QuickSpecs

Overview

Aruba 8320 Switch Series

Models

Aruba 8320 32p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle	JL579A
Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle	JL479A
Aruba 8320 48p 1G/10GBASE-T and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle	JL581A

Product overview

The past several decades in networking have been defined by static, closed networking solutions designed for the client-server era. Aruba is introducing the Aruba 8320 campus core and aggregation switch, a game-changing solution offering a flexible and innovative approach to dealing with the demands of the mobile, cloud and IoT era.

The 8320 provides industry-leading line rate 10GbE (SFP/SFP+ and 10GBASE-T) and 40GbE connectivity in a compact 1U form factor. Together with the modular Aruba 8400 chassis, the 8320 rounds out Aruba's Mobile First switching portfolio with an enterprise core and aggregation solution that ensures higher performance and higher uptime.

The 8320 is based on the new ArubaOS-CX, a modern software system for the enterprise core that automates and simplifies many critical and complex network tasks, delivers enhanced fault tolerance and facilitates zero-service disruption during planned or unplanned control-plane events.

The key innovations in ArubaOS-CX are its micro-services style modular architecture, REST APIs, Python scripting capabilities and the Aruba Network Analytics Engine.

ArubaOS-CX is based on a modular architecture that allows individual process re-startability and upgrades. It's REST APIs and Python scripting enables fine-grained programmability of the switch functions and its unique Aruba Network Analytics Engine provides the ability to monitor and troubleshoot the network easily.

The Network Analytics Engine framework is made up of a time series database and associated REST APIs.

The time series database may be used to store configuration and operational state. Customers can use ArubaOS-CX REST APIs, Python scripting capabilities and time series data to write software modules for trouble shooting problems. The time series data may also be used to analyze trends, identify anomalies and predict future capacity requirements.

Hewlett Packard Enterprise

Overview

Key features

- High performance 2.5Tbps with 1,905 mpps
- High availability with redundant power and fans
- ArubaOS-CX enables automation and programmability using built-in REST APIs and Python scripts
- Intelligent monitoring and visibility with Aruba Network Analytics Engine
- Advanced Layer 2/3 feature set includes BGP, OSPF, VRF, and IPv6
- Compact 1U switches with 10GbE (SFP+ and 10GBASE-T) and 40GbE connectivity
- Multi-chassis link aggregation

Features and benefits

Product architecture

- **ArubaOS-CX**.
    - Modular, Linux based and built with OVSDB to support a database-centric operating system.
    - Distributed architecture with separation of data and control planes.
    - Includes independent monitoring and restart of individual software modules, and enhanced software process serviceability functions.
    - Allows individual software modules to be upgraded for higher availability.
- **Network Analytics Engine**
  A first of a kind built-in framework for monitoring, troubleshooting and capacity planning.

Performance

- **High-speed fully distributed architecture**
  Provides 2.5Tbps for switching and 1,905MPPS for forwarding. All switching and routing are wire-speed to meet the demands of bandwidth-intensive applications today and in the future.
- **Scalable system design**
  Provides investment protection to support future technologies and higher-speed connectivity

Connectivity

- **High-density port connectivity**
  Choice of compact 1U switches include model with 32 ports of 40GbE and models with 48 ports of 10GbE (SFP+ and 10GBASE-T) and 6 ports of 40GbE. 40GbE ports support QSFP+ transceivers.
- **Jumbo frames**
  Allows high-performance backups and disaster-recovery systems; provides a maximum frame size of 9K bytes
- **Loopback**
  Supports internal loopback testing for maintenance purposes and an increase in availability; loopback detection protects against incorrect cabling or network configurations and can be enabled on a per-port or per-VLAN basis for added flexibility
- **Flexible port selection**
  Provides connectivity for 10GbE (SFP+, 10GBASE-T) and 40GbE (QSFP+).
- **Packet storm protection**
  Protects against unknown broadcast, unknown multicast, or unicast storms with user-defined thresholds

Quality of Service (QoS)

Overview

- **Powerful QoS feature**
  Supports the following congestion actions: strict priority (SP) queuing and weighted fair queuing

