

Overview

HPE Aruba Networking CX 8320 Switch Series

The past several decades in networking have been defined by static, closed networking solutions designed for the client-server era. The HPE Aruba Networking CX 8320 Switch Series campus core and aggregation switch is a game-changing solution offering a flexible and innovative approach to dealing with the demands of the mobile, cloud and IoT era. The CX 8320 Switch Series also serves as a top of rack (ToR) switch for data centers needing 10GbE connectivity to servers and 40GbE to the spine.

The CX 8320 provides industry-leading line rate 1/10GbE (SFP/SFP+ and 10GBASE-T) and 40GbE connectivity in a compact 1U form factor. Together with the modular CX 8400 Switch Series chassis and the CX 8325 Switch Series, the CX 8320 Switch Series rounds out switching portfolio with an enterprise core and aggregation solution that ensures higher performance and higher uptime.



HPE Aruba Networking CX 8320 Switch Series

Models

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

Key features

- High performance 2.5Tbps with 1,905 mpps
- High availability with Virtual Switching Extension (VSX), and redundant, hot-swappable power supplies and fans
- AOS-CX enables automation and programmability using built-in REST APIs and Python scripts
- Intelligent monitoring, visibility, and remediation with Network Analytics Engine
- One touch deployment with the CX Mobile App
- NetEdit support for automated configuration and verification
- Advanced Layer 2/3 feature set includes BGP, OSPF, VRF, and IPv6
- Compact 1U switches with 1/10GbE (SFP+ and 10GBASE-T) and 40GbE connectivity

Overview

Standard Features

Product Differentiators

AOS-CX - a modern software system

The HPE Aruba Networking CX 8320 Switch Series is based on AOS-CX, a modern, database-driven operating system that automates and simplifies many critical and complex network tasks. A built-in time series database enables customers and developers to utilize software scripts for historical troubleshooting, as well as analysis of past trends. This helps predict and avoid future problems due to scale, security, and performance bottlenecks. AOS-CX operating system features are organized into CX Foundation and CX Advanced software licenses.

Every CX switch includes an active, embedded CX Foundation license at no additional cost with the option to upgrade to a CX Advanced license.

The CX Foundation license has everything needed to deploy, connect, and troubleshoot an enterprise network, including:

- Network Analytics Engine (NAE)
- Dynamic Segmentation
- Switch Stacking
- High Availability and Resiliency
- Quality of Service (QoS)
- Layer 2 Switching
- Layer 3 Services and Routing
- IP Multicast
- Network Security
- Support for NetEdit

The CX Advanced license includes CX Edge Insights, offering deep visibility with application recognition, identification, and flow capture from layer 4 to layer 7.

For more information on the CX Advanced License, read the **CX Switch License Ordering Guide**.

Because AOS-CX is built on a modular Linux architecture with a stateful database, our operating system provides the following unique capabilities:

- Easy access to all network state information allows unique visibility and analytics
- REST APIs and Python scripting for fine-grained programmability of network tasks
- A micro-services architecture that enables full integration with other workflow systems and services
- Continual state synchronization that provides superior fault tolerance and high availability
- All software processes communicate with the database rather than each other, ensuring near real-time state and resiliency and allowing individual software modules to be independently upgraded for higher availability

HPE Aruba Networking Central, Cloud-based network management

Flexible cloud-based or on-premises management for unified network operations of wired, WLAN, SD-WAN, and public cloud infrastructure. Designed to simplify day zero through day two operations with streamlined workflows. Switch management capabilities include configuration, onboarding, monitoring, troubleshooting, and reporting.

A Central Advanced license expands these capabilities with premium security and AIOps, including the Central NetConductor Fabric Wizard and Policy Manager to enable dynamic segmentation and distributed enforcement at a global scale.

The Central Advanced license now comes with all CX Advanced features so there is no need to purchase a CX Advanced license. This streamlines operational efficiency, reducing the need for IT teams to keep track of multiple licenses, active terms, and renewal dates. For more information on Central licensing, see the

https://www.hpe.com/psnow/doc/a00125615enw?jumpid=in_hpesitesearch

Standard Features

Network Analytics Engine - advanced monitoring and diagnostics

For enhanced visibility and troubleshooting, Network Analytics Engine (NAE) automatically interrogates and analyzes events that can impact a network's health. Advanced telemetry and automation provide the ability to easily identify and troubleshoot network, system, application and security related issues easily, through the use of python agents, CLI-based agents and REST APIs.

The Time Series Database (TSDB) stores configuration and operational state data, making it available to quickly resolve network issues. The data may also be used to analyze trends, identify anomalies and predict future capacity requirements.

HPE Aruba Networking NetEdit - automated switch configuration and management

The entire CX portfolio empowers IT teams to orchestrate multiple switch configuration changes for smooth end-to-end service rollouts. NetEdit introduces automation that allows for rapid network-wide changes, and ensures policy conformance post network updates. Intelligent capabilities include search, edit, validation (including conformance checking), deployment and audit features. Capabilities include:

- Centralized configuration with validation for consistency and compliance
- Time savings via simultaneous viewing and editing of multiple configurations
- Customized validation tests for corporate compliance and network design
- Automated large-scale configuration deployment without programming
- Network health and topology visibility via NAE integration

Notes: A separate software license is required to use NetEdit.

Networking Virtual Switching Extension (VSX)

The ability of AOS-CX to maintain synchronous state across dual control planes allows a simplified carrier-class high availability solution called Virtual Switching Extension (VSX).

Designed using the best features of existing high availability technologies such as Multi-chassis Link Aggregation (MC LAG), VSX enables a distributed architecture that is highly available during upgrades or control plane events. Features include:

- Continuous configuration synchronization via AOS-CX
 - Flexible active-active network designs at Layers 2 and 3
 - Operational simplicity and usability for easy configuration
 - High availability by design during upgrades including support for VSX Live Upgrade with LACP traffic draining
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CX Mobile App - unparalleled deployment convenience

An easy to use mobile app simplifies connecting and managing CX 6300 Switch Series for any size project. Switch information can also be imported into NetEdit for simplified configuration management and to continuously validate the conformance of configurations anywhere in the network. The CX Mobile App is available for [download](#).

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.

