W} \\ & \text { JL079A: } 7 \mathrm{~W} / 3 \mathrm{~W} \\ & \text { JL081A: } 4 \mathrm{~W} / 3 \mathrm{~W} \\ & \text { JL083A: } 11 \mathrm{~W} / 4 \mathrm{~W} \end{aligned}$ |
|  | Maximum Heat Dissipation *(Max Case) | 310.31 |
|  | PoE Power (Max Possible) | N/A |
|  | Notes: | - Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst case theoretical maximum numbers provide for planning the infrastructure with fully loaded PoE (if equipped), 100\% traffic, all ports plugged in, and all modules populated. This is a modular product. <br> - *Switch + 2 power supplies + one JL083A Uplink. For mos $\dagger$ accurate heat dissipation, idle and max power for any combination of chassis and accessories, please consult configurator. |
| 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; EN608501:2007 / IEC 60825-1: 2007 Class1 Class 1 Laser Products / Laser Klasse 1; UL 62368-1 Ed. 2 |  |
| Emissions | $\begin{aligned} & \text { FCC Class A; VCCI Class A; EN 55022/CISPR } 22 \text { Class A; EN 60950-1:2006 +A11:2009 +A1:2010 } \\ & \text { +A12:2011+A2:2013 } \end{aligned}$ |  |
| Immunity | Generic | EN55022: 2010 |
|  | EN | EN55024: 2010 |
|  | ESD | IEC 61000-4-2 |
|  | Radiated | IEC 61000-4-3; $3 \mathrm{~V} / \mathrm{m}$ |
|  | EFT/Burst | IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line) |
|  | Surge | IEC 61000-4-5; $1 \mathrm{kV} / 2 \mathrm{kV} \mathrm{AC}$ |
|  | Conducted | IEC 61000-4-6; 3 V |
|  | Power frequency magnetic field | IEC 61000-4-8; $1 \mathrm{~A} / \mathrm{m}, 50$ 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.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 Hewlett Packard Enterprise sales office. |  |

Technical Specifications

Aruba 3810M 48G PoE+ 4SFP+ 1050W Switch (JL429A)

| Included accessories | ```1 Aruba 3810M 48G PoE+ 1-slot Switch (JL074A) 1 Aruba X372 54VDC 1050W Power Supply (JL087A) 1 Aruba 3810M 4SFP+ Module (JL083A) 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- <br> T/100BASE- TX: half or full; 1000BASE-T: full only; Ports 1-48 support MACSec <br> 1 open module slo $\dagger$ <br> Supports a maximum of $4 \mathrm{SFP}+$ ports or 240 GbE ports, with optional module |  |
| Additional ports and slots | 1 stacking module slot <br> 1 RJ-45 serial console port <br> 1 RJ-45 out-of-band management port <br> 1 dual-personality (RJ-45 or USB micro-B) |  |
| Power supplies | 2 power supply slots <br> 1 minimum power supply required (ordered separately) |  |
| Fan tray | includes: $1 \times$ JL088A 1 fan tray slot Switch ships with 1 JL088A fan tray installed. Spares ordered separately. |  |
| Physical characteristics | Dimensions | ```17.42(w)\times16.98(d) \times1.73(h) in (44.25 \times 43.13 \times 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 | < $2.8 \mu \mathrm{~s}$ (FIFO 64-byte packets) |
|  | 10 Gbps Latency | < $1.8 \mu \mathrm{~s}$ (FIFO 64-byte packets) |
|  | 40 Gbps Latency | < $1.5 \mu \mathrm{~s}$ (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 | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.45^{\circ} \mathrm{C}\right)$ |
|  | Operating relative humidity | $15 \%$ to 95\% @ $104^{\circ} \mathrm{F}\left(40^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Non-operating/Storage temperature | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
|  | Non-operating/Storage relative humidity | 15\% to 90\% @ $149^{\circ} \mathrm{F}\left(65^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Altitude | up to 10,000 ft ( $3 \mathrm{~km} \mathrm{)}$ |
|  | Acoustic | Power: 47 dB, Pressure: 29.4 dB |
|  | Primary Airflow Direction | Front-to-side and front-to-rear |