Resiliency and high availability

- **Redundant and load-sharing fans, and power supplies**
  Increases total performance and power availability while providing hitless, stateful failover
- **All hot-swappable modules**
  Allows replacement of modules without any impact on other modules
- **Separate data and control paths**
  Separates control from services and keeps service processing isolated; increases security and performance
- **VRRP**
  Allows groups of two routers to dynamically back each other up to create highly available routed environments
- **Unidirectional Link Detection (UDLD)**
  Monitors link connectivity and shuts down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks
- **IEEE 802.3ad LACP**
  Supports up to 128 trunks, each with eight links per trunk; and provides support for static or dynamic groups and a user-selectable hashing algorithm
- **Redundant power supplies**
  Provides N+1 high reliability with hot swappable, redundant power supplies

Virtual private network (VPN)

- **Generic Routing Encapsulation (GRE)**
  Enables tunneling traffic from site to site over a Layer 3 path

Management

- **Management interface control**
  Enables or disables each of the following interfaces depending on security preferences: console port, or reset button
- **Industry-standard CLI with a hierarchical structure**
  Reduces training time and expenses, and increases productivity in multivendor installations
- **Management security**
  Restricts access to critical configuration commands; offers multiple privilege levels with password protection; ACLs provide SNMP access; local and remote syslog capabilities allow logging of all access
- **SNMP v2c/v3**
  Provides SNMP read and trap support of industry standard Management Information Base (MIB), and private extensions
- **sFlow® (RFC 3176)**
  Provides scalable ASIC-based wire speed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes
- **Remote monitoring (RMON)**
  Uses standard SNMP to monitor essential network functions and supports events, alarms, history, and statistics groups as well as a private alarm extension group
- **TFTP, and SFTP support**
  Offers different mechanisms for configuration updates; trivial FTP (TFTP) allows bidirectional transfers over a TCP/IP network; Secure File Transfer Protocol (SFTP) runs over an SSH tunnel to provide additional security
- **Debug and sampler utility**
  Supports ping and traceroute for both IPv4 and IPv6
- **Network Time Protocol (NTP)**
  Synchronizes timekeeping among distributed time servers and clients; keeps timekeeping consistent among all clock-dependent devices within the network so the devices can provide diverse applications based on the consistent time

Overview

- **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
- **Dual flash images**
  Provides independent primary and secondary operating system files for backup while upgrading
- **Multiple configuration files**
  Stores easily to the flash image

Layer 2 switching

- **VLAN**
  Supports up to 4,096 port-based or IEEE 802.1Q-based VLANs; and supports MAC-based VLANs, protocol-based VLANs, and IP-subnet-based VLANs for added flexibility
- **Bridge Protocol Data Unit (BPDU) tunneling**
  Transmits STP BPDUs transparently, allowing correct tree calculations across service providers, WANs, or MANs
- **Port mirroring**
  Duplicates port traffic (ingress and egress) to a local or remote monitoring port; supports 4 mirroring groups, with an unlimited number of ports per group
- **STP**
  Supports standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- **Internet Group Management Protocol (IGMP)**
  Controls and manages the flooding of multicast packets in a Layer 2 network
- **Rapid Per-VLAN spanning tree plus (RPVST+)**
  Allows each VLAN to build a separate spanning tree to improve link bandwidth usage in network environments with multiple VLANs

Layer 3 services

- **Address Resolution Protocol (ARP)**
  Determines the MAC address of another IP host in the same subnet; supports static ARPs; gratuitous ARP allows detection of duplicate IP addresses; proxy ARP allows normal ARP operation between subnets or when subnets are separated by a Layer 2 network
- **UDP helper**
  Redirects UDP broadcasts to specific IP subnets to prevent server spoofing
- **Dynamic Host Configuration Protocol (DHCP)**
  Simplifies the management of large IP networks and supports client; DHCP Relay enables DHCP operation across subnets
- **Domain Name System (DNS)**
  Provides a distributed database that translates domain names and IP addresses, which simplifies network design; supports client and server

Layer 3 routing

- **Static IPv4 routing**
  Provides simple manually configured IPv4 routing
- **Open shortest path first (OSPF)**
  Delivers faster convergence; uses link-state routing Interior Gateway Protocol (IGP), which supports ECMP, NSSA, and MD5 authentication for increased security and graceful restart for faster failure recovery
- **Border Gateway Protocol 4 (BGP-4)**
  Delivers an implementation of the Exterior Gateway Protocol (EGP) utilizing path vectors; uses TCP for enhanced reliability for the route discovery process; reduces bandwidth consumption by advertising only incremental updates; supports extensive policies for increased flexibility; scales to very large networks