Standard Features

- **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 models with:
 - 32 ports of 40GbE (QSFP) with optional 4x10 breakout
 - 48 ports of 1/10GbE (SFP/SFP+) with 1GBASE-T and 10GBASE-T transceiver support, and 6 ports of 40GbE (QSFP) with optional 4x10
 - 48 ports of 1/10GbE (1GBASE-T/10GBASE-T), and 6 ports of 40GbE (QSFP) with optional 4x10 breakout
- **Jumbo frames**
Allows high-performance backups and disaster-recovery systems; provides a maximum frame size of 9K bytes
- **Unsupported Transceiver Mode (UTM)**
Allows to insert and enable all unsupported 1G and 10G transceiver and cable
No warranty nor support for the transceiver/cable when used.
- **Loopback**
Supports internal loopback testing for maintenance purposes and increased 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.
- **Packet storm protection**
Protects against unknown broadcast, unknown multicast, or unicast storms with user-defined thresholds

Layer 2 switching

- **VLAN**
Supports up to 4,040 port-based or IEEE 802.1Q-based VLANs
- **VLAN translation**
Remaps VLANs during transit across a core network
- **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 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, IEEE 802.1s Multiple Spanning Tree Protocol (MSTP), STP TCN Trap and STP New Root
- **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
- **Internet Group Management Protocol (IGMP)**
Controls and manages the flooding of multicast packets in a Layer 2 network

Standard Features

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
- **IP Directed Broadcast**
Support directed broadcast on configured network subnets.
- **Dynamic Host Configuration Protocol (DHCP)**
DHCP services are offered within a client network to simplify network management; DHCP Relay enables DHCP operation across subnets; DHCP Smart Relays
- **DHCP Server**
Supports DHCP Services (for IPv4 and IPv6) in customer networks
- **DHCP relay coexistence with server**
Allows DHCP relay coexistence with DHCP server for both IPv4 and IPv6
- **Domain Name System (DNS)**
Provides a distributed database that translates domain names and IP addresses, which simplifies network design; supports client and server. mDNS gateway support.
- **Generic Routing Encapsulation (GRE)**

Enables tunneling traffic from site to site over a Layer 3 path

- **Loopback IP redistribution in OSPF**
Allows redistribution of IPv4 and IPv6 addresses of loopback interface in OSPFv2/v3
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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
 - **Routing Information Protocol version 2 (RIPv2)**
Easy to configure routing protocol for small networks relying on User Datagram Protocol (UDP).
 - **Routing Information Protocol Next Generation (RIPng)**
Extension of RIPv2 for support of IPv6 networking.
 - **Multiprotocol BGP (MP-BGP) with IPv6 Address Family**
Enables sharing of IPv6 routes using BGP and connections to BGP peers using IPv6.
 - **Policy Based Routing (PBR)**
Enables using a classifier to select traffic that can be forwarded based on policy set by the network administrator.
 - **6in4 tunnels**
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Standard Features

- Supports the tunneling of IPv6 traffic in an IPv4 network.
 - **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
 - **Generic Routing Encapsulation (GRE)**
Enables tunneling traffic site to site over a Layer 3 path
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Resiliency and high availability

- **Redundant and load-sharing fans, and power supplies**
Increases total performance and power availability while providing hitless, stateful failover
 - **Hot swappable power supply and fan modules**
Allows replacement of accessories modules without any operational impact on other modules nor the switch operations
 - **Separate data and control paths**
Separates control from services and keeps service processing isolated; increases security and performance
 - **Virtual Switching Extension (VSX)**
VSX enables a distributed and redundant architecture that is highly available during upgrades inherently by architecture design. High availability is delivered through redundancy gained by deploying two chassis in the core with each chassis maintaining its independent control.
 - **Virtual Router Redundancy Protocol (VRRP)**
Allows a group of switches to dynamically back each other up to create highly available routed environments
 - **Bidirectional forward detection (BFD)**
Enable sub-second failure detection for rapid routing protocol re-balancing
 - **Ethernet Ring Protection Switching (ERPS)**
Supports rapid protection and recovery in a ring topology
 - **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 54 link aggregation groups (LAGs), each with 16 members per LAG, with a user-selectable L1- 4 hashing algorithm
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Quality of Service (QoS)

- **Strict priority (SP) queuing and Deficit Weighted Round Robin (DWRR)**
Enable congestion avoidance
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Standard Features

Visibility

CX Edge Insights

- Upgrade the active, perpetual CX Foundation license to the term based CX Advanced license to unlock deep visibility with CX Edge Insights for application recognition, identification, and flow capture from layer 4 to layer 7. CX Edge Insights enables granular datapoint collection with search, sort and reporting as well as the ability to recognize 22 categories and more than 3700 applications.
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Security

- **TAA Compliance**

The CX 8320 Switch Series, a TAA compliant product, with the AOS-CX uses FIPS 140-2 validated cryptography for protection of sensitive information

- **Access control list (ACL) Features**

Supports powerful ACLs for both IPv4 and IPv6. Supports creation of object groups representing sets of devices like IP addresses. For instance, IT management devices could be grouped in this way. ACLs can also support protecting control plane services such as SSH, SNMP, NTP or web servers.

- **Enrollment over Secure Transport (EST)**

Enables secure certificate enrollment, allowing for easier enterprise management of PKI.

- **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

- **RadSec**

Enable RADIUS authentication and accounting data to be passed safely and reliably across insecure networks such as the internet

- **Management access security**

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

Management

In addition to the CX Mobile App, NetEdit and Analytics Engine, the 8320 series offers the following:

- **Built-in programmable and easy to use REST API interface**

- **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

- **IPSLA**

Standard Features

Monitor the network for degradation of various services, including monitoring voice. Monitoring is enabled via the NAE for history and for automated gathering of additional information when anomalies are detected.