Technical Specifications

| Electrical Characteristics | Frequency | 50/60Hz |
| :--- | :--- | :--- |
|  | Voltage | JLO85A PSU: 100-127/200-240 VAC |
|  | Current | JL085A PSU (Each): 1A/0.5A |
|  | Max/Idle Power Rating <br> (Switch+ 1 PSU) | 70W/55W |

Technical Specifications

| Aruba 3810M 24SFP+ 250W Switch (JL430A) |  |  |
| :---: | :---: | :---: |
| Included accessories | 1 Aruba 3810M 16SFP+ 2-slot Switch (JL075A) <br> 1 Aruba X371 12VDC 250W Power Supply (JL085A) <br> 2 Aruba 3810M 4SFP+ Module (JL083A) <br> 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; <br> Ports <br> 1-16 support MACSec <br> 2 open module slots <br> Supports a maximum of 8 SFP+ ports or 240 GbE ports, with optional module |  |
| Additional ports and slots | 1 stacking module slot <br> 1 RJ-45 serial console port <br> 1 RJ-45 out-of-band management port <br> 1 dual-personality (RJ-45 or USB micro-B) |  |
| Power supplies | 2 power supply slots <br> 1 minimum power supply required (ordered separately) |  |
| Fan tray | includes: $1 \times$ JL088A1 fan tray slotSwitch ships with 1 JL088A fan tray installed. Spares ordered separately.D |  |
| Physical characteristics | Dimensions | $17.42(\mathrm{w}) \times 16.98(\mathrm{~d}) \times 1.73(\mathrm{~h}) \text { in }(44.25 \times 43.13 \times 4.39 \mathrm{~cm})(1 \mathrm{U}$ 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 | < $2.8 \mu \mathrm{~s}$ (FIFO 64-byte packets) |
|  | 10 Gbps Latency | < $1.8 \mu \mathrm{~s}$ (FIFO 64-byte packets) |
|  | 40 Gbps Latency | < $1.5 \mu \mathrm{~s}$ (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) |
|  | MAC address table size | 64000 entries |
| Environment | Operating temperature | $32^{\circ} \mathrm{F}$ to $113^{\circ} \mathrm{F}\left(0^{\circ} \mathrm{C}\right.$ to $\left.45^{\circ} \mathrm{C}\right)$ |
|  | Operating relative humidity | 15\% to 95\% @ $104^{\circ} \mathrm{F}\left(40^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Non-operating/Storage temperature | $-40^{\circ} \mathrm{F}$ to $158^{\circ} \mathrm{F}\left(-40^{\circ} \mathrm{C}\right.$ to $\left.70^{\circ} \mathrm{C}\right)$ |
|  | Non-operating/Storage relative humidity | $15 \%$ to $90 \%$ @ $149^{\circ} \mathrm{F}\left(65^{\circ} \mathrm{C}\right)$, noncondensing |
|  | Altitude | up to 10,000 ft (3 km) |
|  | Acoustic | Power: 39 dB, Pressure: 22.3 dB |
|  | Primary Airflow Direction | Front-to-side and front-to-rear |

Technical Specifications

| Electrical Characteristics | Frequency | 50/60Hz |
| :--- | :--- | :--- |
|  | Voltage | JLO85A PSU: 100-127/200-240 VAC |
|  | Current | JL085A PSU (Each): 1A/0.5A |

## Technical Specifications

## Standards and protocols

Applies to all products in series

## 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 802.3az Energy Efficient Ethernet
- IEEE 802.3x Flow Control
- IEEE 802.3bz $2.5 \mathrm{~Gb} / \mathrm{s}$ and $5 \mathrm{~Gb} / \mathrm{s}$ interfaces
- 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)