Overview

- **IP performance optimization**
  Provides a set of tools to improve the performance of IPv4 networks; includes directed broadcasts, customization of TCP parameters, support of ICMP error packets, and extensive display capabilities
- **Static IPv6 routing**
  Provides simple manually configured IPv6 routing
- **Dual IP stack**
  Maintains separate stacks for IPv4 and IPv6 to ease the transition from an IPv4-only network to an IPv6-only network design
- **OSPFv3**
  Provides OSPF support for IPv6
- **Equal-Cost Multipath (ECMP)**
  Enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth

Security

- **TAA Compliance**
  The Aruba 8320, a TAA compliant product, with the ArubaOS-CX uses FIPS 140-2 validated cryptography for protection of sensitive information
- **Access control list (ACL)**
  Supports powerful ACLs for both IPv4 and IPv6; ACLs are used for filtering traffic to prevent unauthorized users from accessing the network, or for controlling network traffic to save resources; rules can either deny or permit traffic to be forwarded; rules can be based on a Layer 2 header or a Layer 3 protocol header
- **Remote Authentication Dial-In User Service (RADIUS)**
  Eases security access administration by using a password authentication server
- **Terminal Access Controller Access-Control System (TACACS+)**
  Delivers an authentication tool using TCP with encryption of the full authentication request, providing additional security
- **Management access security**
  Aruba OS CX provides for both on-box as well as off-box authentication for administrative access.   RADIUS or TACACS+ can be used to provide encrypted user authentication. Additionally, TACACS+ can also provide user authorization services
- **Secure shell (SSHv2)**
  Uses external servers to securely log in to a remote device; with authentication and encryption, it protects against IP spoofing and plain-text password interception; increases the security of Secure FTP (SFTP) transfers

Multicast

- **Multicast VLAN**
  Allows multiple VLANs to receive the same IPv4 or IPv6 multicast traffic, lessening network bandwidth demand by reducing multiple streams to each VLAN
- **Protocol Independent Multicast (PIM)**
  Defines modes of IPv4 multicasting to allow one-to-many and many-to-many transmission of information; supports PIM, Sparse Mode (SM)
- **Internet Group Management Protocol (IGMP)**
  Utilizes Any-Source Multicast (ASM) to manage IPv4 multicast networks; supports IGMPv1, v2, and v3

Additional information

- **Green initiative support**
  Provides support for RoHS and WEEE regulations

Warranty and support

Overview

- **5-year Warranty**
  See **http://www.hpe.com/networking/warrantysummary** for warranty and support information included with your product purchase.
- **Software releases**
  To find software for your product refer to **http://www.hpe.com/networking/support**; for details on the software releases available with your product purchase, refer to **http://www.hpe.com/networking/warrantysummary**.

Configuration

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

Standard Switch Enclosures

Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle	JL479A
• Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle	See Configuration **NOTE:** 1, 2, 3, 4
• Includes 2 Power Supplies (JL480A) with No open PS slots	
• Includes 5 Fan Tray Bundles (JL481A) with No open FT Slots	
• Includes 1 2-Post Rack Kit (JL482A)	
• Min=0 \ Max= 48 SFP/SFP+ 1/10G Transceivers	
• Min=0 \ Max = 6 QSFP+ 40G Transceiver	
• 1U - Height	

PDU Cable NA/MEX/TW/JP	JL479A#B2B
• C13 PDU Jumper Cord (NA/MEX/TW/JP)	

PDU Cable ROW	JL479A#B2C
• C13 PDU Jumper Cord (ROW)	

High Volt Switch/Router to Wall Power Cord	JL479A#B2E
• HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)	

No Power Cord	JL479A#AC3
• No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	

Aruba 8320 32p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle	JL579A
• Aruba 8320 32p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle	See Configuration **NOTE:** 3, 4
• Includes 2 Power Supplies (JL480A) with No open PS slots	
• Includes 5 Fan Tray Bundles (JL481A) with No open FT Slots	
• Includes 1 2-Post Rack Kit (JL482A)	
• Min=0 \ Max = 32 QSFP+ 40G Transceiver	
• 1U - Height	

