Overview

Aruba 2930M Switch Series

The Aruba 2930M Switch Series is designed for customers creating smart digital workplaces that are optimized for mobile users with an integrated wired and wireless approach. These Layer 3 network switches are easy to deploy and manage with advanced security and network management tools like Aruba ClearPass Policy Manager and Aruba AirWave and cloud-based Aruba Central.

A powerful Aruba ProVision ASIC delivers performance, robust feature support, and value with flexible programmability for the latest applications. High performance modular stacking for up to 10 switches provides pay as you grow scalability and simplicity.

The flexible 2930M supports wire speed 10GbE and 40GbE uplinks, redundant dual modular power supplies for up to 1440 Watts of PoE, and new models with industry standard IEEE 802.3bt Class 6 that provide up to 60W of PoE per port. HPE Smart Rate multi-gigabit Ethernet models paves the way for high speed APs and IoT devices by delivering fast connectivity and PoE power using existing campus cabling.

The feature rich 2930M supports a robust QoS, RIP, Access OSPF routing, PIM, VRRP, IPv6 and Dynamic Segmentation for unified and secure access.

The Aruba 2930M Switch Series provides a simple and powerful access layer solution that can be quickly set up at branch offices with little or no IT support using Zero Touch Deployment. The switches include a Limited Lifetime Warranty.

Aruba 2930M Switch Series

Standard Features

Key Features

- Aruba Layer 3 Switch with 10 chassis backplane stacking, static, RIP and access OSPF routing, dynamic segmentation, ACLs, SDN and robust QoS
- Advanced security and network management via Aruba ClearPass Policy Manager, Aruba AirWave and Aruba Central
- Modular 10GbE or 40GbE uplinks and HPE Smart Rate (IEEE 802.3bz) with up to 1440W PoE
- Models with 24 ports of HPE Smart Rate with IEEE 802.3bz
- Up to 60W PoE per port (IEEE 802.3bt Class 6) for high power devices
- Software-defined ready with REST APIs and OpenFlow support
- Simple deployment with Zero Touch Provisioning

Standard Features

Enhanced Capabilities

Software-defined networks

- Supports multiple programmatic interfaces, including
  REST APIs, Openflow 1.0 and 1.3, and more, to enable automation of network operations, monitoring, and troubleshooting.

Unified Wired and Wireless

- Supports unified wired and wireless policies using Aruba ClearPass Policy Manager
- Switch auto-configuration automatically configures switch 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.
- For 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.

Quality of Service (QoS)

- Traffic prioritization (IEEE 802.1p) for real-time classification into eight priority levels mapped to eight queues
- 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
- Rate limiting sets per-port ingress enforced maximums and per-port, per-queue minimums
- Large buffers provide graceful congestion management
- Unknown Unicast Rate Limiting throttles unicast packets with unknown destination addresses and limits flooding on the VLAN

Performance and Efficiency

- Energy-efficient design
  - 80 PLUS Gold and Platinum Certified power supplies increase power efficiency and savings
  - Energy-efficient Ethernet (EEE) support reduces power consumption in accordance with IEEE 802.3az
- Designed with the latest Aruba Provision ASIC, providing very low latency, increased packet buffering, and adaptive power consumption
- Selectable queue configurations allows for increased performance by selecting the number of queues and associated memory buffering that best meet the requirements of the network applications
- Stacking Topology
  - High Performance stacking—up to 100 Gbps of stacking throughput per switch. Each 2-port stacking module can support up to 25Gbps in each direction per port.
  - Ring topology—Supports up to 10 member stack
  - Virtualized Switching provides simplified management as the switches act as a single chassis when stacked

Connectivity

- HPE Smart Rate multi-gigabit (IEEE 802.3bz) Ethernet supports high-speed wireless access points
- Flexible configurations include:
  - Switch with 24 Smart Rate ports
  - Switch with 40 gigabit ports and 8 Smart Rate ports
  - Switch with 24 Smart Rate ports supporting high power IEEE 802.3bt Class 6 (60W)
  - Switch with 40 gigabit ports and 8 Smart Rate ports supporting high power IEEE 802.3bt Class 6 (60W)
  - All 2930M switches support optional 4 port Smart Rate module

Standard Features

- Flexible 10 Gb/s Ethernet connectivity Modular 4 port 10 Gigabit (SFP+) available
- Models with IEEE 802.3bt Class 6 PoE provides up to 60 W per port for IEEE 802.3bt compatible devices.
- 40Gbps Uplink port connectivity Modular 40Gbps QSFP+ port available
- Auto-MDIX provides automatic adjustments for straight-through or crossover cables on all 10/100 and 10/100/1000 ports
- 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
- Pre-standard PoE support detects and provides power to pre-standard PoE devices
- IPv6
  - IPv6 host enables switches to be managed in an IPv6 network
  - Dual stack (IPv4 and IPv6) transitions from 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 network traffic
  - IPv6 routing supports static and RIPng and OSPFv3 protocols
  - Security provides RA guard, DHCPv6 protection, dynamic IPv6 lockdown, and ND snooping

Convergence

- IP multicast snooping and data-driven IGMP automatically prevent 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
- IEEE 802.1AB Link Layer Discovery Protocol (LLDP) facilitates easy mapping using network management applications with LLDP automated device discovery protocol
- PoE and PoE+ allocations support multiple methods (automatic, IEEE 802.3at dynamic, LLDP-MED fine grain, IEEE 802.3af device class, or user-specified) to allocate and manage PoE/PoE+ power for more efficient energy savings
- PoE Class 6 allocations support increased dynamic power up to 60W with new IEEE 802.3bt LLDP type, length, and value (TLV) information extended to 29 octets
- Local MAC Authentication assigns attributes such as VLAN and QoS using locally configured profile that can be a list of MAC prefixes
- IP multicast routing includes PIM sparse and dense modes to route IP multicast traffic
- Protocol Independent Multicast for IPv6 supports one-to-many and many-to-many media casting use cases such as IPTV over IPv6 networks

Simplified Configuration and Management

- Aruba Central cloud- based management platform offers simple, secure and cost effective way to manage switches
- Zero-Touch-Provisioning (ZTP) simplifies installation of the switch infrastructure using Aruba Activate or DHCP-based process with AirWave and Central Network Management
- Flexible management with same hardware – Supports both cloud-based Central and on-premise AirWave with the same hardware ensuring change management platform without ripping and replacing switching infrastructure
- Built-in programmable and easy to use REST API interface provides configuration automation for campus networks
- Out-of-band Ethernet management port enables management on a separate physical management network, and keeps management traffic segmented from network data traffic
- SNMPv1, v2, and v3 provide complete support of SNMP; provide full support of industry-standard Management Information Base (MIB) plus private extensions; SNMPv3 supports increased security using encryption

Resiliency and high availability

- Virtual Router Redundancy Protocol (VRRP) allows groups of two routers to back each other up dynamically to create highly available routed environments in IPV4 and IPV6 networks
- 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

Standard Features

- IEEE 802.3ad link-aggregation-control protocol (LACP) and port trunking supports up to 60 static and dynamic trunks with each trunk having up to eight links (ports) per static trunk
- SmartLink provides easy-to-configure link redundancy of active and standby links
- Dual hot-swappable power supplies
  - Increased Resiliency provides secondary power supply to enable complete switch power redundancy in case or power line or supply failure
  - Increased PoE power provides secondary power supply to increase the total available PoE+ power

Manageability

- Dual flash images provides independent primary and secondary operating system files for backup while upgrading
- Friendly port names allow assignment of descriptive names to ports
- Find-Fix-Inform feature finds and fixes common network problems automatically, then informs administrator
- Supports multiple configuration files to be stored to a flash image
- RMON, XRMON, and sFlow provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- Troubleshooting ingress and egress port monitoring enable network problem solving
- 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
- Power down mode delivers power savings by allowing the switch to power down most of the switch, except a clock which will boot up the switch when scheduled.

