Overview

HPE Aruba Networking CX 8100 Switch Series

The HPE Aruba Networking CX 8100 Switch Series offers a flexible and innovative approach to addressing the application, security, and scalability demands of the mobile, cloud, and IoT era. These switches serve the needs of the next-generation core and aggregation layer of campuses, as well as virtual and highly dynamic data center environments. They provide up to 1.76Tbps of capacity, with line-rate Gigabit Ethernet interfaces including support for Smart Rate (1/2.5/5 Gbps), 10Gbps, 25Gbps, 40Gbps, and 100Gbps.

The HPE Aruba Networking CX 8100 series includes industry-leading line rate ports with 1/10GbE (SFP/SFP+) and 40/100GbE (QSFP+/QSFP28) connectivity in a compact 1U form factor. 4x10Gbps and 4x25Gbps break out from 40/100G ports offer advanced flexibility in connectivity and aggregation. These switches deliver a fantastic investment for customers requiring 1GbE/10GbEwith a mix of fiber and copper ports, and 40/100GbE uplink ports.



HPE Aruba Networking CX 8100 Switch Series

Key features

- High-performance 1.76Tbps and 1,309 Mpps
- Intelligent monitoring and visibility with HPE Aruba Networking Network Analytics Engine
- High availability with industry leading VSX redundancy, and redundant power supplies and fans
- Designed for core/aggregation in the campus or Top of Rack or End of Row in data center environments
- HPE Aruba Networking OS-CX automation and programmability using built-in REST APIs and Python scripts
- Advanced Layer 2/3 feature set includes BGP, OSPF, VRF, and IPv6
- Addition of Smart Rate (1/2.5/5/10G) ports on the HPE Aruba Networking CX 8100-40XT8XF4C and HPE Aruba Networking CX 8100-24XT4XF4C

Standard Features

Product Differentiators

The HPE Aruba Networking CX 8100 Switch series is based on HPE Aruba Networking OS-CX, a modern, database-driven operating system that automates and simplifies many critical and complex tasks. The enhanced capabilities of HPE Aruba Networking OS-CX provide a unique set of differentiators for campus and data center switching.

Modular Architecture with Native Cloud-Native HPE Aruba Networking OS-CX

AOS-CX operating system features are organized into HPE Aruba Networking CX Foundation and HPE Aruba Networking CX Advanced software licenses.

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

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

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

The HPE Aruba Networking CX Advanced license includes HPE Aruba Networking 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
https://www.hpe.com/psnow/doc/a00125615enw?jumpid=in_hpesitesearch

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.

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

The HPE Aruba Networking Central Advanced license now comes with all HPE Aruba Networking 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 HPE Aruba Networking Central licensing, see the
https://www.hpe.com/psnow/doc/a00125615enw?jumpid=in_hpesitesearch

HPE Aruba Networking Network Analytics Engine

HPE Aruba Networking OS-CX includes HPE Aruba Networking's Network Analytics Engine (NAE) for advanced telemetry and automation. The NAE framework is an industry-first monitoring and troubleshooting

Standard Features

system, providing greatly improved network operations. NAE uniquely provides the ability to monitor and easily troubleshoot network health and congestion issues. The Time Series Database (TSDB) may be used to store configuration and operational state.

Customers can use data from the TSDB to write software modules to troubleshoot problems. This data may also be used to analyze trends, identify anomalies, and predict future capacity requirements.

HPE Aruba Networking Virtual Switching Extension

The ability of HPE Aruba Networking OS-CX to maintain synchronous state across dual control planes allows a unique high availability solution called HPE Aruba Networking Virtual Switching Extension (VSX).

VSX is delivered through redundancy gained by deploying two chassis with an inter-switch link, with each chassis maintaining its independent control.

Designed using the best features of existing HA technologies such as Multichassis Link Aggregation (MC-LAG) - HPE Aruba Networking VSX enables a distributed architecture that is highly available during upgrades or control plane events.