PDU Cable NA/MEX/TW/JP	JL579A#B2B
• C13 PDU Jumper Cord (NA/MEX/TW/JP)	

PDU Cable ROW	JL579A#B2C
• C13 PDU Jumper Cord (ROW)	

High Volt Switch/Router to Wall Power Cord	JL579A#B2E
• HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)	

No Power Cord	JL579A#AC3
• No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	

Configuration

Aruba 8320 48p 1G/10GBASE-T and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle   **JL581A**

- Aruba 8320 48p 1/10BASE-T and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle   See Configuration **NOTE:** 3, 4
- Includes 2 Power Supplies (JL480A) with No open PS slots
- Includes 5 Fan Tray Bundles (JL481A) with No open FT Slots
- Includes 1 2-Post Rack Kit (JL482A)
- Min=0 \ Max = 40 QSFP+ 40G Transceiver
- 1U - Height

PDU Cable NA/MEX/TW/JP   **JL581A#B2B**

- C13 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW   **JL581A#B2C**

- C13 PDU Jumper Cord (ROW)

High Volt Switch/Router to Wall Power Cord   **JL581A#B2E**

- HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)

No Power Cord   **JL581A#AC3**

- No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)

Configuration Rules:

Note 1	The following Transceivers install into this Module: (Use BTO only when adding to 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

Note 2	The following Transceivers install into this Module: (Use BTO only when adding to switch)	
	Aruba 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver	JL563A
	Aruba 10G SFP+ LC SR 300m OM3 MMF Transceiver	J9150D
	Aruba 10G SFP+ LC LR 10km SMF Transceiver	J9151D
	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

Note 3	The following Transceivers install into this Module: (Use BTO only when adding to switch)	
	Aruba 40G QSFP+ LC ER4 40km SMF Transceiver	Q9G82A
	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

Note 4   Localization required on orders without #B2B, #B2C, #B2E or #AC3 options.

Remarks:

Drop down under power supply should offer the following options and results:
Switch/Router/Power Supply to PDU Power Cord - #B2B in North America, Mexico, Taiwan, and Japan or #B2C ROW. (Watson Default B2B or B2C for Rack Level CTO)
Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)
High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)
No Power Cord - #AC3 Option

OCA Blue Note: Locking Power Cord (J9955A) L6-20P is available through the OCA Accessories tab

OCA Only Model Selection Form -
HPE Offering > Aruba > Switches - ArubaOS:
8320 Switch Series

Rack Level Integration CTO Models

Standard Switch Enclosures

Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle | JL479A
- Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle
- Includes 2 Power Supplies (JL480A) with No open PS slots
- Includes 5 Fan Tray Bundles (JL481A) with No open FT Slots
- Includes 1 2-Post Rack Kit (JL482A)
- Min=0 \ Max= 48 SFP/SFP+ 1/10G Transceivers
- Min=0 \ Max = 6 QSFP+ 40G Transceiver
- 1U - Height

See Configuration
NOTE: 1, 2, 3, 4, 6

PDU Cable NA/MEX/TW/JP | JL479A#B2B
- C13 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW | JL479A#B2C
- C13 PDU Jumper Cord (ROW)

High Volt Switch/Router to Wall Power Cord | JL479A#B2E
- HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)

No Power Cord | JL479A#AC3
- No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)

Aruba 8320 32p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle | JL579A
- Aruba 8320 32p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle
- Includes 2 Power Supplies (JL480A) with No open PS slots
- Includes 5 Fan Tray Bundles (JL481A) with No open FT Slots
- Includes 1 2-Post Rack Kit (JL482A)
- Min=0 \ Max = 32 QSFP+ 40G Transceiver
- 1U - Height

See Configuration
NOTE: 3, 4, 6

Configuration

PDU Cable NA/MEX/TW/JP	JL579A#B2B
• C13 PDU Jumper Cord (NA/MEX/TW/JP)	

PDU Cable ROW	JL579A#B2C
• C13 PDU Jumper Cord (ROW)	

High Volt Switch/Router to Wall Power Cord	JL579A#B2E
• HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)	