Layer 2 switching

- IEEE802.1ad QinQ increases the scalability of an Ethernet network by providing a hierarchical structure; connects multiple LANs on a high-speed campus or metro network
- VLAN Support and Tagging supports IEEE 802.1Q (4094 VLAN IDs) and 2K VLANs simultaneously
- Jumbo packet support improves the performance of large data transfers; supports frame size of up to 9220 bytes
- IEEE 802.1v protocol VLANs isolate select non-IPv4 protocols automatically into their own 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+
- GVRP and MVRP allows automatic learning and dynamic assignment of VLANs
- VxLAN encapsulation (tunneling) protocol for overlay network that enables a more scalable virtual network deployment
- IEEE 1588v2 Transparent Clock Mode1-step and end to end delay mode support critical timing applications
  Notes: IEEE 1588v2 (PTP) is not supported on the following 2930M models: JL323A, JL324A, R0M67A, R0M68A or 2930M modules: JL325A, JL078A, JL081A, JL083A

Layer 3 routing

- Static IP routing provides manually configured routing; includes ECMP capability
- Routing Information Protocol (RIP) provides RIPv1, RIPv2, and RIPng routing
- Access OSPF provides OSPFv2 and OSPFv3 protocols for routing between access and the next layer on the LAN. One OSPF area and up to eight interfaces are supported.
- Policy-based routing uses a classifier to select traffic that can be forwarded based on policy set by the network administrator (limited to 16 next-hop routes)

Layer 3 services

- DHCP server centralizes and reduces the cost of IPv4 address management

Security

- Multiple user authentication methods
  - Uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards
  - Supports web-based authentication provides a browser-based environment, similar to IEEE 802.1X, to authenticate clients that do not support IEEE 802.1X

Standard Features

  - Supports MAC-based client authentication
- TPM-based Security
  - Includes a Trusted Platform Module (TPM) for secure hardware-based generation and storage of cryptographic keys that can be used for a variety of authentication purposes
- Authentication flexibility
  - Multiple IEEE 802.1X users per port provides authentication of multiple devices on a single port; prevents a user from “piggybacking” on another user’s IEEE 802.1X authentication
  - Concurrent IEEE 802.1X, Web, and MAC authentication schemes per port switch port will accept up to 32 sessions of IEEE 802.1X, Web, and MAC authentications
- 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
- Access control lists (ACLs) provide IP Layer 3 filtering based on source/destination IP address/subnet and source/destination TCP/UDP port number
- Control plane policing: Set rate limit on control protocols to protect CPU overload
- Source-port filtering allows only specified ports to communicate with each other
- RADIUS/TACACS+ eases switch management security administration by using a password authentication server
- Secure shell encrypts all transmitted data for secure remote CLI access over IP networks
- Secure Sockets Layer (SSL) encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- Port security allows access only to specified MAC addresses, which can be learned or specified by the administrator
- Radius over TLS (RadSec) allows users to use a more secure and reliable mode of communications between switch and radius servers over unsecure networks
- MAC address lockout prevents particular configured MAC addresses from connecting to the network
- 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
- Custom banner displays security policy when users log in to the switch
- STP BPDU port protection blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- 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
- Identity-driven ACL enables implementation of a highly granular and flexible access security policy and VLAN assignment specific to each authenticated network user
- Per-port broadcast throttling configures broadcast control selectively on heavy traffic port uplinks
- 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 or HPE Smart Rate) using standard encryption and authentication
- Enrollment over Secure Transport (EST) enhances the switch PKI infrastructure with a simpler, scalable and more secure method of certificate provisioning, re-enrollment and renewal

Standard Features

Monitor and diagnostics

- Digital optical monitoring of SFP+ and 1000BASE-T transceivers allows detailed monitoring of the transceiver settings and parameters

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 24x7x365, 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/**

Configuration Information

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

BTO Models

Rule #	Description	SKU
1, 2, 3	Aruba 2930M 40G 8 HPE Smart Rate PoE Class 6 1-slot Switch • 8 Smart Rate Ports 1/2.5/5/10GBASE-T PoE Class 6 • 36 10/100/1000BaseT Ports PoE Class 6 • 4 Combo Ports 10/100/1000BaseT PoE Class 6 or 100M/1G SFP Ports • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply (Default Qty1 JL087A) • 1U – Height	R0M67A
2	Aruba 2930M 24 HPE Smart Rate PoE Class 6 1-slot Switch • 24 Smart Rate Ports 1/2.5/5Gbps PoE Class 6 (No 10Gbps) • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply (Default Qty1 JL087A) • 1U – Height	R0M68A
1, 3	Aruba 2930M 40G 8 HPE Smart Rate PoE+ 1-slot Switch • 8 Smart Rate Ports 1/2.5/5/10GBASE-T PoE+ • 36 10/100/1000BaseT Ports PoE+ • 4 Combo Ports 10/100/1000BaseT PoE+ or 100M/1G SFP Ports • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply (Default Qty1 JL087A) • 1U – Height	JL323A
	Aruba 2930M 24 HPE Smart Rate PoE+ 1-slot Switch • 24 Smart Rate Ports 1/2.5/5Gbps PoE+ (No 10Gbps) • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply (Default Qty1 JL087A) • 1U - Height	JL324A
1, 3	Aruba 2930M 24G 1-slot Switch • 4 Combo Ports 10/100/1000BaseT or 100M/1G SFP Ports • 20 10/100/1000BaseT • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply (Default Qty1 JL085A) • 1U – Height	JL319A

Configuration Information

Rule #	Description	SKU
1, 3	Aruba 2930M 24G PoE+ 1-slot Switch • 4 Combo Ports 10/100/1000BaseT PoE+ or 100M/1G SFP Ports • 20 10/100/1000BaseT PoE+ • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply (Default Qty1 JL086A) • 1U – Height	JL320A
1, 3	Aruba 2930M 48G 1-slot Switch • 4 Combo Ports 10/100/1000BaseT or 100M/1G SFP Ports • 44 10/100/1000BaseT • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply (Default Qty1 JL085A) • 1U – Height	JL321A
1, 3	Aruba 2930M 48G PoE+ 1-slot Switch • 4 Combo Ports 10/100/1000BaseT PoE+ or 100M/1G SFP Ports • 44 10/100/1000BaseT PoE+ • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply (Default Qty1 JL086A) • 1U – Height	JL322A
	Configuration Rules	
1	The following Transceivers install into this Switch:	
	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
2	OCA Blue Switch can deliver up to 60 watts of PoE per port (on front panel ports only)	
3	The following Transceivers install into this Switch:	
	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
Notes:	OCA Only Model Selection Form – HPE Offering > Aruba > Switches - ArubaOS: Aruba 2930M Switch Series	

Configuration Information

Rack Level Integration CTO Models

Rule #	Description	SKU
1, 2, 3, 4, 5	Aruba 2930M 40G 8 HPE Smart Rate PoE Class 6 1-slot Switch • 8 Smart Rate Ports 1/2.5/5/10GBASE-T PoE Class 6 • 36 10/100/1000BaseT Ports PoE Class 6 • 4 Combo Ports 10/100/1000BaseT PoE Class 6 or 100M/1G SFP Ports • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply (Default Qty1 JL087A) • 1U – Height	R0M67A
2, 3, 4, 5	Aruba 2930M 24 HPE Smart Rate PoE Class 6 1-slot Switch • 24 Smart Rate Ports 1/2.5/5Gbps PoE Class 6 (No 10Gbps) • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply (Default Qty1 JL087A) • 1U – Height	R0M68A
1, 2, 3, 5	Aruba 2930M 40G 8 HPE Smart Rate PoE+ 1-slot Switch • 8 Smart Rate Ports 1/2.5/5/10GBASE-T PoE+ • 36 10/100/1000BaseT Ports PoE+ • 4 Combo Ports 10/100/1000BaseT PoE+ or 100M/1G SFP Ports • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply • 1U – Height	JL323A
2, 3, 5	Aruba 2930M 24 HPE Smart Rate PoE+ 1-slot Switch • 24 Smart Rate Ports 1/2.5/5Gbps PoE+ (No 10Gbps) • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply • 1U – Height	JL324A
1, 2, 3, 5	Aruba 2930M 24G 1-slot Switch • 4 Combo Ports 10/100/1000BaseT or 100M/1G SFP Ports • 20 10/100/1000BaseT • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply • 1U – Height	JL319A
1, 2, 3, 5	Aruba 2930M 24G PoE+ 1-slot Switch • 4 Combo Ports 10/100/1000BaseT PoE+ or 100M/1G SFP Ports • 20 10/100/1000BaseT PoE+ • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply • 1U – Height	JL320A