- **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. Can serve as the NTP server in a customer network. 'Prefer' statement on a NTP server entry
- **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 files easily to the flash image

Additional information

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

Customer first, customer last support

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

- Foundation Care for support services include priority access to Technical Assistance Center(TAC) engineers 24x7x365, flexible hardware and onsite support options, and total coverage for HPE Aruba Networking products. HPE Aruba Networking switches with assigned Central subscriptions benefit with option for additional hardware support only.
- Pro Care adds fast access to senior 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 Pro Care, please visit:

<https://www.hpe.com/us/en/networking/hpe-aruba-networking-support-services.html>

Standard Features

Warranty, services and support

- **Limited Lifetime Warranty**
- **Software Releases and Documentation**
- **Support and services information**
Visit <https://www.hpe.com/us/en/networking/hpe-aruba-networking-support-services.html>
- **Supportability**

Job scheduler framework

- **Analytics**

AIOPS NAE Agent & Engine Improvements - Unicast Routing and Client Services

- **Korea Government Security Features**

Ensure configuration integrity

Limit concurrent users for web access

Multicast

- **Internet Group Management Protocol (IGMP)**
Enables establishing multicast group memberships in IPv4 networks; supports IGMPv1, v2, and v3
- **Multicast Listener Discovery (MLD)**
Enable discovery of IPv6 multicast listeners; supports MLDv1 and v2
- **Multicast Service Delivery Protocol (MSDP) for Anycast RP**
MSDP used for Anycast RP is an intradomain feature that provides redundancy and load-sharing capabilities.
- **MSDP Mesh Groups**
MSDP used for Anycast RP is an intradomain feature that provides redundancy and load-sharing capabilities.
When MSDP mesh groups are used, SA messages are not flooded to other mesh group peers. When MSDP peer in group receives SA message from another MSDP peer in the group, it assumes that this SA message was sent to all the other MSDP peers in the group. It also eliminates RPF checks on arriving SA messages. With MSDP mesh group configured, SA messages are always accepted from mesh group peer.
- **PIM-Dense Mode**
Floods multicast traffic to every corner of the network (push-model). Method is for delivering data to receivers without receivers requesting the data. Can be efficient in certain deployments in which there are active receivers on every subnet in the network. Branches without downstream receivers are pruned from the forwarding trees.
- **FastLeave (FL) and Forced-FastLeave (FFL) for IGMP**
FL and FFL for IGMP/MLD speed up the process of blocking unnecessary Multicast traffic to a switch port that is connected to end nodes. They help to eliminate the CPU overhead of having to generate an IGMP/MLD Group-Specific Query message.
- **Support for Microsoft Network Load Balancer (NLB) for server applications**
- **IGMP/MLD Snooping**

Standard Features

Prevent flooding of multicast traffic to non-listening ports

- **Protocol Independent Multicast (PIM)**

Protocol Independent Multicast for IPv4 and IPv6 supports one-to-many and many-to-many media casting use cases such as IPTV over IPv4 and IPv6 networks. Support for PIM Sparse Mode (PIM-SM, IPv4 and IPv6); PIM Multicast Boundary (v4); VSX Graceful shutdown for IGMP/MLD; Multicast NSF.

Configuration Information

BTO Models

Standard Switch Enclosures

Rules #	Description	SKU
1, 2, 3, 4, 5, 7	HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle <ul style="list-style-type: none"> HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ 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 (JL482B) Min=0 \ Max= 48 SFP/SFP+ 1/10G Transceivers Min=0 \ Max = 6 QSFP+ 40G Transceiver QSA28 Adapter Min=0 \ Max=6 (rule5) 1U - Height 	JL479A
	HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle PDU <ul style="list-style-type: none"> C13 PDU Jumper Cord (NA/MEX/TW/JP) 	JL479A#B2B
	HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle PDU <ul style="list-style-type: none"> C13 PDU Jumper Cord (ROW) 	JL479A#B2C
	HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bndl 220v <ul style="list-style-type: none"> HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A) 	JL479A#B2E
	HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle <ul style="list-style-type: none"> No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P) 	JL479A#AC3
3, 4, 5, 7	HPE Aruba Networking 8320 32 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle <ul style="list-style-type: none"> HPE Aruba Networking 8320 32 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 (JL482B) Min=0 \ Max = 32 QSFP+ 40G Transceiver QSA28 Adapter Min=0 \ Max=32 (rule5) 1U - Height 	JL579A
	HPE Aruba Networking 8320 32 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle PDU <ul style="list-style-type: none"> C13 PDU Jumper Cord (NA/MEX/TW/JP) 	JL579A#B2B
	HPE Aruba Networking 8320 32 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle PDU <ul style="list-style-type: none"> C13 PDU Jumper Cord (ROW) 	JL579A#B2C
	HPE Aruba Networking 8320 32 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle 220v <ul style="list-style-type: none"> HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A) 	JL579A#B2E

Configuration Information

HPE Aruba Networking 8320 32 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle	JL579A#AC3
<ul style="list-style-type: none"> No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P) 	

3, 4, 5, 7	HPE Aruba Networking 8320 48p 1G/10GBASE-T 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle	JL581A
<ul style="list-style-type: none"> HPE Aruba Networking 8320 48p 1G/10GBASE-T 6p 40G QSFP+ 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 (JL482B) Min=0 \ Max = 40 QSFP+ 40G Transceiver QSA28 Adapter Min=0 \ Max=6 (rule5) 1U - Height 		
	HPE Aruba Networking 8320 48p 1G/10GBASE-T 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bndl PDU	JL581A#B2B
	<ul style="list-style-type: none"> C13 PDU Jumper Cord (NA/MEX/TW/JP) 	
	HPE Aruba Networking 8320 48p 1G/10GBASE-T 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle PDU	JL581A#B2C
	<ul style="list-style-type: none"> C13 PDU Jumper Cord (ROW) 	
	HPE Aruba Networking 8320 48p 1G/10GBASE-T 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bndl 220v	JL581A#B2E
	<ul style="list-style-type: none"> HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A) 	
	HPE Aruba Networking 8320 48p 1G/10GBASE-T 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle	JL581A#AC3
	<ul style="list-style-type: none"> No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P) 	

Configuration Rules

Rules #	Description	SKU
1	The following Transceivers install into this Module: (Use BTO only when adding to switch)	
	HPE Aruba Networking 1G SFP LC LX 10km SMF Transceiver	J4859D
	HPE Aruba Networking 1G SFP LC LH 70km SMF Transceiver	J4860D
	HPE Aruba Networking 1G SFP RJ45 T 100m Cat5e Transceiver	J8177D
	HPE Aruba Networking 1G SFP LC SX 500m MMF TAA Transceiver	JL745A
	HPE Aruba Networking 1G SFP LC LX 10km SMF TAA Transceiver	JL746A
	HPE Aruba Networking 1G SFP RJ45 T 100m Cat5e TAA Transceiver	JL747A
2	The following Transceivers install into this Module: (Use BTO only when adding to switch)	
	HPE Aruba Networking 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver	JL563B
	Notes: Available in CY18Q2	
	HPE Aruba Networking 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver	JL563C
	HPE Aruba Networking 10G SFP+ LC SR 300m OM3 MMF Transceiver	J9150D
	HPE Aruba Networking 10G SFP+ LC LR 10km SMF Transceiver	J9151E
	HPE Aruba Networking 10G SFP+ LC ER 40km SMF Transceiver	J9153D
	HPE Aruba Networking 10G SFP+ LC SR 300m MMF TAA Transceiver	JL748A