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

IPv6

## Technical Specifications

- 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 for IPv6
- 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


## Device Management

- RFC 1591 DNS (client)
- RFC 2576 (Coexistence between SNMP V1, V2, V3)
- RFC 2579 (SMIv2 Text Conventions)
- RFC 2580 (SMIv2 Conformance)
- RFC 3416 (SNMP Protocol Operations v2)
- RFC 3417 (SNMP Transport Mappings)
- HTML and telnet management


## Denial of service protection

- CPU DoS Protection


## IP Multicast

## Technical Specifications

- RFC 3376 IGMPv3
- RFC 3973 PIM Dense Mode
- RFC 4601 PIM Sparse Mode


## 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 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 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 5424 Syslog Protocol
- ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
- SNMPv1/v2c/v3
- XRMON


## Technical Specifications

## 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 2698 A Two Rate Three Color Marker
- RFC 2818 HTTP Over TLS
- RFC 2865 RADIUS (client only)
- RFC 2866 RADIUS Accounting
- RFC 3579 RADIUS Support For Extensible Authentication Protocol (EAP)
- RFC 6614 Transport Layer Security (TLS) Encryption over Radius (RadSec)
- RFC 7030 Enrollment over Secure Transport
- Secure Sockets Layer (SSL)
- SSHv2 Secure Shell


## Summary of Changes

| Date | Version History | Action | Description of Change |
| :---: | :---: | :---: | :---: |
| 28-Jun-2021 | Version 24 | Changed | Standard Features and Configuration Information sections were updated. |
| 08-Mar-2021 | Version 23 | Changed | SKUs added in Configuration Information section. |
| 08-Sep-2020 | Version 22 | Changed | Configuration Information sections was updated. |
| 06-Apr-2020 | Version 21 | Changed | Standard Features- Warranty and Configuration Information sections were updated. |
| 01-Jul-2019 | Version 20 | Changed | Standard Features and Technical Specifications sections were updated. Obsolete SKUs were removed. |
| 04-Mar-2019 | Version 19 | Changed | SKU J9151D was replaced with J9151E CTO models were removed. Obsolete SKUs were removed. |
| 03-Dec-2018 | Version 18 | Changed | Software feature update: Key features, Product overview and Enhanced Capabilities updated |
| 02-Jul-2018 | Version 17 | Changed | Software feature update |
| 07-May-2018 | Version 16 | Added | Edits made on Configuration section and Technical Specifications |
| 05-Mar-2018 | Version 15 | Changed | Configuration section updated. |
| 05-Feb-2018 | Version 14 | Changed | Configuration section updated. <br> Document name updated to match Product Master. |
| 08-Jan-2018 | Version 13 | Changed | Software feature update |
| 07-Aug-2017 | Version 12 | Added | SKU added: JL308A |
| 03-Jul-2017 | Version 11 | Added | SKU added: JL448A |
| 08-May-2017 | Version 10 | Changed | Configuration section updated |
| 03-Apr-2017 | Version 9 | Changed | Modules updated on Configuration section |
| 17-Feb-2017 | Version 8 | Changed | Configuration section updated (Adding \#B2B, \#B2C, and \#B2E Options on SKUs JL428A; JL429A and JL430A) |
| 09-Jan-2017 | Version 7 | Added | Models added: JL428A, JL429A, JL430A |
| 07-Nov-2016 | Version 6 | Changed | Product overview, Features and Benefits updated |
| 19-Aug-2016 | Version 5 | Changed | Configuration section updated. Minor changes made on Technical Specifications. |
| 06-Jun-2016 | Version 4 | Changed | Features and Benefits, Standards and Protocols, Accessories updated. SKU descriptions updated. |
| 18-Mar-2016 | Version 3 | Changed | Minor edits on Features and Benefits, Switch family photo added. |
| 11-Dec-2015 | Version 2 | Changed | Standards and protocols and Configuration Menu updated |
| 01-Dec-2015 | Version 1 | New | New QuickSpecs |

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