No Power Cord	JL579A#AC3
• No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	

Aruba 8320 48p 1G/10GBASE-T and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle   JL581A
- Aruba 8320 48p 1/10BASE-T and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch   See Configuration
  Bundle   **NOTE:** 3, 4, 6
- Includes 2 Power Supplies (JL480A) with No open PS slots
- Includes 5 Fan Tray Bundles (JL481A) with No open FT Slots
- Includes 1 2-Post Rack Kit (JL482A)
- Min=0 \ Max = 40 QSFP+ 40G Transceiver
- 1U - Height

Configuration Rules:

Note 1   The following Transceivers install into this Module (Use #0D1 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

Note 2   The following Transceivers install into this Module(Use #0D1 quoted to switch if
                switch is CTO) - if applicable:

Aruba 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver	JL563A
Aruba 10G SFP+ LC SR 300m OM3 MMF Transceiver	J9150D
Aruba 10G SFP+ LC LR 10km SMF Transceiver	J9151D
Aruba 10G SFP+ LC ER 40km SMF Transceiver	J9153D
Aruba 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281D

Configuration

	Aruba 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283D

Note 3	The following Transceivers install into this Module(Use #0D1 quoted to switch if switch is CTO) - if applicable:	
	Aruba 40G QSFP+ LC ER4 40km SMF Transceiver	Q9G82A
	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

Note 4   Localization required on orders without #B2B, #B2C, #B2E or #AC3 options.

Note 6   If the CTO Switch Chassis needs to be racked, Then the CTO Base Model needs to integrate (with #0D1) to the HPE Network Rack.

Remarks:

Drop down under power supply should offer the following options and results:
Switch/Router/Power Supply to PDU Power Cord - #B2B in North America, Mexico, Taiwan, and Japan or #B2C ROW. (Watson Default B2B or B2C for Rack Level CTO)
Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)
High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)
No Power Cord - #AC3 Option

OCA Blue Note: Locking Power Cord (J9955A) L6-20P is available through the OCA Accessories tab

Transceivers

SPF Transceivers

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

SPF+ Transceivers

Aruba 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver	JL563A
Aruba 10G SFP+ LC SR 300m OM3 MMF Transceiver	J9150D
Aruba 10G SFP+ LC LR 10km SMF Transceiver	J9151D
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

QSFP+ Transceivers

Configuration

Aruba 40G QSFP+ LC ER4 40km SMF Transceiver	Q9G82A
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

Switch Options

Rack Mount Kits

For Switch JL479A, JL579A, JL581A System (std 0 // max 1) User Selection (min 0 // max 1) per enclosure

Aruba X474 4-post Rack Kit   JL483A
- includes 1 x c19, 2750w   See Configuration
                                                                                                                NOTE: 1

Configuration Rules:

Note 1   If the switch will be factory racked into an HPE Universal Rack, then this 4 Post Rack Mount kit is required.

Remarks:

                          OCA Blue Note: 1 2-Post Rack Mount Kit(JL482A) is included with the JL479A Switch Bundle

Accessories

Spare Items

For Switch JL479A, JL579A, JL581A System (std 0 // max 99) User Selection (min 0 // max 99) per enclosure

Aruba X371 400W AC Power Supply   JL480A
- includes 1 x c13, 400w   See Configuration
                                                                                                                NOTE: 1

PDU Cable NA/MEX/TW/JP   JL480A#B2B
- C13 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW   JL480A#B2C
- C13 PDU Jumper Cord (ROW)

High Volt Switch/Router to Wall Power Cord   JL480A#B2E
- HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)

No Power Cord   JL480A#AC3
- No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)

Aruba X721 Front-to-Back Fan   JL481A

Aruba X472 2-post Rack Kit   JL482A

Configuration

Aruba X474 4-post Rack Kit   JL483A

Aruba X2C2 RJ45 to DB9 Console Cable   JL448A

HPE 2.5M C15 to NEMA L6-20P Power Cord   J9955A

Configuration Rules:

Note 1   Localization required on orders without #B2B, #B2C, #B2E or #AC3 options.