Configuration Information

HPE Aruba Networking 10G SFP+ LC LR 10km SMF TAA Transceiver	JL749A
HPE Aruba Networking 10G SR SFP+ LC 400m OM4 MMF C-Class Transceiver	S2P30A
HPE Aruba Networking 10G LR SFP+ LC 10km SMF C-Class Transceiver	S2P31A
HPE Aruba Networking 10G ER SFP+ LC 40km SMF C-Class Transceiver	S2P32A
HPE Aruba Networking 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281D
HPE Aruba Networking 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283D
HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 3m Direct Attach Copper Cable	487655-B21
HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 5m Direct Attach Copper Cable	537963-B21

3 The following Transceivers install into this Module: (Use BTO only when adding to switch)

HPE Networking X142 40G QSFP+ MPO SR4 Transceiver	JH231A
HPE Networking X142 40G QSFP+ LC LR4 SM Transceiver	JH232A
HPE Networking X142 40G QSFP+ MPO eSR4 300M Transceiver	JH233A
HPE Aruba Networking 40G QSFP+ LC Bidirectional 150m MMF 2-strand Transceiver	JL308A
HPE Networking X242 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable	JH234A
HPE Networking X242 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable	JH235A
HPE Networking X242 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable	JH236A
HPE BladeSystem c-Class 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	721064-B21
HPE QSFP28 to SFP28 Adapter	845970-B21

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

5 If qty1 of the following QSA28 Adapter(845970-B21) is selected, then increase max SFP28 Port qty by 1 allow user selection of the following SFP Transceivers. Refer to qty and port restrictions for individual Switch in the "Additional Info" sections: (Use BTO only when adding this QSA28 Adapter)

HPE Aruba Networking 10G SFP+ LC SR 300m OM3 MMF Transceiver	J9150D
HPE Aruba Networking 10G SFP+ LC LR 10km SMF Transceiver	J9151E
HPE Aruba Networking 10G SFP+ LC ER 40km SMF Transceiver	J9153D
HPE Aruba Networking 10G SFP+ LC SR 300m MMF TAA Transceiver	JL748A
HPE Aruba Networking 10G SFP+ LC SR 300m MMF TAA Transceiver	JL748A

7 Unbuildable/FAN required, generates CFGU: If order is quoted for India and contains "#B2C" Option, then Display the following:

For BTO shipments to India:

Please replace <Base Model>#B2C option with <Base Model>#AC3 in the Bill of Materials and add the appropriate INDIA PDU Power Cord below via Ad-Hoc:

For Factory Integration of Power Cord, please add "#0D1" to the Power Cord Sku suffix. (Ex. JL671A#0D1)

HPE Networking 2.0m C13 to C14 PDU India Power Cord	JL671A
HPE Networking 2.5m C15 to C14 PDU India Power Cord	JL672A
HPE Networking 2.5m C19 to C20 PDU India Power Cord	JL673A

Notes: Drop down under power supply should offer the following options and results:

- o 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)

Configuration Information

- o [Switch/Router/Power Supply to Wall Power Cord - Localized Option \(Watson Default for BTO and Box Level CTO\)](#)
- o [High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. \(Offered only in North America, Mexico, Taiwan, and Japan\)](#)
- o [No Power Cord - #AC3 Option](#)

[Locking Power Cord \(J9955A\) L6-20P is available through the OCA Accessories tab](#)

[OCA Only Model Selection Form - HPE Offering > HPE Aruba Networking > Switches - AOS: > 8320 Switch Series](#)

Rack Level Integration CTO Models

Standard Switch Enclosures

Rules #	Description	SKU
1, 2, 3, 4, 5, 6, 7	HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle <ul style="list-style-type: none"> • HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ 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 (JL482B) • Min=0 \ Max= 48 SFP/SFP+ 1/10G Transceivers • Min=0 \ Max = 6 QSFP+ 40G Transceiver • QSA28 Adapter Min=0 \ Max=6 (rule5) • 1U - Height 	JL479A
	HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle PDU	JL479A#B2B
	HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle PDU <ul style="list-style-type: none"> • C13 PDU Jumper Cord (ROW) 	JL479A#B2C
	HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bndl 220v <ul style="list-style-type: none"> • HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A) 	JL479A#B2E
	HPE Aruba Networking 8320 48p 10G SFP/SFP+ 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle <ul style="list-style-type: none"> • No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P) 	JL479A#AC3
3, 4, 5, 6,7	HPE Aruba Networking 8320 32 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle <ul style="list-style-type: none"> • HPE Aruba Networking 8320 32 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 (JL482B) • Min=0 \ Max = 32 QSFP+ 40G Transceiver • QSA28 Adapter Min=0 \ Max=32 (rule5) 	JL579A

Configuration Information

- 1U - Height

HPE Aruba Networking 8320 32 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle PDU JL579A#B2B

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

HPE Aruba Networking 8320 32 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle PDU JL579A#B2C

- C13 PDU Jumper Cord (ROW)

HPE Aruba Networking 8320 32 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle 220v JL579A#B2E

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

HPE Aruba Networking 8320 32 40G QSFP+ with X472 5 Fans 2 Power Supply Switch Bundle JL579A#AC3

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

3, 4, 5,
6,7

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

- HPE Aruba Networking 8320 48p 1G/10GBASE-T 6p 40G QSFP+ 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 (JL482B)
- Min=0 \ Max = 40 QSFP+ 40G Transceiver
- QSA28 Adapter Min=0 \ Max=6 (rule5)
- 1U - Height

HPE Aruba Networking 8320 48p 1G/10GBASE-T 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bndl PDU JL581A#B2B

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

HPE Aruba Networking 8320 48p 1G/10GBASE-T 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle PDU JL581A#B2C

- C13 PDU Jumper Cord (ROW)

HPE Aruba Networking 8320 48p 1G/10GBASE-T 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bndl 220v JL581A#B2E

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

HPE Aruba Networking 8320 48p 1G/10GBASE-T 6p 40G QSFP+ X472 5 Fans 2 Power Supply Switch Bundle JL581A#AC3