Configuration Information

1, 2, 3, 5	Aruba 2930M 48G 1-slot Switch • 4 Combo Ports 10/100/1000BaseT or 100M/1G SFP Ports • 44 10/100/1000BaseT • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply • 1U – Height	JL321A
1, 2, 3, 5	Aruba 2930M 48G PoE+ 1-slot Switch • 4 Combo Ports 10/100/1000BaseT PoE+ or 100M/1G SFP Ports • 44 10/100/1000BaseT PoE+ • min=0 \\ max=4 SFP Transceivers • 1 Uplink Module Slot • 1 Stacking Module Slot • Must select minimum 1 Power Supply • 1U – Height	JL322A

Configuration Rules

Rule #	Description	SKU
1	The following Transceivers install into this Module: (Use #0D1 or #B01 if switch is CTO) - if applicable	
	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
2	If this switch is factory installed in HPE Racks, Then the J9583A#0D1 is required.	
3	If HPE CTO Switch Chassis is selected to for Rack Level Integration, Then the CTO Switch Chassis needs to integrate (with #0D1) to the HPE Rack.	
4	OCA Blue Switch can deliver up to 60 watts of PoE per port(on front panel ports only)	
5	The following Transceivers install into this Switch:	
	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
Notes:	Clic UNB - If an option is ordered with #0D1/#B01, then the switch must have #0D1 option.	

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

Networking

Rule #	Description	SKU
	Uplink Modules	
	System (std 0 // max 1) User Selection (min 0 // max 1) per enclosure	
3	Aruba 3810M/2930M 1-port QSFP+ 40GbE Module • 1 x QSFP+ Ports,	JL078A
4	Aruba 3810M 4 HPE Smart Rate PoE+ Module 4 x HPE Smart Rate Ports	JL081A
1, 2, 5, 6	Aruba 3810M/2930M 4-port 100M/1G/10G SFP+ MACsec Module • 4 x 10GbE SFP+ Ports	JL083A

Configuration Information

	Configuration Rules	
1	The following 1G Transceivers install into this Module (Use #0D1 or #B01 quoted to switch if switch is CTO) - if applicable	
	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
2	The following 10G Transceivers install into this Module (Use #0D1 or #B01 quoted to switch if switch is CTO) - if applicable	
	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+ 7m Direct Attach Copper Cable	J9285D
3	The following 40G Transceivers install into this Module (Use #0D1 or #B01 quoted to switch if switch is CTO) - if applicable	
	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
4	OCA Blue Switch can deliver up to 30 watts of PoE per port on this Module (JL081A) when used on the following PoE+/PoE Class 6 Switches:	
	Aruba 2930M 24G PoE+ 1-slot Switch	JL320A
	Aruba 2930M 48G PoE+ 1-slot Switch	JL322A
	Aruba 2930M 40G 8 HPE Smart Rate PoE+ 1-slot Switch	JL323A
	Aruba 2930M 24 HPE Smart Rate PoE+ 1-slot Switch	JL324A
	Aruba 2930M 40G 8 HPE Smart Rate PoE Class 6 1-slot Switch	R0M67A
5	The following Transceivers install into this Switch:	
	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
6	The following Transceivers install into this Switch:	
	Aruba 10G SFP+ LC SR 300m MMF TAA Transceiver	JL748A
	Aruba 10G SFP+ LC LR 10km SMF TAA Transceiver	JL749A
Notes:	OCA Blue - 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.	

Configuration Information

Stacking Modules

Rule #	Description	SKU
	System (std 0 // max 1) User Selection (min 0 // max 1) per Stacking Module	
1	Aruba 2930 2-port Stacking Module	JL325A
	min=1 \ max=2 Stacking Cables	
	Configuration Rules	
1	One of the following Stacking Cables must be selected:	
	Aruba 2920/2930M 0.5m Stacking Cable	J9734A
	Aruba 2920/2930M 1m Stacking Cable	J9735A
	Aruba 2920/2930M 3m Stacking Cable	J9736A

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	
	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

Internal Power Supplies

Rule #	Description	SKU
	System (std 0 // max 2) User Selection (min 1 // max 2) per enclosure	
1, 3	Aruba X371 12VDC 250W 100-240VAC Power Supply	JL085A
	Aruba X371 12VDC 250W 100-240VAC Power Supply PDU NA, JP or TW	JL085A#B2B
	• C15 PDU Jumper Cord (NA/MEX/TW/JP)	
	Aruba X371 12VDC 250W 100-240VAC Power Supply PDU ROW	JL085A#B2C

Configuration Information

	• C15 PDU Jumper Cord (ROW)	
	Aruba X371 12VDC 250W 100-240VAC Power Supply United States 220 volt	JL085A#B2E
	• NEMA L6-20P Cord (NA/MEX/JP/TW)	
	Aruba X371 12VDC 250W 100-240VAC Power Supply	JL085A#AC3
	• No Localized Power Cord Selected	
2, 3	Aruba X372 54VDC 680W 100-240VAC Power Supply	JL086A
	Aruba X372 54VDC 680W 100-240VAC Power Supply PDU NA, JP or TW	JL086A#B2B
	• C15 PDU Jumper Cord (NA/MEX/TW/JP)	
	Aruba X372 54VDC 680W 100-240VAC Power Supply PDU ROW	JL086A#B2C
	• C15 PDU Jumper Cord (ROW)	
	Aruba X372 54VDC 680W 100-240VAC Power Supply United States 220 volt	JL086A#B2E
	• NEMA L6-20P Cord (NA/MEX/JP/TW)	
	Aruba X372 54VDC 680W 100-240VAC Power Supply	JL086A#AC3
	• No Localized Power Cord Selected	
2, 3	Aruba X372 54VDC 1050W 110-240VAC Power Supply	JL087A
	Aruba X372 54VDC 1050W 110-240VAC Power Supply PDU NA, JP or TW	JL087A#B2B
	• C15 PDU Jumper Cord (NA/MEX/TW/JP)	
	Aruba X372 54VDC 1050W 110-240VAC Power Supply PDU ROW	JL087A#B2C
	Aruba X372 54VDC 1050W 110-240VAC Power Supply United States 220 volt	JL087A#B2E
	• NEMA L6-20P Cord (NA/MEX/JP/TW)	
	Aruba X372 54VDC 1050W 110-240VAC Power Supply	JL087A#AC3
	• No Localized Power Cord Selected	
	Configuration Rules	
1	This PSU is compatible with the following Switches:	
	Aruba 2930M 24G 1-slot Switch	JL319A
	Aruba 2930M 48G 1-slot Switch	JL321A
2	This PSU is compatible with the following Switches:	
	Aruba 2930M 24G PoE+ 1-slot Switch	JL320A
	Aruba 2930M 48G PoE+ 1-slot Switch	JL322A
	Aruba 2930M 40G 8 HPE Smart Rate PoE+ 1-slot Switch	JL323A
	Aruba 2930M 24 HPE Smart Rate PoE+ 1-slot Switch	JL324A
	Aruba 2930M 40G 8 HPE Smart Rate PoE Class 6 1-slot Switch	R0M67A
	Aruba 2930M 24 HPE Smart Rate PoE Class 6 1-slot Switch	R0M68A
3	Localization required on orders without #B2B, #B2C, #B2E and #AC3 options	
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 Power Cord - #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.	