Product Capabilities

Performance

- **High-speed fully distributed architecture**
  Provides up to 1.76Tbps for bidirectional switching and 1,309 Mpps for forwarding 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

Variety of Port Density Options

Four different base models, each sold in two airflow modes: a Front to Back airflow bundle, and Back to Front airflow bundle:

- HPE Aruba Networking CX 8100-48XF4C
  +48 ports of 1GbE/10GbE\(SFP/SFP+)
  +4 ports of 40GbE/100GbE (QSFP+/QSFP28)
- HPE Aruba Networking CX 8100-24XT4XF4C
  + 24 ports of 100M/1GbE/10GbE (10GBASE-T)
  + 4 1GbE/10GbE (SFP/SFP+)
  + 4 ports of 40GbE/100GbE (QSFP+/QSFP28)
  + Support Smart Rate (1/2.5/5/10G)
- HPE Aruba Networking CX 8100-24XF4C
  + 24 ports of 1GbE/10GbE (SFP/SFP+)
  + 4 ports of 40GbE/100GbE (QSFP+/QSFP28)
- HPE Aruba Networking CX 8100-40XT8XF4C
  + 40 ports of 100M/1GbE/10GbE (10GBASE-T)
  + 8 1GbE/10GbE (SFP/SFP+)
  + 4 ports of 40GbE/100GbE (QSFP+/QSFP28)
  + Support Smart Rate (1/2.5/5/10G)

All QSFP ports (QSFP+/QSFP28), on the HPE Aruba Networking CX 8100-24XT4XF4C and HPE Aruba Networking CX 8100-24XF4C support optional 4x10G/4x25G break out capability.
There is 1Gbps transceiver support, including 1GBASE-T, on SFP+ports.

Standard Features

Jumbo Frames
Allows high-performance backups and disaster-recovery systems; provides a maximum frame size of 9K bytes

Unsupported Transceiver Mode (UTM)

- Allows users to insert and enable unsupported 1G, 10G, 25G and 100G transceivers and cables
- 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, multicast, or unicast storms with user-defined thresholds

Quality of Service (QoS)

Strict priority (SP) queuing and Deficit Weighted Round Robin (DWRR)

Enables Congestion Avoidance

Data Center Bridging (DCB)

- Supports lossless Ethernet networking standards to eliminate packet loss due to queue overflow
- Priority Flow Control (PFC) 2 priorities per port
- Enhanced Transmission Service (ETS)
- DCB Exchange Protocol (Pre-standard LLDP DCBX IEEE 1.01 version)

Flow-Control Guard
Prevents accumulation of excessive congestion with periodic flushing. Avoids packets buffering for an extended time period

ECN With Slope
Marks packets as ECN-CE (Congestion Experienced). Helps TCP to reduce receive window size during congestion Advanced Lossless Pool Configuration

Global Buffering Statistics

Storage Solution Support
iSCSI, Lossless iSCSI, RDMA over Converged Ethernet version 2 (RoCE v1 and v2) and Non-Volatile Memory Express (NVMe over Fabrics)

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 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
- **HPE Aruba Networking Virtual Switching Extension (VSX)**

Standard Features

VSX enables a distributed and redundant architecture by deploying two switches with each switch maintaining independent control yet staying synchronized during upgrades or failover. Also supports upgrades during live operation.

- **Virtual Router Redundancy Protocol (VRRP)**
  VRRP allows a group of switches to dynamically back each other up to create highly available routed environments
- **Bidirectional Forward Detection (BFD)**
  Enables sub-second failure detection for rapid routing protocol re-balancing
  Enabled for both BGP IPv4 and IPv6
- **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 50 LAGs, with up to 8 members per LAG (32 for a VSX pair), with a user-selectable L1-4 hashing algorithm

Management

In addition to the HPE Aruba Networking CX Mobile App, HPE Aruba Networking NetEdit and HPE Aruba Networking Network Analytics Engine, the HPE Aruba Networking CX 8100 series offers the following:

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

- **IPFIX**

IP Flow Information Export (IPFIX) is an integrated network flow analysis tool that allows to measure flow properties and send flow reports. The switch ASIC supports inline flow accounting of all the packets ingressing the switch. The telemetry can be used for network monitoring and capacity planning.

Standard Features

- **TFTP and SFTP support**
- **Supportability**

Job scheduler framework

- **Debug and sampler utility**
  Supports ping and traceroute for 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.
- **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 1,024 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 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)
- **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.
- **Static VXLAN**
  Supports static VXLAN. Allows operators to manually connect two or more VXLAN tunnel endpoints (VTEP).
- **Dynamic VXLAN with BGP-EVPN**

Deep segmentation for Spine/Leaf data center networks or Layer 3 campus designs with centralized gateway and symmetric Integrated Routing and Bridging (IRB) based distributed gateways VXLAN tunnels.