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

Configuration Rules

Rule #:	Description	SKU
1	The following Transceivers install into this Module (Use #0D1 quoted to switch if switch is CTO) - if applicable:	
	HPE Aruba Networking 1G SFP LC SX 500m OM2 MMF Transceiver	J4858D
	HPE Aruba Networking 1G SFP LC LX 10km SMF Transceiver	J4859D
	HPE Aruba Networking 1G SFP LC LH 70km SMF Transceiver	J4860D
	HPE Aruba Networking 1G SFP RJ45 T 100m Cat5e Transceiver	J8177D
	HPE Aruba Networking 1G SFP LC SX 500m MMF TAA Transceiver	JL745A
	HPE Aruba Networking 1G SFP LC LX 10km SMF TAA Transceiver	JL746A

Configuration Information

- 2 HPE Aruba Networking 1G SFP RJ45 T 100m Cat5e TAA Transceiver JL747A
- The following Transceivers install into this Module(Use #0D1 quoted to switch if switch is CTO) - if applicable:
- HPE Aruba Networking 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver JL563B
- HPE Aruba Networking 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver JL563C
- HPE Aruba Networking 10G SFP+ LC SR 300m OM3 MMF Transceiver J9150D
- HPE Aruba Networking 10G SFP+ LC LR 10km SMF Transceiver J9151E
- HPE Aruba Networking 10G SFP+ LC ER 40km SMF Transceiver J9153D
- HPE Aruba Networking 10G SFP+ LC SR 300m MMF TAA Transceiver JL748A
- HPE Aruba Networking 10G SFP+ LC LR 10km SMF TAA Transceiver JL749A
- HPE Aruba Networking 10G SR SFP+ LC 400m OM4 MMF C-Class Transceiver S2P30A
- HPE Aruba Networking 10G LR SFP+ LC 10km SMF C-Class Transceiver S2P31A
- HPE Aruba Networking 10G ER SFP+ LC 40km SMF C-Class Transceiver S2P32A
- HPE Aruba Networking 10G SFP+ to SFP+ 1m Direct Attach Copper Cable J9281D
- HPE Aruba Networking 10G SFP+ to SFP+ 3m Direct Attach Copper Cable J9283D
- HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 3m Direct Attach Copper Cable 487655-B21
- HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 5m Direct Attach Copper Cable 537963-B21
- 3 The following Transceivers install into this Module(Use #0D1 quoted to switch if switch is CTO) - if applicable:
- HPE Aruba Networking 40G QSFP+ LC ER4 40km SMF Transceiver Q9G82A
- HPE Networking X142 40G QSFP+ MPO SR4 Transceiver JH231A
- HPE Networking X142 40G QSFP+ LC LR4 SM Transceiver JH232A
- HPE Networking X142 40G QSFP+ MPO eSR4 300M Transceiver JH233A
- HPE Aruba Networking 40G QSFP+ LC Bidirectional 150m MMF 2-strand Transceiver JL308A
- HPE Networking X242 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable JH234A
- HPE Networking X242 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable JH235A
- HPE Networking X242 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable JH236A
- HPE BladeSystem c-Class 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable 721064-B21
- HPE QSFP28 to SFP28 Adapter 845970-B21
- 4 Localization required on orders without #B2B, #B2C, #B2E or #AC3 options.
- 5 If qty1 of the following QSA28 Adapter(845970-B21) is selected, then increase max SFP28 Port qty by 1 allow user selection of the following SFP Transceivers. Refer to qty and port restrictions for individual Switch in the "Additional Info" sections: (Use BTO only when adding this QSA28 Adapter)
- HPE Aruba Networking 10G SFP+ LC SR 300m OM3 MMF Transceiver J9150D
- HPE Aruba Networking 10G SFP+ LC LR 10km SMF Transceiver J9151E
- HPE Aruba Networking 10G SFP+ LC ER 40km SMF Transceiver J9153D
- HPE Aruba Networking 10G SFP+ LC SR 300m MMF TAA Transceiver JL748A
- HPE Aruba Networking 10G SFP+ LC SR 300m MMF TAA Transceiver JL748A
- 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.
- 7 Unbuildable/FAN required, generates CFGU: If order is quoted for India and contains "#B2C" Option, then Display the following:

For BTO shipments to India:

Configuration Information

Please replace <Base Model>#B2C option with <Base Model>#AC3 in the Bill of Materials and add the appropriate INDIA PDU Power Cord below via Ad-Hoc:

For Factory Integration of Power Cord, please add "#0D1" to the Power Cord Sku suffix. (Ex. JL671A#0D1)

HPE Networking 2.0m C13 to C14 PDU India Power Cord	JL671A
HPE Networking 2.5m C15 to C14 PDU India Power Cord	JL672A
HPE Networking 2.5m C19 to C20 PDU India Power Cord	JL673A

Notes: Drop down under power supply should offer the following options and results:

- o 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)
- o Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)
- o High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)
- o No Power Cord - #AC3 Option

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

Transceivers

Remark Description

SKU

s

SPF Transceivers

HPE Aruba Networking 1G SFP LC SX 500m OM2 MMF Transceiver	J4858D
HPE Aruba Networking 1G SFP LC LX 10km SMF Transceiver	J4859D
HPE Aruba Networking 1G SFP LC LH 70km SMF Transceiver	J4860D
HPE Aruba Networking 1G SFP RJ45 T 100m Cat5e Transceiver	J8177D
HPE Aruba Networking 1G SFP LC SX 500m MMF TAA Transceiver	JL745A
HPE Aruba Networking 1G SFP LC LX 10km SMF TAA Transceiver	JL746A
HPE Aruba Networking 1G SFP RJ45 T 100m Cat5e TAA Transceiver	JL747A

SPF+ Transceivers

HPE Aruba Networking 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver	JL563B
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Notes: Limit 12 per switch/module, only to be installed in ports 1-12

HPE Aruba Networking 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver	JL563C
HPE Aruba Networking 10G SFP+ LC SR 300m OM3 MMF Transceiver	J9150D
HPE Aruba Networking 10G SFP+ LC LR 10km SMF Transceiver	J9151E
HPE Aruba Networking 10G SFP+ LC ER 40km SMF Transceiver	J9153D
HPE Aruba Networking 10G SFP+ LC SR 300m MMF TAA Transceiver	JL748A
HPE Aruba Networking 10G SFP+ LC LR 10km SMF TAA Transceiver	JL749A
HPE Aruba Networking 10G SR SFP+ LC 400m OM4 MMF C-Class Transceiver	S2P30A
HPE Aruba Networking 10G LR SFP+ LC 10km SMF C-Class Transceiver	S2P31A
HPE Aruba Networking 10G ER SFP+ LC 40km SMF C-Class Transceiver	S2P32A
HPE Aruba Networking 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281D

Configuration Information

HPE Aruba Networking 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283D
HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 3m Direct Attach Copper Cable	487655-B21
HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 5m Direct Attach Copper Cable	537963-B21

Notes: OCA Blue A maximum qty of 12 XCVRs (JL563B) can be installed into ports 1-12 within the JL479A Switch.