Configuration Information

Cables

Remarks	Description	SKU
	Stacking Cables	
	(std 0 // max 2) User Selection (min 0 // max 2) per module	
	Aruba 2920/2930M 0.5m Stacking Cable	J9734A
	Aruba 2920/2930M 1m Stacking Cable	J9735A
	Aruba 2920/2930M 3m Stacking Cable	J9736A
	Console Cables	
	(std 0 // max 1) User Selection (min 0 // max 1) per switch	
	Aruba X2C2 RJ45 to DB9 Console Cable	JL448A

Switch Enclosure Options

Remarks	Description	SKU
	Mounting Kit	
	(std 0 // max 1) User Selection (min 0 // max 1) per switch	
	Aruba X414 1U Universal 4-post Rack Mount Kit	J9583B
Notes:	If this Mounting Kit is ordered with #0D1, then it integrates to the HP Universal Rack. (not the switch)	

Software

Remarks	Description	SKU
	Central	
	Cloud Services / 62XX/29XX Switch Foundation Subscriptions	
	Aruba Central 62xx or 29xx Switch Foundation 1 year Subscription E-STU	Q9Y73AAE
	Aruba Central 62xx or 29xx Switch Foundation 3 year Subscription E-STU	Q9Y74AAE
	Aruba Central 62xx or 29xx Switch Foundation 5 year Subscription E-STU	Q9Y75AAE
	Aruba Central 62xx or 29xx Switch Foundation 7 year Subscription E-STU	Q9Y76AAE
	Aruba Central 62xx or 29xx Switch Foundation 10 year Subscription E-STU	Q9Y77AAE
Notes:	Add the Central Cloud Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > Cloud Services	
	On-Prem Services / 62XX/29XX Switch Foundation Subscriptions	
	Aruba Central On-Premises 62xx or 29xx Switch Foundation 1 year Subscription E-STU	R6U78AAE
	Aruba Central On-Premises 62xx or 29xx Switch Foundation 3 year Subscription E-STU	R6U79AAE
	Aruba Central On-Premises 62xx or 29xx Switch Foundation 5 year Subscription E-STU	R6U80AAE
	Aruba Central On-Premises 62xx or 29xx Switch Foundation 7 year Subscription E-STU	R6U81AAE
	Aruba Central On-Premises 62xx or 29xx Switch Foundation 10 year Subscription E-STU	R6U82AAE
Notes:	Add the Central On-Prem Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > On-Prem Services	
	On-Prem Services / 62XX/29XX Switch Advanced Subscriptions	
	Aruba Central On-Premises 62xx or 29xx Switch Advanced 1 year Subscription E-STU	R6U98AAE
	Aruba Central On-Premises 62xx or 29xx Switch Advanced 3 year Subscription E-STU	R6U99AAE
	Aruba Central On-Premises 62xx or 29xx Switch Advanced 5 year Subscription E-STU	R6V00AAE
	Aruba Central On-Premises 62xx or 29xx Switch Advanced 7 year Subscription E-STU	R6V01AAE
	Aruba Central On-Premises 62xx or 29xx Switch Advanced 10 year Subscription E-STU	R6V02AAE
Notes:	Add the Central On-Prem Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > On-Prem Services	
	Aruba 2930F 12G PoE+ 2G/2SFP+ Switch	JL693A
	Aruba 2930F 8G PoE+ 2SFP+ Switch	JL258A

Configuration Information

	Advanced Services / 62XX or 29XX Switch Advanced Subscriptions	
	Aruba Central 62xx or 29xx Switch Advanced 1 year Subscription E-STU	JZ530AAE
	Aruba Central 62xx or 29xx Switch Advanced 3 year Subscription E-STU	JZ531AAE
	Aruba Central 62xx or 29xx Switch Advanced 5 year Subscription E-STU	JZ532AAE
	Aruba Central 62xx or 29xx Switch Advanced 7 year Subscription E-STU	JZ533AAE
	Aruba Central 62xx or 29xx Switch Advanced 10 year Subscription E-STU	JZ534AAE
Notes:	Add the Central Advanced Service Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > Advanced	

Technical Specifications

Aruba 2930M 24G 1-slot Switch (JL319A)		
I/O ports and slots	20 Autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASETX, IEEE 802.3ab Type 1000Base-T); Duplex: 10BASE-T/100BASE-TX:half or full;1000BASE-T:full only	
	4 Combo 10/100/1000BASE-T or 100/1000Mbps SFP Ports	
Additional ports and slots	1 Dual Personality (RJ-45 or USB Micro-B) serial console port 1 USB A port for uploading/ downloading files 1 100BASE-T Out of Band Management Port 1 Uplink Slot 1 Stacking Module Slot 2 Power Supply Slots (power supplies not included)	
Physical characteristics	**Dimensions**	1.73" (Height) x 17.42" (Width) x 12.77" (Depth) (4.39cm x 44.25cm x 32.43cm)
	Weight	9.81 lbs 4.45kg
Memory and processor	Dual Core ARM Cortex A9 @ 1016 MHz 1 GB DDR3 SDRAM Packet Buffer Size: 12.38 MB 4.5MB Ingress/7.875MB Egress 4GB eMMC	
Performance	**IPv6 Ready certified**	
	10 Mbps Latency	< 98.5us (FIFO 64 byte packets)
	100 Mbps Latency	<11.8us (FIFO 64-byte Packets)
	1000 Mbps Latency	< 3.1us (FIFO 64-byte packets)
	10Gbps Latency	<3.4us (FIFO 64-byte packets)
	Throughput	Up to 95.2Mpps
	Stacking Performance	100 Gbps
	Switching Capacity	128 Gbps
	Switching Capacity (including Stacking)	228 Gbps
	Routing table Size	2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP
	Mac Address Table Size	32768 entries
Environment	**Operating temperature**	32˚ F to 131˚F (0° C to 55° C) up to 5000ft, 32˚ F to 122˚F (0° C to 50° C). Derate -1 degree C for every 1000 ft from 5000 ft to 10000 ft
	Operating relative humidity	15%to 95% (Non-condens- ing) 10,000 ft
	Non-operating/Storage temperature	-40°C to 70°C up to 15000 ft
	Non-operating/Storage relative humidity	90% at 65°C (non-condens- ing); 15,000 ft
	Acoustic	Sound Power LWaD=4.0 Bel, Sound Pressure LpAm, Bystander = 22.8 dB
	Primary Airflow direction	Front to Back
Electrical Characteristics	**Frequency**	50/60Hz
	Maximum Heat Dissipation	168 BTU/hr 177 kJ/hr
	Voltage	JL085A PSU: 100-127/200-240
	Current	JL085A PSU: 1A/0.5A
	Maximum power rating	49W
	Idle Power	34W
	PoE Power(Max Possible)	N/A
	Hibernate Power	11W

Technical Specifications

	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.