Remarks:

Drop down under power supply should offer the following options and results:
Switch/Router to PDU Power Cord - #B2B in NA, 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

OCA Blue Note: Locking Power Cord (J9955A) L6-20P is available in the Accessories tab

OCA Blue Note: 2 Power Supply is included with the Switch Bundle

Technical Specifications

Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle (JL479A)

I/O ports and slots		Supports 48 ports of 10G for use with SFP and SFP+ transceivers, and 6 ports of 40G for use with QSFP+ transceivers.
Additional ports and slots	**Module VoQ**	16 MB Packet Buffer
	Power supplies	Field-replaceable, hot-swappable, and up to 2 power supplies. Bundles (JL479A, JL579A, JL581A) include 2 power supplies.
	Fans	Field-replaceable, hot-swappable, and up to 5 fans. Bundles (JL479A, JL579A, JL581A) include 5 fans.
	MTBF	314,721 hrs
Physical characteristics	**Dimensions**	17.4in (442mm) (w) x 19.9in (505.5mm) (d) x 1.7in (43.2mm) (h)
	Full configuration weight	20.7lbs (9.4kg)
Memory and Processor	**CPU**	2GHz
	Memory Drive	16 GB RAM, 64 GB SSD, and 8 GB Flash
Performance	**Switching Capacity**	2.5Tbs
	MAC Address Table Size	14K
Mounting and enclosure		Mounts in an EIA standard 19-inch rack or other equipment cabinet (hardware included); horizontal surface mounting only
Environment	**Operating Temperature**	0°C to 40°C (32°F to 104°F) up to 10,000 ft (3Km)
	Operating Relative Humidity	5% to 95% at 40°C (104°F) non-condensing
	Non-Operating	-40°C to 70°C (-40°F to 158°F) up to 15,000Ft (4.6Km)
	Non-Operating/ Storage Relative Humidity	5% to 95% @ 65°C (149°F)
	Max Operating Altitude	Up to 10,000ft (3.048 Km)
	Max Non-Operating	Up to 15,000ft (4.6 Km)
	Acoustic	Sound Pressure (LpAm) (Bystander) 61.1 dB
	Primary Airflow Direction	Front-to-Back
Electrical characteristics	**Frequency**	50-65 Hz
	AC voltage	100-127 and 200-240 with either 50 or 60Hz VAC
	Current	6A (low voltage) - 3A (high voltage)
	Power output	357 W
Safety		EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; EN60825-1; IEC60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825-1; UL60950-1, CSA 22.2 No 60950-
EMC		EN 55032:2012, Class A; EN 55024:2010; EN 61000-3-2:2014, Class A; EN 61000-3-3:2013; FCC CFR 47 Part 15:2010, Class A; EN 50581:2012 (RoHS)
Lasers		EN60825-1:2014 / IEC 60825-1: 2014 Class 1; Class 1 Laser Products / Laser Klasse 1
Management		SNMP; RJ-45 serial; USB micro USB console; RJ-45 Ethernet port

Technical Specifications

Aruba 8320 32p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle (JL579A)

I/O ports and slots	Supports 32 ports of 40G for use with QSFP+ transceivers.	
Additional ports and slots	**Module VoQ**	16 MB Packet Buffer
	Power supplies	Field-replaceable, hot-swappable, and up to 2 power supplies. Bundles (JL479A, JL579A, JL581A) include 2 power supplies.
	Fans	Field-replaceable, hot-swappable, and up to 5 fans. Bundles (JL479A, JL579A, JL581A) include 5 fans.
	MTBF	296,526 hrs
Physical characteristics	**Dimensions**	17.26in (438mm) (W) 20.28in (515mm) (D) 1.71in (43.5mm) (H)
	Full configuration weight	21.27lbs (9.7kb)
Memory and Processor	**CPU**	2GHz
	Memory Drive	16 GB RAM, 64 GB SSD, and 8 GB Flash
Performance	**Switching Capacity**	2.5Tbs
	MAC Address Table Size	14K
Mounting and enclosure	Mounts in an EIA standard 19-inch rack or other equipment cabinet (hardware included); horizontal surface mounting only	
Environment	**Operating Temperature**	0°C to 40°C (32°F to 104°F) up to 10,000 ft (3Km)
	Operating Relative Humidity	5% to 95% at 40°C (104°F) non-condensing
	Non-Operating	-40°C to 70°C (-40°F to 158°F) up to 15,000Ft (4.6Km)
	Non-Operating/ Storage Relative Humidity	5% to 95% @ 65°C (149°F)
	Max Operating Altitude	Up to 10,000ft (3.048 Km)
	Max Non-Operating	Up to 15,000ft (4.6 Km)
	Acoustic	Sound Pressure (LpAm) (Bystander) 79 dB
	Primary Airflow Direction	Front-to-Back
Electrical characteristics	**Frequency**	50-65 Hz
	AC voltage	100-127 and 200-240 with either 50 or 60Hz VAC
	Current	6A (low voltage) - 3A (high voltage)
	Power output	310 W
Safety	EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; EN60825-1; IEC60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825-1; UL60950-1, CSA 22.2 No 60950-	
EMC	EN 55032:2012, Class A; EN 55024:2010; EN 61000-3-2:2014, Class A; EN 61000-3-3:2013; FCC CFR 47 Part 15:2010, Class A; EN 50581:2012 (RoHS)	
Lasers	EN60825-1:2014 / IEC 60825-1: 2014 Class 1; Class 1 Laser Products / Laser Klasse 1	
Management	SNMP; RJ-45 serial; USB micro USB console; RJ-45 Ethernet port	