QSFP+ Transceivers

HPE Aruba Networking 40G QSFP+ LC ER4 40km SMF Transceiver	Q9G82A
HPE Networking X142 40G QSFP+ MPO SR4 Transceiver	JH231A
HPE Networking X142 40G QSFP+ LC LR4 SM Transceiver	JH232A
HPE Networking X142 40G QSFP+ MPO eSR4 300M Transceiver	JH233A
HPE Aruba Networking 40G QSFP+ LC Bidirectional 150m MMF 2-strand Transceiver	JL308A
HPE Networking X242 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable	JH234A
HPE Networking X242 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable	JH235A
HPE Networking X242 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable	JH236A
HPE BladeSystem c-Class 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	721064-B21

Notes: A maximum qty of 24 Splitter Cables (721064-B21) can be installed into ports 5-28 within the JL579A Switch.

QSA28 Adapter

HPE QSFP28 to SFP28 Adapter	845970-B21
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Notes: –Limit 24 per switch/module, only to be installed in ports 5-28 (JL579A)

–OCA Display **Notes:**

If selecting the 845970-B21 - QSFP28 to SFP28 Adapter, then see HPE Aruba Networking Transceiver Guide for details.

Switch Options

Remarks	Description	SKU
	Rack Mount Kits	
	For Switch JL479A, JL579A, JL581A System (std 0 // max 1) User Selection (min 0 // max 1) per enclosure	
	HPE Aruba Networking X474 4-post Rack Kit	JL483C
Notes:	If the switch will be factory racked into an HPE Universal Rack, then this 4 Post Rack Mount kit is required.	
	OCA Display Notes: 1 2-Post Rack Mount Kit(JL482B) is included with the Switch Bundle	

India PDU Cable

For Switch System (std 0 // max 1) User Selection (min 0 // max 1) per enclosure	
HPE Networking 2.0m C13 to C14 PDU India Power Cord	JL671A

Configuration Information

Notes: This cable is intended for India use only. Typically power cord is ordered when power supply option #AC3 is selected. C13 India PDU Cable for Factory Racked Systems Only

Accessories

Remark Description

SKU

s

USB Console Cables

System (std 0 // max 99) User Selection (min 0 // max 99) per enclosure

HPE Aruba Networking USBA-RJ45 PIN3TX-6RX 2.5m Cable R8Z87A

HPE Aruba Networking USBA-RJ45 PC-to-Switch PIN6TX-3RX 2.5m Cable R9G48B

HPE Aruba Networking USB-A reversible to USB-C PC-to-Switch 3m Cable R9J32A

HPE Aruba Networking USB-C to USB-C PC-to-Switch 3m Cable R9J33A

Notes: This cable is only compatible with the following Switches; JL479A, JL579A, JL581A

Spare Items

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

HPE Aruba Networking X371 400W AC Power Supply JL480A

- includes 1 x c13, 400w

Notes: Localization required on orders without #B2B, #B2C, #B2E or #AC3 options

HPE Aruba Networking X371 400W AC Power Supply PDU JL480A#B2B

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

HPE Aruba Networking X371 400W AC Power Supply PDU JL480A#B2C

- C13 PDU Jumper Cord (ROW)

HPE Aruba Networking X371 400W AC Power Supply 220v JL480A#B2E

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

HPE Aruba Networking X371 400W AC Power Supply JL480A#AC3

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

HPE Aruba Networking X721 Front-to-Back Fan JL481A

HPE Aruba Networking X472 2-post Rack Kit JL482C

HPE Aruba Networking X474 4-post Rack Kit JL483C

HPE Aruba Networking X2C2 RJ45 to DB9 Console Cable JL448A

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

HPE Aruba Networking CX Switch Bluetooth Adapter S1H23A

Notes: Drop down under power supply should offer the following options and results:

- o 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)
- o Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)
- o High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)

Configuration Information

- o No Localized Power Cord Selected - #AC3 Option

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

2 Power Supply is included with the Switch Bundle

Software

Remark	Description	SKU
s	HPE AOS-CX Software CX Advanced Software Licenses HPE Aruba Networking CX Software 8/9xxx Switch Advanced 1-year Subscription E-STU HPE Aruba Networking CX Software 8/9xxx Switch Advanced 3-year Subscription E-STU HPE Aruba Networking CX Software 8/9xxx Switch Advanced 5-year Subscription E-STU HPE Aruba Networking CX Software 8/9xxx Switch Advanced 7-year Subscription E-STU HPE Aruba Networking CX Software 8/9xxx Switch Advanced 10-year Subscription E-STU HPE Aruba Networking NetEdit HPE Aruba Networking NetEdit / Single Node Subscription HPE Aruba Networking NetEdit Single Node 1yr Subscription E-STU HPE Aruba Networking NetEdit Single Node 3yr Subscription E-STU HPE Aruba Networking Central	S0T87AAE S0T88AAE S0T89AAE S0T90AAE S0T86AAE JL639AAE JL640AAE
Notes:	For details and complete listing of HPE Aruba Networking Central licensing options, please see https://www.hpe.com/psnow/doc/a00125615enw?jumpid=in_hpesitesearch and HPE Aruba Networking Central Data Sheet.	
2	Cloud Services / 8XXX Switch Foundation Subscriptions HPE Aruba Networking Central Switch Class5 Foundation 1-year Subscription E-STU	R3K03AAE
2	HPE Aruba Networking Central Switch Class5 Foundation 3-year Subscription E-STU	R3K04AAE
2	HPE Aruba Networking Central Switch Class5 Foundation 5-year Subscription E-STU	R3K05AAE
2	HPE Aruba Networking Central Switch Class5 Foundation 7-year Subscription E-STU	R3K06AAE
2	HPE Aruba Networking Central Switch Class5 Foundation 10-year Subscription E-STU	R3K07AAE
3	On-Prem Services / 8XXX Switch Foundation Subscriptions HPE Aruba Networking Central on Prem Switch Class-5 Foundation 1 year Subscription E-STU	R6U88AAE
3	HPE Aruba Networking Central on Prem Switch Class-5 Foundation 3 year Subscription E-STU	R6U89AAE