- Port PBR VXLAN support

- VSX Active Forwarding support for VXLAN underlay

Standard Features

- Route-map support BGP EVPN AF

- **IPv4 Multicast in VXLAN/EVPN Overlay**

Enable PIM-SM/IGMP snooping in the VXLAN Overlay

- **IPv6 VXLAN/EVPN Overlay Support**
  Enables IPv6 traffic over the VXLAN overlay
- **VXLAN distributed anycast gateway**
  Addressing mechanism that enables the use of the same gateway IP addresses across all the leaf switches part of a VXLAN network.
- **VXLAN ARP/ND suppression**
  Allows minimization of ARP and ND traffic flooding within individual VXLAN segments, thus optimizing the VXLAN network.
- **Dynamic Segmentation**
  VXLAN Group-Based Policy (GBP) and Role-based Policies
  - Enables micro segmentation and role-based policies across the VXLAN overlay

  Dual stack support
  - Reserved GBP Tag for Infrastructure (Switch Generated) Traffic
  - Allows stub fabric extender VTEPs to relay VXLAN GBP between static and dynamic VXLAN tunnels

- **Troubleshooting on the Overlay**

  - Supports ping over VXLAN for IPv4 and IPv6

  - Supports traceroute over VXLAN for IPv4 and IPv6 services on the overlay

  - Supports RADIUS server over VXLAN for IPv4 and IPv6

  - IPv4 DHCP relay over VXLAN for non-default VRF

  - Route-leaking to/from default VRF

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**
  Supports 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 Server**
  Supports DHCP services (for Ipv4 and Ipv6) in customer networks.
  Support for DHCP smart relay.

- **DHCP Relay Coexistence with Server**

Standard Features

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.

Layer 3 Routing

- **Static IPv4 routing**
  Provides simple manually configured IPv4 routing.
- **Sub-Interface**
  - Allows multiple IP addresses on a single routed interface
  - Supports unicast and multicast routing for both IPv4 and IPv6
  - Supports OSPF, BGP and PIM for both IPv4 and IPV6
  - Supported on RoP, L3 lags and Hydra interfaces
  - Network Load Balancing (NLB)
  - PBR and Ingress Policy support
- **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.
  Configurable OSPF distance for type-5 LSA.
  Configurable default-metric for OSPF default-information
- **Loopback IP redistribution in OSPF**

Allows redistribution of IPv4 and IPv6 addresses of loopback interface in OSFPv2/v3.

- **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.
- **Dynamic BGP Peering**
  Simplifies BGP configuration for ZTP scenarios and enables CX for Azure stack integration.
- **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.
- **6 in 4 Tunnels**
  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**

Standard Features

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. 8 way Equal-cost multi-path routing (ECMP).
- **Generic Routing Encapsulation (GRE)**
  Enables tunneling traffic from site to site over a Layer 3 path.

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.

Security

- **TAA Compliance**
  The HPE Aruba Networking CX 8100, 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 protect control plane services such as SSH, SNMP, NTP or web servers.
  802.1x, Mac-auth, LUR, DUR, Port-Access Policy, Static Port Filtering.
  802.1x to Sticky MAC for "Port-Access Security"
  MAC lockdown, MAC lockout, sticky MAC.
- **Private VLAN**
  Enables traffic isolation for users on the same VLAN.
  Support for isolated, community and primary VLANs.
  L3-Mcast, IGMP snooping, MLD snooping, ACL/QoS interop, L3 unicast (BGP, IPDB, L3 addressing, static routes). VSX support.
- **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.
  - RADIUS Port-Access (Accounting, Tracking, CoA, v4/v6, Dead Only Server Tracking)
- **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**
  HPE Aruba Networking 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.

Standard Features

Dot1x supplicant: support for EAP-TLS

- **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

- **Internet Group Management Protocol (IGMP)**
  Enables establishing multicast group memberships in IPv4 networks; supports IGMPv1, v2, and v3
- **PIM Multicast Boundary (v4)**
  VSX Graceful shutdown for IGMP/MLD Multicast NSF
- **Multicast Listener Discovery (MLD)**
  Enable discovery of IPv6 multicast listeners; supports MLDv1 and v2. ROP Extension for VSX Border Leaf (Centralized/Distributed)
- **PIM-SSM**

ACL Support to define the PIM-SSM ranges.