Aruba 2930M 24G PoE+ 1-slot Switch (JL320A)		
I/O ports and slots	20 Autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASETX, IEEE 802.3ab Type 1000Base-T IEEE 802.3at PoE+); Duplex: 10BASE‑T/100BASE-TX:half or full;1000BASE-T:full only	
	4 Combo 10/100/1000BASE-T PoE+ or 100/1000Mbps SFP Ports	
Additional ports and slots	1 Dual Personality (RJ-45 or USB Micro-B) serial console port 1 USB A port for uploading/ downloading files 1 100BASE-T Out of Band Management Port 1 Uplink Slot 1 Stacking Module Slot 2 Power Supply Slots (power supplies not included)	
Physical characteristics	**Dimensions**	1.73" (Height) x 17.42" (Width) x 12.77" (Depth) (4.39cm x 44.25cm x 32.43cm)
	Weight	9.92 lbs 4.50 kg
Memory and processor	Dual Core ARM Cortex A9 @ 1016 MHz	
	1 GB DDR3 SDRAM	
	Packet Buffer Size: 12.38 MB 4.5MB Ingress/7.875MB Egress	
	4GB eMMC	
Performance	**IPv6 Ready certified**	
	10 Mbps Latency	< 98.5us (FIFO 64 byte packets)
	100 Mbps Latency	<11.8us (FIFO 64-byte Packets)
	1000 Mbps Latency	< 3.1us (FIFO 64-byte packets)
	10Gbps Latency	<3.4us (FIFO 64-byte packets)
	Throughput	Up to 95.2Mpps
	Stacking Performance	100 Gbps
	Switching Capacity	128 Gbps
	Switching Capacity (including Stacking)	228 Gbps
	Routing table Size	2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP
	Mac Address Table Size	32768 entries
Environment	**Operating temperature**	32 ˚ F to 131 ˚F (0° C to 55° C) up to 5000ft, 32 ˚ F to 122 ˚F (0° C to 50° C). Derate -1 degree C for every 1000 ft from 5000 ft to 10000 ft
	Operating relative humidity	15%to 95% (Non-condens- ing) 10,000 ft
	Non-operating/Storage temperature	-40°C to 70°C up to 15000 ft
	Non-operating/Storage relative humidity	90% at 65°C (non-condens- ing); 15,000 ft
	Acoustic	Sound Power LWaD=4.6 Bel, Sound Pressure LpAm, Bystander = 28.8 dB
	Primary Airflow direction	Front to Back
Electrical Characteristics	**Frequency**	50/60Hz
	Maximum Heat Dissipation	279 BTU/hr 314 kJ/hr
	Voltage	JL086A PSU: 100-127/200- 240 VAC JL087A PSU: 110-127/200- 240 VAC

Technical Specifications

Electrical Characteristics	**Current**	JL086A PSU (each): 5A/2.5A JL087A PSU (each): 8.5A/5A
	Maximum power rating	JL086A PSU (each): 450W JL087A PSU (each): 810W
	Idle Power	63W
	PoE Power (Max Possible)	840 Watts
	Hibernate Power	23W
	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.	

Aruba 2930M 48G 1-slot Switch (JL321A)		
I/O ports and slots	44 Autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASETX, IEEE 802.3ab Type 1000Base-T); Duplex: 10BASE-T/100BASE-TX:half or full;1000BASE-T:full only	
	4 Combo 10/100/1000BASE-T or 100/1000Mbps SFP Ports	
Additional ports and slots	1 Dual Personality (RJ-45 or USB Micro-B) serial console port 1 USB A port for uploading/ downloading files 1 100BASE-T Out of Band Management Port 1 Uplink Slot 1 Stacking Module Slot 2 Power Supply Slots (power supplies not included)	
Physical characteristics	**Dimensions**	1.73" (Height) x 17.42" (Width) x 12.77" (Depth) (4.39cm x 44.25cm x 32.43cm)
	Weight	10.14 lbs 4.60 kg
Memory and processor	Dual Core ARM Cortex A9 @ 1016 MHz	
	1 GB DDR3 SDRAM	
	Packet Buffer Size: 12.38 MB 4.5MB Ingress/7.875MB Egress	
	4GB eMMC	
Performance	**IPv6 Ready certified**	
	10 Mbps Latency	< 98.5us (FIFO 64 byte packets)
	100 Mbps Latency	<11.8us (FIFO 64-byte Packets)
	1000 Mbps Latency	< 3.1us (FIFO 64-byte packets)
	10Gbps Latency	<3.4us (FIFO 64-byte packets)
	Throughput	Up to 112 Mpps
	Stacking Performance	100 Gbps
	Switching Capacity	176 Gbps
	Switching Capacity (including Stacking)	276 Gbps
	Routing table Size	2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP
	Mac Address Table Size	32768 entries
Environment	**Operating temperature**	32˚ F to 131˚F (0° C to 55° C) up to 5000ft, 32˚ F to 122˚F (0° C to 50° C). Derate -1 degree C for every 1000 ft from 5000 ft to 10000 ft
	Operating relative humidity	15%to 95% (Non-condens- ing) 10,000 ft
	Non-operating/Storage temperature	-40°C to 70°C up to 15000 ft
	Non-operating/Storage relative humidity	90% at 65°C (non-condens- ing); 15,000 ft
	Acoustic	Sound Power LWaD=4.1 Bel, Sound Pressure LpAm, Bystander = 23.7 dB

Technical Specifications

Electrical Characteristics	**Primary Airflow direction**	Front to Back
Electrical Characteristics	**Frequency**	50/60Hz
	Maximum Heat Dissipation	263 BTU/hr 278kJ/hr
	Voltage	JL085A PSU: 100-127/200- 240
	Current	JL085A PSU: 1A/0.5A
	Maximum power rating	78W
	Idle Power	52W
	PoE Power (Max Possible)	N/A
	Hibernate Power	11W
	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.	

Aruba 2930M 48G PoE+ 1-slot Switch (JL322A)		
I/O ports and slots	44 Autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASETX, IEEE 802.3ab Type 1000Base-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX:half or full;1000BASE-T:full only	
	4 Combo 10/100/1000BASE-T PoE+ or 100/1000Mbps SFP Ports	
Additional ports and slots	1 Dual Personality (RJ-45 or USB Micro-B) serial console port 1 USB A port for uploading/ downloading files 1 100BASE-T Out of Band Management Port 1 Uplink Slot 1 Stacking Module Slot 2 Power Supply Slots (power supplies not included)	
Physical characteristics	**Dimensions**	1.73" (Height) x 17.42" (Width) x 12.77" (Depth) (4.39cm x 44.25cm x 32.43cm)
	Weight	10.25 lbs 4.65 kg
Memory and processor	Dual Core ARM Cortex A9 @ 1016 MHz	
	1 GB DDR3 SDRAM	
	Packet Buffer Size: 12.38 MB 4.5MB Ingress/7.875MB Egress	
	4GB eMMC	
Performance	**IPv6 Ready certified**	
	10 Mbps Latency	< 98.5us (FIFO 64 byte packets)
	100 Mbps Latency	<11.8us (FIFO 64-byte Packets)
	1000 Mbps Latency	< 3.1us (FIFO 64-byte packets)
	10Gbps Latency	<3.4us (FIFO 64-byte packets)
	Throughput	Up to 112 Mpps
	Stacking Performance	100 Gbps
	Switching Capacity	176 Gbps
	Switching Capacity (including Stacking)	278 Gbps
	Routing table Size	2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP
	Mac Address Table Size	32768 entries
Environment	**Operating temperature**	32˚ F to 131˚F (0° C to 55° C) up to 5000ft, 32˚ F to 122˚F (0° C to 50° C). Derate -1 degree C for every 1000 ft from 5000 ft to 10000 ft
	Operating relative humidity	15%to 95% (Non-condens- ing) 10,000 ft

Technical Specifications

Environment	**Non-operating/Storage temperature**	-40°C to 70°C up to 15000 ft
	Non-operating/Storage relative humidity	90% at 65°C (non-condens- ing); 15,000 ft
	Acoustic	Sound Power LWaD=4.6 Bel, Sound Pressure LpAm, Bystander = 28.9 dB
	Primary Airflow direction	Front to Back
Electrical Characteristics	**Frequency**	50/60Hz
	Maximum Heat Dissipation	355 BTU/hr 375 kJ/hr
	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): 9A/ 4.5A
	Maximum power rating	JL086A PSU (each): 470W JL087A PSU (each): 860W
	Idle Power	73W
	PoE Power (Max Possible)	1440 Watts
	Hibernate Power	23W
	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.	