Configuration Information

3	HPE Aruba Networking Central on Prem Switch Class-5 Foundation 5 year Subscription E-STU	R6U90AAE
3	HPE Aruba Networking Central on Prem Switch Class-5 Foundation 7 year Subscription E-STU	R6U91AAE
3	HPE Aruba Networking Central on Prem Switch Class-5 Foundation 10 year Subscription E-STU	R6U92AAE
On-Prem Services / 8XXX/9XXX/10XXX Switch Advanced Subscriptions		
3	HPE Aruba Networking Central On-Premises Switch Class5 Advanced 7-year Subscription E-STU	R6V11AAE
3	HPE Aruba Networking Central On-Premises Switch Class5 Advanced 5-year Subscription E-STU	R6V10AAE
3	HPE Aruba Networking Central On-Premises Switch Class5 Advanced 3-year Subscription E-STU	R6V09AAE
3	HPE Aruba Networking Central On-Premises Switch Class5 Advanced 1-year Subscription E-STU	R6V08AAE
3	HPE Aruba Networking Central On-Premises Switch Class5 Advanced 10-year Subscription E-STU	R6V12AAE
FedRAMP Services / 8XXX Switch Foundation Subscriptions		
	HPE Aruba Networking Central 84xx/83xx/64xx/54xx Switch Foundation Government 1yr Subscription E-STU	R8L04AAE
	HPE Aruba Networking Central 84xx/83xx/64xx/54xx Switch Foundation Government 3yr Subscription E-STU	R8L05AAE
	HPE Aruba Networking Central 84xx/83xx/64xx/54xx Switch Foundation Government 5yr Subscription E-STU	R8L06AAE
	HPE Aruba Networking Central 84xx/83xx/64xx/54xx Switch Foundation Government 7yr Subscription E-STU	R8L07AAE
	HPE Aruba Networking Central 84xx/83xx/64xx/54xx Switch Foundation Government 10yr Sub E-STU	R8L08AAE

Configuration Rules

Rules #	Description	SKU
2	Add the Central Cloud Skus to the HPE Aruba Networking Catalog as Standalone: HPE Aruba Networking > Network Management > Central > Cloud Services	
3	Add the Central On-Prem Skus to the HPE Aruba Networking Catalog as Standalone: HPE Aruba Networking > Network Management > Central > On-Prem Services	

As-a-Service

HPE AOS-CX Software

CX Advanced Software Licenses

HPE Aruba Networking Central

Cloud Services / 8XXX Switch Foundation Subscriptions

HPE Aruba Networking Central Switch Class-5 Foundation 1 year Subscription SaaS	R3K03AAS
HPE Aruba Networking Central Switch Class-5 Foundation 3 year Subscription SaaS	R3K04AAS

Configuration Information

HPE Aruba Networking Central Switch Class-5 Foundation 5 year Subscription SaaS	R3K05AAS
HPE Aruba Networking Central Switch Class-5 Foundation 7 year Subscription SaaS	R3K06AAS
HPE Aruba Networking Central Switch Class-5 Foundation 10 year Subscription SaaS	R3K07AAS

Notes: [Add the Central Cloud Skus to the HPE Aruba Networking Catalog as Standalone: HPE Aruba Networking > Network Management > Central > Cloud Services](#)

Cloud Services / Switch Advanced AAS Licenses

HPE Aruba Networking Central Switch Class-5 Advanced 7 year Subscription SaaS	S0W45AAS
HPE Aruba Networking Central Switch Class-5 Advanced 10 year Subscription SaaS	S0W46AAS
HPE Aruba Networking Central Switch Class-5 Advanced 1 year Subscription SaaS	S0W62AAS
HPE Aruba Networking Central Switch Class-5 Advanced 3 year Subscription SaaS	S0W63AAS
HPE Aruba Networking Central Switch Class-5 Advanced 5 year Subscription SaaS	S0W64AAS
HPE Aruba Networking Central Switch Class-5 Advanced 7 year Subscription SaaS	S0W65AAS
HPE Aruba Networking Central Switch Class-5 Advanced 10 year Subscription SaaS	S0W66AAS
HPE Aruba Networking Central Switch Class-5 Advanced 1 year Subscription SaaS	S0W87AAS
HPE Aruba Networking Central Switch Class-5 Advanced 3 year Subscription SaaS	S0W88AAS
HPE Aruba Networking Central Switch Class-5 Advanced 5 year Subscription SaaS	S0W89AAS

Notes: [For IRIS reference only. No action required for OCX and Clic](#)

Technical Specifications

HPE Aruba Networking CX 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 1/10G for use with SFP and SFP+ transceivers, and 6 ports of 40G for use with QSFP+ transceivers. Optional 1GBASE-T and 10GBASE-T transceivers and 4x10G breakout cables.	
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, and JL581A) include 2 power supplies.
	Fans	Field-replaceable, hot-swappable, and up to 5 fans. Bundles (JL479A, JL579A, and 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	2.4GHz
	Memory Drive	16 GB RAM, 64 GB SSD, and 8 GB Flash
Performance*	Switching Capacity	2.5Tbs
	IPv4 Host Table	120,000
	IPv6 Host Table	52,000
	IPv4 Unicast Routes	131,072
	IPv6 Unicast Routes	32,732
	MAC Address Table Size	98,304
	IGMP Groups	4,094
	MLD Groups	4,094
	IPv4 Multicast Routes	4,094
	IPv6 Multicast Routes	4,094
Notes: * Some of these scaling numbers assume shared tables.		
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