Technical Specifications

Aruba 8320 48p 1G/10GBASE-T and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle (JL581A)

I/O ports and slots		Supports 48 ports of 10GBaseT and 6 ports of 40G for use with QSFP+ transceivers.
Additional ports and slots	**Module VoQ**	16 MB Packet Buffer
	Power supplies	Field-replaceable, hot-swappable, and up to 2 power supplies. Bundles (JL479A, JL579A, JL581A) include 2 power supplies.
	Fans	Field-replaceable, hot-swappable, and up to 5 fans. Bundles (JL479A, JL579A, JL581A) include 5 fans.
	MTBF	275,339 hrs
Physical characteristics	**Dimensions**	18.6in (473mm) (W) 17.4in (443mm) (D) 1.71in (43.9mm) (H)
	Full configuration weight	20.94lbs (9.5kg)
Memory and Processor	**CPU**	2GHz
	Memory Drive	16 GB RAM, 64 GB SSD, and 8 GB Flash
Performance	**Switching Capacity**	2.5 Tbs
	MAC Address Table Size	14K
Mounting and enclosure		Mounts in an EIA standard 19-inch rack or other equipment cabinet (hardware included); horizontal surface mounting only
Environment	**Operating Temperature**	0°C to 40°C (32°F to 104°F) up to 10,000 ft (3Km)
	Operating Relative Humidity	5% to 95% at 40°C (104°F) non-condensing
	Non-Operating	-40°C to 70°C (-40°F to 158°F) up to 15,000Ft (4.6Km)
	Non-Operating/ Storage Relative Humidity	5% to 95% @ 65°C (149°F)
	Max Operating Altitude	Up to 10,000ft (3.048 Km)
	Max Non-Operating	Up to 15,000ft (4.6 Km)
	Acoustic	Sound Pressure (LpAm) (Bystander) 61.1 dB
	Primary Airflow Direction	Front-to-Back
Electrical characteristics	**Frequency**	50-65 Hz
	AC voltage	100-127 and 200-240 with either 50 or 60Hz VAC
	Current	6A (low voltage) - 3A (high voltage)
	Power output	348 W
Safety		EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; EN60825-1; IEC60950-1:2005 Ed.2; Am 1:2009+A2:2013; IEC 60825-1; UL60950-1, CSA 22.2 No 60950-
EMC		EN 55032:2012, Class A; EN 55024:2010; EN 61000-3-2:2014, Class A; EN 61000-3-3:2013; FCC CFR 47 Part 15:2010, Class A; EN 50581:2012 (RoHS)
Lasers		EN60825-1:2014 / IEC 60825-1: 2014 Class 1; Class 1 Laser Products / Laser Klasse 1
Management		SNMP; RJ-45 serial; USB micro USB console; RJ-45 Ethernet port

Technical Specifications

Standards and protocols (applies to all products in series)