Aruba 2930M 40G 8 HPE Smart Rate PoE Class 6 1-slot Switch (R0M67A)		
I/O ports and slots	36 Autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASETX, IEEE 802.3ab Type 1000Base-T PoE Class 6); Duplex: 10BASE-T/100BASE-TX:half or full;1000BASE-T:full only	
	4 Combo 10/100/1000BASE-T PoE Class 6 or 100/1000Mbps SFP Ports	
	8 802.3bz 100M, 1/2.5/5GBASE-T and 10GBASE-T PoE Class 6 ports	
Additional ports and slots	1 Dual Personality (RJ-45 or USB Micro-B) serial console port 1 USB A port for uploading/ downloading files 1 100BASE-T Out of Band Management Port 1 Uplink Slot 1 Stacking Module Slot 2 Power Supply Slots (power supplies not included)	
Physical characteristics	**Dimensions**	1.73” (Height) x 17.42” (Width) x 12.77” (Depth) (4.39cm x 44.25cm x 32.43cm)
	Weight	9.90 lbs 4.49 kg
Memory and processor	Dual Core ARM Cortex A9 @ 1016 MHz	
	1 GB DDR3 SDRAM	
	Packet Buffer Size: 12.38MB and 4.5MB Ingress/7.875MB Egress	
	4GB eMMC	
Performance	**IPv6 Ready certified**	< 98.5 µs (FIFO 64-byte packets)
	10 Mbps Latency	< 11.8 µs (FIFO 64-byte packets)
	100 Mbps Latency	< 3.1 µs (FIFO 64-byte packets)

Technical Specifications

Performance	**1000 Mbps Latency**	< 6.5 µs (FIFO 64-byte packets)
	10Gbps Latency	< 4.2 µs (FIFO 64-byte packets)
	Throughput	Up to < 3.4 µs (FIFO 64-byte packets)
	Stacking Performance	112 Mpps
	Switching Capacity	100 Gbps
	Switching Capacity (including Stacking)	320 Gbps
	Routing table Size	2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP
	Mac Address Table Size	32,768
Environment	**Operating temperature**	32°F to 131°F (0°C to 55°C) up to 5000ft, 32°F to 122°F (0°C to 50°C). Derate -1 degree C for every 1000 ft from 5000 ft to 10000 ft
	Operating relative humidity	15% to 95% (Non-condensing) 10,000 ft
	Non-operating/Storage temperature	-40°C to +70°C up to 15000 ft
	Non-operating/Storage relative humidity	90% at 65C (non-condensing); 15,000 ft
	Acoustic (power and pressure) in decibels	Sound Power LWaD=4.5 Bel, Sound Pressure LpAm, Bystander = 27.1 dB
	Airflow direction	Port to Power
Electrical Characteristics	**Frequency**	50/60 Hz
	Maximum Heat Dissipation	457 BTU/hr 482 kJ/hr
	Voltage	JL086A PSU: 100-127/200-240 VAC JL087A PSU: 110-127/200-240 VAC
	Current	JL086A PSU (each): 5.3A/2.6A JL087A PSU (each): 9A/4.5A
	Maximum power rating	JL086A PSU (each): 495W JL087A PSU (each): 855W
	Idle Power	90W
	PoE Power (Max Possible)	1440W
	Hibernate Power	25W
	Notes: – Heat dissipation does not include heat dissipated by the PoE-powered devices themselves. – 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 – 100% traffic, all ports plugged in, and all modules populated	

Technical Specifications

Aruba 2930M 40G 8 HPE Smart Rate PoE+ 1-slot Switch (JL323A)		
I/O ports and slots	36 Autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASETX, IEEE 802.3ab Type 1000Base-T PoE+); Duplex: 10BASE-T/100BASE-TX:half or full;1000BASE-T:full only	
	4 Combo 10/100/1000BASE-T PoE+ or 100/1000Mbps SFP	
	8 802.3bz 100M, 1/2.5/5GBASE-T and 10GBASE-T copper PoE+ ports	
Additional ports and slots	1 Dual Personality (RJ-45 or USB Micro-B) serial console port 1 USB A port for uploading/downloading files 1 100BASE-T Out of Band Management Port 1 Uplink Slot 1 Stacking Module Slot 2 Power Supply Slots (power supplies not included)	
Physical characteristics	**Dimensions**	1.73" (Height) x 17.42" (Width) x 12.77" (Depth) (4.39cm x 44.25cm x 32.43cm)
	Weight	9.81 lbs 4.45 kg
Memory and processor	Dual Core ARM Cortex A9 @ 1016 MHz	
	1 GB DDR3 SDRAM	
	Packet Buffer Size: 12.38MB and 4.5MB Ingress/7.875MB Egress	
	4GB eMMC	
Performance	**IPv6 Ready certified**	
	10 Mbps Latency	< 98.5µs (FIFO 64 byte packets)
	100 Mbps Latency	< 11.8µs (FIFO 64-byte Packets)
	1000 Mbps Latency	< 3.1µs (FIFO 64-byte packets)
	2.5 Gbps Latency	< 6.5µs (FIFO 64-byte packets)
	5 Gbps Latency	< 4.2µs (FIFO 64-byte packets)
	10 Gbps Latency	< 3.4µs (FIFO 64-byte packets)
	Throughput	Up to 112 Mpps
	Stacking Performance	100 Gbps
	Switching Capacity	320 Gbps
	Switching Capacity (including Stacking)	420 Gbps
	Routing table Size	2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP
	Mac Address Table Size	32768 entries
Environment	**Operating temperature**	32°F to 131°F (0°C to 55°C) up to 5000ft, 32°F to 122°F (0°C to 50°C). Derate -1 degree C for every 1000 ft from 5000 ft to 10000 ft
	Operating relative humidity	15% to 95% (Non-condensing) 10,000 ft
	Non-operating/Storage temperature	-40°C to +70°C up to 15000 ft
	Non-operating/Storage relative humidity	90% at 65C (non-condensing); 15,000 ft
	Acoustic	Sound Power LWaD=4.4 Bel, Sound Pressure LpAm, Bystander = 26.0 dB
	Primary Airflow direction	Port to Power

Technical Specifications

Electrical Characteristics	**Frequency**	50/60Hz
	Maximum Heat Dissipation	457 BTU/hr 482 kJ/hr
	Voltage	JL086A PSU: 100-127/200-240 VAC JL087A PSU: 110-127/200-240 VAC
	Current	JL086A PSU (each): 5.3/2.6A JL087A PSU (each): 9A/4.5A
	Maximum power rating	JL086A PSU (each): 495W JL087A PSU (each): 855W
	Idle Power	90W
	PoE Power (Max Possible)	1440 Watts
	Hibernate Power	25W
	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.	

Aruba 2930M 24 HPE Smart Rate PoE+ 1-slot Switch (JL324A)		
I/O ports and slots	24 Autosensing 100M, 1/2.5/5GBASE-T ports PoE+	
Additional ports and slots	1 Dual Personality (RJ-45 or USB Micro-B) serial console port	
	1 USB A port for uploading/downloading files	
	1 100BASE-T Out of Band Management Port	
	1 Uplink Slot	
	1 Stacking Module Slot	
	2 Power Supply Slots (power supplies not included)	
Physical characteristics	**Dimensions**	1.73" (Height) x 17.42" (Width) x 12.77" (Depth) (4.39cm x 44.25cm x 32.43cm)
	Weight	9.92 lbs 4.50 kg
Memory and processor	Dual Core ARM Cortex A9 @ 1016 MHz	
	1 GB DDR3 SDRAM	
	Packet Buffer Size: 12.38MB and 4.5MB Ingress/7.875MB Egress	
	4GB eMMC	
Performance	**IPv6 Ready certified**	
	10 Mbps Latency	n/a
	100 Mbps Latency	n/a
	1000 Mbps Latency	< 3.1µs (FIFO 64-byte packets)
	2.5 Gbps Latency	< 6.5µs (FIFO 64-byte packets)
	5 Gbps Latency	4.2µs (FIFO 64-byte packets)
	10 Gbps Latency	< 3.4µs (FIFO 64-byte packets)
	Throughput	Up to 112 Mpps
	Stacking Performance	100 Gbps
	Switching Capacity	320 Gbps
	Switching Capacity (including Stacking)	420 Gbps
	Routing table Size	2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP
	Mac Address Table Size	32768 entries
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C) up to 5000ft, 32°F to 122°F (0°C to 40°C). Derate -1 degree C for every 1000 ft from 5000 ft to 10000 ft

Technical Specifications

	Operating relative humidity	15% to 95% (Non-condensing) 10,000 ft
	Non-operating/Storage temperature	-40°C to +70°C up to 15000 ft
	Non-operating/Storage relative humidity	90% at 65C (non-condensing); 15,000 ft
	Acoustic	Sound Power LWaD=4.8 Bel, Sound Pressure LpAm, Bystander = 31.3 dB
	Primary Airflow direction	Port to Power
Electrical Characteristics	**Frequency**	50/60Hz
	Maximum Heat Dissipation	522 BTU/hr 551 kJ/hr
	Voltage	JL086A PSU: 100-127/200-240 VAC JL087A PSU: 110-127/200-240 VAC
	Current	JL086A PSU (each): 5.4A/2.7A JL087A PSU (each): 9.2A/4.6A
	Maximum power rating	JL086A PSU (each): 513W JL087A PSU (each): 873W
	Idle Power	101W
	PoE Power (Max Possible)	840 Watts
	Hibernate Power	27W
	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.	