Technical Specifications

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	

HPE Aruba Networking CX 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. Optional 4x10G breakout cables.	
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, and JL581A) include 2 power supplies.
	Fans	Field-replaceable, hot-swappable, and up to 5 fans. Bundles (JL479A, JL579A, and 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	2.4GHz
	Memory Drive	16 GB RAM, 64 GB SSD, and 8 GB Flash
Performance*	Switching Capacity	2.5Tbs
	IPv4 Host Table	120,000
	IPv6 Host Table	52,000
	IPv4 Unicast Routes	131,072
	IPv6 Unicast Routes	32,732
	MAC Address Table Size	98,304
	IGMP Groups	4,094
	MLD Groups	4,094
	IPv4 Multicast Routes	4,094
	IPv6 Multicast Routes	4,094
Notes: * Some of these scaling numbers assume shared tables.		
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)

Technical Specifications

	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	

HPE Aruba Networking CX 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. Optional 4x10G breakout cables.	
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, and JL581A) include 2 power supplies.
	Fans	Field-replaceable, hot-swappable, and up to 5 fans. Bundles (JL479A, JL579A, and 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	2.4GHz
	Memory Drive	16 GB RAM, 64 GB SSD, and 8 GB Flash
Performance*	Switching Capacity	2.5 Tbs
	IPv4 Host Table	120,000
	IPv6 Host Table	52,000
	IPv4 Unicast Routes	131,072

Technical Specifications

	IPv6 Unicast Routes	32,732
	MAC Address Table Size	98,304
	IGMP Groups	4,094
	MLD Groups	4,094
	IPv4 Multicast Routes	4,094
	IPv6 Multicast Routes	4,094
Notes: * Some of these scaling numbers assume shared tables.		
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	

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 Traffic Class Expediting and Dynamic Multicast Filtering
- IEEE 802.1Q VLANs

Technical Specifications

- IEEE 802.1s Multiple Spanning Trees
- IEEE 802.1w Rapid Reconfiguration of Spanning Tree
- IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.3x Flow Control
- IEEE 802.3z Gigabit Ethernet
- IEEE 802.3ae 10 Gigabit Ethernet
- IEEE 802.3ba 40 Gigabit Ethernet Architecture
- 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 1657 Definitions of Managed Objects for BGP-4 using SMIv2
- RFC 1772 Application of the Border Gateway Protocol in the Internet
- 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 2401 Security Architecture for the Internet Protocol
- RFC 2402 IP Authentication Header
- RFC 2406 IP Encapsulating Security Payload (ESP)
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 2545 Use of BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing
- RFC 2710 Multicast Listener Discovery (MLD) for IPv6
- 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 3484: Default Address Selection for Internet Protocol version 6 (IPv6)
- RFC 3509 Alternative Implementations of OSPF Area Border Routers
- RFC 3623 Graceful OSPF Restart
- RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6
- RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers
- RFC 4251 The Secure Shell (SSH) Protocol
- RFC 4271 A Border Gateway Protocol 4 (BGP-4)
- RFC 4273 Definitions of Managed Objects for BGP-4
- RFC 4291 IP Version 6 Addressing Architecture

Technical Specifications


- RFC 4292 IP Forwarding Table MIB
 - RFC 4293 Management Information Base for the Internet Protocol (IP)
 - RFC 4360 BGP Extended Communities Attribute
 - RFC 4486 Subcodes for BGP Cease Notification Message
 - RFC 4552 Authentication/Confidentiality for OSPFv3
 - RFC 4724 Graceful Restart Mechanism for BGP
 - RFC 4760 Multiprotocol Extensions for BGP-4
 - RFC 4940 IANA Considerations for OSPF
 - RFC 5095: Deprecation of Type 0 Routing Headers in IPv6
 - RFC 5701 IPv6 Address Specific BGP Extended Community Attribute
 - RFC 6987 OSPF Stub Router Advertisement
 - RFC 7047 The Open vSwitch Database Management Protocol
 - RFC 7059 A Comparison of IPv6-over-IPv4 Tunnel Mechanisms
 - RFC 7313 Enhanced Route Refresh Capability for BGP-4
 - RFC 8201 Path MTU Discovery for IP version 6
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Summary of Changes

Date	Version History	Action	Description of Change
18-Nov-2024	Version 32	Changed	QuickSpecs was updated.
03-Sep-2024	Version 31	Changed	Configuration Information section was updated.
01-Apr-2024	Version 30	Changed	Configuration Information section was updated.
04-Dec-2023	Version 29	Changed	Obsolete SKU was removed Configuration Information section was updated.
10-Jul-2023	Version 28	Changed	Configuration Information section was updated.
15-May-2023	Version 27	Changed	Configuration Information section was updated.
06-Feb-2023	Version 26	Changed	Standard Features and Configuration Information sections were updated.
05-Dec-2022	Version 25	Changed	Configuration Information section was updated and new SKUs were added.
07-Nov-2022	Version 24	Changed	Configuration Information section was updated.
06-Jun-2022	Version 23	Changed	Standard Features and Configuration Information sections were updated.
02-May-2022	Version 22	Changed	Configuration Information section was updated.
06-Dec-2021	Version 21	Changed	Standard Features section was updated.
04-Oct-2021	Version 20	Changed	Standard Features section was updated.
07-Sep-2021	Version 19	Changed	Overview and Standard Features sections were updated.
07-Jun-2021	Version 18	Changed	Configuration Information section was updated.
08-Mar-2021	Version 17	Changed	SKUs added in Configuration Information section.
07-Dec-2020	Version 16	Changed	Standard Features and Technical Specification sections were updated.
05-Oct-2020	Version 15	Changed	Configuration Information section was updated.
10-Aug-2020	Version 14	Changed	Standard Features and Technical Specification sections were updated.
06-Jul-2020	Version 13	Changed	Configuration Information section was updated.
04-Nov-2019	Version 12	Changed	Overview, Standard Features and Configuration Information were updated.
03-Jun-2019	Version 11	Changed	Overview, Standard Features and Technical Specifications sections were updated.
02-Apr-2019	Version 10	Changed	SKU JL483A was replaced with JL483B Obsolete SKUs were removed.
04-Mar-2019	Version 9	Changed	SKU J9151D was replaced with J9151E Obsolete SKUs were removed.
03-Dec-2018	Version 8	Changed	Features and benefits updated
02-Jul-2018	Version 7	Changed	Product overview, Key features, Features and benefits changed due to a Software feature update
04-Jun-2018	Version 6	Changed	Configuration section updated
07-May-2018	Version 5	Changed	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	Changed	SKU added: JL579A Updates made on product image, Overview, Technical Specifications and Configuration section.
04-Dec-2017	Version 1	New	New QuickSpecs

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