- IEEE 802.1AB-2009
- IEEE 802.1ak-2007
- IEEE 802.1t-2001
- IEEE 802.1AX-2008 Link Aggregation
- IEEE 802.1p Priority
- IEEE 802.1Q VLANs
- IEEE 802.1s Multiple Spanning Trees
- IEEE 802.1w Rapid Reconfiguration of Spanning Tree
- IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.3ba 40 and 100 Gigabit Ethernet Architecture
- IEEE 802.3z 1000BASE-X
- RFC 768 UDP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 768 User Datagram Protocol
- RFC 813 Window and Acknowledgement Strategy in TCP
- RFC 815 IP datagram reassembly algorithms
- RFC 879 TCP maximum segment size and related topics
- RFC 896 Congestion control in IP/TCP internetworks
- RFC 917 Internet subnets
- RFC 919 Broadcasting Internet Datagrams
- RFC 922 Broadcasting Internet Datagrams in the Presence of Subnets (IP_BROAD)
- RFC 925 Multi-LAN address resolution
- RFC 1215 Convention for defining traps for use with the SNMP
- RFC 1256 ICMP Router Discovery Messages
- RFC 1393 Traceroute Using an IP Option
- RFC 1591 Domain Name System Structure and Delegation
- RFC 1981 Path MTU Discovery for IP version 6
- RFC 1997 BGP Communities Attribute
- RFC 1998 An Application of the BGP Community Attribute in Multi-home Routing
- RFC 2385 Protection of BGP Sessions via the TCP MD5 Signature Option
- RFC 2787 Definitions of Managed Objects for the Virtual Router Redundancy Protocol
- RFC 2918 Route Refresh Capability for BGP-4
- RFC 2934 Protocol Independent Multicast MIB for IPv4
- RFC 3137 OSPF Stub Router Advertisement
- RFC 3176 InMon Corporation###s sFlow: A Method for Monitoring Traffic in Switched and Routed Networks
- RFC 3509 Alternative Implementations of OSPF Area Border Routers
- RFC 3623 Graceful OSPF Restart
- RFC 4486 Subcodes for BGP Cease Notification Message
- RFC 4724 Graceful Restart Mechanism for BGP
- RFC 4940 IANA Considerations for OSPF
- RFC 5187 OSPFv3 Graceful Restart
- RFC 6987 OSPF Stub Router Advertisement

Technical Specifications

- RFC 7047 The Open vSwitch Database Management Protocol
- RFC 4251 The Secure Shell (SSH) Protocol
- RFC 4271 A Border Gateway Protocol 4 (BGP-4)
- RFC 4291 IP Version 6 Addressing Architecture
- RFC 4292 IP Forwarding Table MIB
- RFC 4293 Management Information Base for the Internet Protocol (IP)

Accessories

Bundles and Accessories

Aruba 8320 Bundles

Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle	JL479A
Aruba 8320 32p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle	JL579A
Aruba 8320 48p 1G/10GBASE-T and 6p 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle	JL581A

Accessories

Aruba X721 Front-to-Back Fan	JL481A

Power supply

Aruba X371 400W AC Power Supply	JL480A

Mounting kit

Aruba X472 2-post Rack Kit	JL482A
Aruba X474 4-post Rack Kit	JL483A

Console cable

Aruba X2C2 RJ45 to DB9 Console Cable	JL448A

Transceivers

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 10G SFP+ LC SR 300m OM3 MMF Transceiver	J9150D
Aruba 10G SFP+ LC LR 10km SMF Transceiver	J9151D
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 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver	JL563A[1]
Aruba 40G QSFP+ LC Bidirectional 150m MMF 2-strand Transceiver	JL308A
HPE X142 40G QSFP+ MPO SR4 Transceiver	JH231A
Aruba 40G QSFP+ LC ER4 40km SMF Transceiver	Q9G82A
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

[1]Available in CY18Q2

Summary of Changes

Date	Version History	Action	Description of Change
07-May-2018	Version 5	Added	SKU added: JL563A; Q9G82A
16-Apr-2018	Version 4	Changed	Standards and protocols updated
02-Apr-2018	Version 3	Changed	SKU added to the Configuration section: JL581A
05-Mar-2018	Version 2	Added	SKU added: JL579A
		Changed	Updates made on product image, Overview, Technical Specifications and Configuration section.
04-Dec-2017	Version 1	Created	Document Creation

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