Aruba 2930M 24 HPE Smart Rate PoE Class 6 1-slot Switch (R0M68A)		
I/O ports and slots	24 Autosensing 100M, 1/2.5/5GBASE-T PoE Class 6 ports	
Additional ports and slots	1 Dual Personality (RJ-45 or USB Micro-B) serial console port 1 USB A port for uploading/downloading files 1 100BASE-T Out of Band Management Port 1 Uplink Slot 1 Stacking Module Slot 2 Power Supply Slots (power supplies not included)	
Physical characteristics	**Dimensions**	1.73” (Height) x 17.42” (Width) x 12.77” (Depth) (4.39cm x 44.25cm x 32.43cm)
	Weight	9.96 lbs 4.52 kg
Memory and processor	Dual Core ARM Cortex A9 @ 1016 MHz	
	1 GB DDR3 SDRAM	
	Packet Buffer Size: 12.38MB and 4.5MB Ingress/7.875MB Egress	
	4GB eMMC	

Technical Specifications

Performance	**1000 Mbps Latency**	< 6.5 µs (FIFO 64-byte packets)
	10Gbps Latency	< 4.2 µs (FIFO 64-byte packets)
	Throughput	Up to < 3.4 µs (FIFO 64-byte packets)
	Stacking Performance	112 Mpps
	Switching Capacity	100 Gbps
	Switching Capacity (including Stacking)	320 Gbps
	Routing table Size	2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP
	Mac Address Table Size	32,768
Environment	**Operating temperature**	32°F to 113°F (0°C to 45°C) up to 5000ft, 32°F to 104°F (0°C to 40°C). Derate -1 degree C for every 1000 ft from 5000 ft to 10000 ft
	Operating relative humidity	15% to 95% (Non-condensing) 10,000 ft
	Non-operating/Storage temperature	-40°C to +70°C up to 15000 ft
	Non-operating/Storage relative humidity	90% at 65C (non-condensing); 15,000 ft
	Acoustic (power and pressure) in decibels	Sound Power LWaD=4.9 Bel, Sound Pressure LpAm, Bystander = 31.6 dB
	Airflow direction	Port to Power
Electrical Characteristics	**Frequency**	50/60 Hz
	Maximum Heat Dissipation	522 BTU/hr 551 kJ/hr
	Voltage	JL086A PSU: 100-127/200-240 VAC JL087A PSU: 110-127/200-240 VAC
	Current	JL086A PSU (each): 5.4A/2.7A JL087A PSU (each): 9.2A/4.6A
	Maximum power rating	JL086A PSU (each): 513W JL087A PSU (each): 873W
	Idle Power	101W
	PoE Power (Max Possible)	1440W
	Hibernate Power	27W
	Notes: – Heat dissipation does not include heat dissipated by the PoE-powered devices themselves. – 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 – 100% traffic, all ports plugged in, and all modules populated	

Technical Specifications

The operating temperature range for an Aruba 2930M switch is 0°C to 50°C (32°F to 122°F) if any of the following transceivers are installed in the switch: JL308A, JH231A, JH232A or JH233A.

General Specifications	
Immunity	
Generic	EN 55024:2010/CISPR 24
ESD	IEC 61000-4-2
Radiated	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4
Surge	IEC 61000-4-5
Conducted	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8
Voltage dips and interruptions	IEC 61000-4-11
Harmonics	EN 61000-3-2, IEC 61000-3-2
Flicker	EN 61000-3-3, IEC 61000-3-3

Safety

- UL 60950-1, 2nd Edition
- UL 62368-1: 2nd Edition
- EN 60950-1:2006 +A11:2009 : A1:2010 +A12:2011 +A2:2013
- EN 62368-1: 2nd Edition
- IEC60950-1:2005 +A1:2009 +A2:2013
- IEC62368-1:2014, 2nd Edition
- IEC62368-1: 2nd Edition
- CSA 22.2 No. 60950-1-07 2nd Edition
- EN60825-1:2007 /IEC 60825-1:2007 Class 1

Emissions

- VCCI Class A
- CNS 13438: 2006 Class A
- ICES-003 Class A
- FCC Title 47 CFR, Part 15, Class A
- EN 55032: 2015/CISPR-32:2015, Class A

Management

- Aruba AirWave Network Management
- IMC—Intelligent Management Center
- Command-line interface
- Web browser
- Configuration menu
- REST interface
- SNMP manager
- Telnet
- RMON1
- FTP
- Out-of-band management (serial RS-232C, micro USB, Ethernet)

Technical Specifications

Standards and Protocols

Applies to all products in series

Denial of service protection

- CPU DoS Protection

Device Management

- RFC 1155 Structure and Mgmt Information (SMIv1)
- RFC 1157 SNMPv1/v2c
- RFC 1591 DNS (client)
- RFC 1901 (Community based SNMPv2)
- RFC 1901-1907 SNMPv2c, SMIv2 and Revised MIB-II
- RFC 1908 (SNMP v1/2 Coexistence)
- RFC 2576 (Coexistence between SNMP V1, V2, V3)
- RFC 2578-2580 SMIv2
- RFC 2579 (SMIv2 Text Conventions)
- RFC 2580 (SMIv2 Conformance)
- RFC 2819 (RMON groups Alarm, Event, History and Statistics only)
- RFC 3416 (SNMP Protocol Operations v2)
- RFC 3417 (SNMP Transport Mappings)
- HTML and telnet management
- HTTP, SSHv1, and Telnet
- Multiple Configuration Files
- Multiple Software Images
- SNMP v3 and RMON RFC support
- SSHv1/SSHv2 Secure Shell
- TACACS/TACACS+
- Web UI

IP Multicast

- RFC 1112 IGMP
- RFC 2236 IGMPv2
- RFC 2710 Multicast Listener Discovery (MLD) for IPv6
- RFC 3376 IGMPv3
- RFC 3973 PIM Dense Mode
- RFC 4601 PIM Sparse Mode
- RFC 4541 Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches
- RFC 5059 Bootstrap Router—Except for scope zones
- RFC 7761 PIM Sparse Mode

QoS/CoS

- IEEE 802.1p (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)
- Ingress Rate Limiting

Technical Specifications

General protocols

- 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 802.3ab 1000BASE-T
- IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.3af Power over Ethernet
- IEEE 802.3at PoE+
- IEEE 802.3az Energy Efficient Ethernet
- IEEE 802.3bz 2.5Gb/s and 5Gb/s interfaces
- IEEE 802.3bt 4-pair Power over Ethernet (PoE)
- IEEE 802.3x Flow Control
- IEEE 802.1ad Q-in-Q
- 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 1256 ICMP Router Discovery Protocol (IRDP)
- RFC 1350 TFTP Protocol (revision 2)
- RFC 1519 CIDR
- RFC 1542 BOOTP Extensions
- IEEE 1588v2 Precision Time Protocol(Transparent Clock Mode)
  Notes: IEEE 1588v2 (PTP) is not supported on the following 2930M models: JL323A, JL324A, R0M67A, R0M68A or 2930M modules: JL325A, JL078A, JL081A, JL083A
- RFC 1918 Address Allocation for Private Internet
- RFC 2030 Simple Network Time Protocol (SNTP) v4
- RFC 2131 DHCP
- RFC 2236 IGMP Snooping
- RFC 2453 RIPv2
- RFC 2865 Remote Authentication Dial In User Service (RADIUS)
- RFC 2866 RADIUS Accounting
- RFC 3046 DHCP Relay Agent Information Option
- RFC 3411 An Architecture for Describing Simple Network Management Protocol (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 3416 Protocol Operations for SNMP
- RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)
- RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)
- RFC 3575 IANA Considerations for RADIUS

Technical Specifications

- RFC 3576 Ext to RADIUS (CoA only)
- RFC 4292 IP Forwarding Table MIB
- RFC 4541 Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches
- RFC 4675 RADIUS VLAN & Priority
- RFC 4861 Neighbor Discovery for IP version 6 (IPv6)
- RFC 4862 IPv6 Stateless Address Autoconfiguration
- RFC 5905 Network Time Protocol Version 4: Protocol and Algorithms Specification
- UDLD (Uni-directional Link Detection)

IPV6

- RFC 1981 IPv6 Path MTU Discovery
- RFC 2080 RIPng for IPv6
- RFC 2081 RIPng Protocol Applicability Statement
- RFC 2082 RIP-2 MD5
- 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 2925 Remote Operations MIB (Ping only)
- RFC 3019 MLDv1 MIB
- RFC 3315 DHCPv6 (client and relay)
- RFC 3484 Default Address Selection for IPv6
- RFC 3513 IPv6 Addressing Architecture
- RFC 3596 DNS Extension for IPv6
- RFC 3810 MLDv2 for IPv6
- RFC 4022 MIB for TCP
- RFC 4113 MIB for UDP
- 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 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 6620 FCFS SAVI

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 1156 (TCP/IP MIB)
- RFC 1157 A Simple Network Management Protocol (SNMP)
- RFC 1213 MIB II

Technical Specifications

- RFC 1493 Bridge MIB
- RFC 1724 RIPv2 MIB
- RFC 2021 RMONv2 MIB
- RFC 2578 Structure of Management Information Version 2 (SMIv2)
- RFC 2579 Textual Conventions for SMIv2
- RFC 2580 Conformance Statements for 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 2819 RMON MIB
- RFC 2863 The Interfaces Group MIB
- RFC 2925 Ping MIB
- RFC 2932 IP (Multicast Routing MIB)
- RFC 2933 IGMP MIB
- RFC 3414 SNMP-User based-SM MIB
- RFC 3415 SNMP-View based-ACM MIB
- RFC 3417 Simple Network Management Protocol (SNMP) over IEEE 802 Networks
- RFC 3418 MIB for SNMPv3
- RFC 4836 Managed Objects for 802.3 Medium Attachment Units (MAU)

Network Management

- IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
- RFC 1155 Structure of Management Information
- RFC 1157 SNMPv1
- RFC 2021 Remote Network Monitoring Management Information Base Version 2 using SMIv2
- RFC 2576 Coexistence between SNMP versions
- RFC 2578 Structure of Management Information Version 2 (SMIv2)
- RFC 2579 Textual Conventions for SMIv2
- RFC 2580 Conformance Statements for SMIv2
- RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
- RFC 2819 Remote Network Monitoring Management Information Base
- RFC 2856 Textual Conventions for Additional High Capacity Data Types
- RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations
- RFC 3164 BSD syslog Protocol
- 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 (LLDPMED)
- SNMPv1/v2c/v3
- XRMON

Technical Specifications

Security

- IEEE 802.1X Port Based Network Access Control
- RFC 1321 The MD5 Message-Digest Algorithm
- RFC 1334 PPP Authentication Protocols (PAP)
- RFC 1492 An Access Control Protocol, Sometimes Called TACACS
- RFC 1492 TACACS+
- RFC 1994 PPP Challenge Handshake Authentication Protocol (CHAP)
- RFC 2082 RIP-2 MD5 Authentication
- RFC 2104 Keyed-Hashing for Message Authentication
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Accounting
- RFC 2246 Transport Layer Security (TLS)
- RFC 2548 Microsoft Vendor-specific RADIUS Attributes
- RFC 2618 RADIUS Authentication Client MIB
- RFC 2620 RADIUS Accounting Client MIB
- RFC 2698 A Two Rate Three Color Marker
- RFC 2716 PPP EAP TLS Authentication Protocol
- RFC 2818 HTTP Over TLS
- RFC 2865 RADIUS (client only)
- RFC 2865 RADIUS Authentication
- RFC 2866 RADIUS Accounting
- RFC 2867 RADIUS Accounting Modifications for Tunnel Protocol Support
- RFC 2868 RADIUS Attributes for Tunnel Protocol Support
- RFC 2869 RADIUS Extensions
- RFC 2882 NAS Requirements: Extended RADIUS Practices
- RFC 3162 RADIUS and IPv6
- RFC 3576 Dynamic Authorization Extensions to RADIUS
- RFC 3579 RADIUS Support For Extensible Authentication Protocol (EAP)
- RFC 3580 IEEE 802.1X RADIUS
- RFC 3580 IEEE 802.1X Remote Authentication Dial In User Service (RADIUS) Usage Guidelines
- RFC 4576 RADIUS Attributes
- RFC 6614 Transport Layer Security (TLS) Encryption over Radius (RadSec)
- RFC 7030 Enrollment over Secure Transport
- Access Control Lists (ACLs)
- draft-grant-tacacs-02 (TACACS)
- Guest VLAN for 802.1X
- MAC Authentication
- MAC Lockdown
- MAC Lockout
- Port Security
- Secure Sockets Layer (SSL)
- SSHv2 Secure Shell
- Web Authentication

Refer to Hewlett Packard Enterprise website **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.

Summary of Changes

Date	Version History	Action	Description of Change
05-Dec-2022	Version 22	Changed	Configuration Information section was updated.
07-Nov-2022	Version 21	Changed	Configuration Information section was updated.
28-Jun-2021	Version 20	Changed	Standard Features and Configuration Information sections were updated.
08-Mar-2021	Version 19	Changed	SKUs added in Configuration Information section.
08-Sep-2020	Version 18	Changed	Configuration Information, Standard Features and Technical Specifications sections were updated.
01-Jun-2020	Version 17	Changed	Standard Features and Technical Specifications sections were updated.
06-Apr-2020	Version 16	Changed	Added TAA Transceivers. Standard Features- Warranty and Configuration Information sections were updated.
16-Sep-2019	Version 15	Changed	Technical Specification section was updated.
15-Jul-2019	Version 14	Changed	Technical Specifications section was updated SKU descriptions were updated.
01-Jul-2019	Version 13	Changed	Standard Features, Configuration Information and Technical Specifications sections were updated. Obsolete SKUs were removed.
15-Apr-2019	Version 12	Changed	Standard Features section was updated. Obsolete SKUs were removed.
04-Mar-2019	Version 11	Changed	SKU J9151D was replaced with J9151E Obsolete SKUs were removed.
03-Dec-2018	Version 10	Changed	Enhanced Capabilities, Technical Specifications and General Specifications updated
05-Nov-2018	Version 9	Changed	Overview, Products and Benefits and Technical Specifications updated SKUs added: R0M67A, R0M68A
02-Jul-2018	Version 8	Changed	Software feature update
05-Feb-2018	Version 7	Changed	Configuration section updated
08-Jan-2018	Version 6	Changed	Software feature update
11-Sep-2017	Version 5	Changed	Family product image updated
04-Sep-2017	Version 4	Added	SKUs added: JL323A, JL324A and JL308A
07-Aug-2017	Version 3	Added	SKU added: JL308A
03-Jul-2017	Version 2	Added	SKU added: JL448A
01-May-2017	Version 1	New	New QuickSpecs

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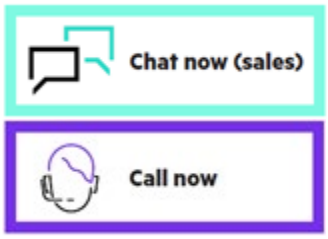

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