VSX, IPv6, IGMPv3 for IPv4, MSDP and PIM-SSM interaction

- **Anycast Rendezvous Point (RP)**
  Two or more RPs configured with same /32 Host IP address on loopback interfaces. All the downstream routers will
  be configured to point to Anycast RP address for multicast routes. Device will automatically select the closest RP for each source and receiver. If equal costs routes exist, the process of registering the sources will be shared equally by all the RPs in the network.
- **Multicast Service Delivery Protocol (MSDP)**
  Efficiently routes multicast traffic through core networks.
- **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)**
  FL and FFL for IGMP/MLD speeds up the process of blocking unnecessary Multicast traffic to a switch port that is connected to end nodes for IGMP. They help to eliminate the CPU overhead of having to generate an IGMP/MLD Group-Specific Query message.
- **Network Load Balancer (NLB)**
  Supported for server applications.
  Load balancing technology for server clustering developed on Microsoft Windows Server.
  Supports load sharing and redundancy among servers within a cluster.
- **IGMP/MLD Snooping**
  Prevent flooding of multicast traffic to non-listening ports.

Standard Features

- **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)

Additional Information

- **Green initiative support**
  Provides support for RoHS (EN 63000:2018) regulations.
- **Korea Government Security Features**
  - Ensure configuration integrity
  - Limit concurrent users for web access
- **Analytics**
  - AIOPS - NAE Agent & Engine Improvements - Unicast Routing
  - AIOPS - NAE Agent & Engine Improvements - Client Services
- **Customer First Customer Last Support**
  When your network is important to your business, then your business needs the backing of HPE Aruba Networking 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 HPE Aruba Networking support services include priority access to HPE Aruba Networking 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 HPE Aruba Networking Central subscriptions benefit with option for additional hardware support only.
  HPE Aruba Networking Pro Care adds fast access to senior HPE Aruba Networking 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 HPE Aruba Networking Pro Care, please visit:
  https://www.hpe.com/us/en/networking/hpe-aruba-networking-support-services.html

Warranty, Services and Support

Limited Lifetime Warranty

Please reference the below web pages for more detailed information HPE Aruba Networking AOS-CX software releases and features

For **Global Services** information, see
https://www.hpe.com/us/en/networking/hpe-aruba-networking-support-services.html

Configuration Information

BTO Models

Rule #	Description	SKU
1, 2, 3, 4, 5, 6, 7, 8, 9, 10	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU Switch Bdl • Includes 2 Power Supplies with No open PS slots • Includes 3 Fan Trays with No open FT Slots • Includes 1 2-Post Rack Kit • Min=0 \ Max= 24 SFP/SFP+ 1/10G Transceivers • Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter (see rule 6) • 1U - Height	R9W86A
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU Switch Bundle PDU • C13 PDU Jumper Cord (NA/MEX/TW/JP)	R9W86A#B2B
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU Switch Bundle PDU • C13 PDU Jumper Cord (ROW)	R9W86A#B2C
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU Switch Bdl 220v • HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)	R9W86A#B2E
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU Switch Bdl NoLoc • No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	R9W86A#AC3
1, 2, 3, 4, 5, 6, 7, 8, 9, 10	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 BF Airflow 3Fan 2AC PSU Switch Bdl • Includes 2 Power Supplies with No open PS slots • Includes 3 Fan Tray with No open FT Slots • Includes 1 2-Post Rack Kit • Min=0 \ Max= 24 SFP/SFP+ 1/10G Transceivers • Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter (see rule 6) • 1U - Height	R9W87A
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 BF Airflow 3Fan 2AC PSU Switch Bundle PDU • C13 PDU Jumper Cord (NA/MEX/TW/JP)	R9W87A#B2B
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 BF Airflow 3Fan 2AC PSU Switch Bundle PDU • C13 PDU Jumper Cord (ROW)	R9W87A#B2C
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 BF Airflow 3Fan 2AC PSU Switch Bdl 220v • HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)	R9W87A#B2E
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 BF Airflow 3Fan 2AC PSU Switch Bdl NoLoc • No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	R9W87A#AC3
1, 2, 3, 4, 5, 6, 7, 8, 9, 10	HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU Sw Bdl	R9W88A

Configuration Information

- Includes 2 Power Supplies with No open PS slots
- Includes 3 Fan Tray with No open FT Slots
- Includes 1 2-Post Rack Kit
- Min=0 \ Max= 4 SFP/SFP+ 1/10G Transceivers
- Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter

(see rule 6)

- 1U - Height

HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU Sw Bdl PDU — R9W88A#B2B

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

HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU Sw Bdl PDU — R9W88A#B2C

- C13 PDU Jumper Cord (ROW)

HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU Sw Bdl 220v — R9W88A#B2E

- HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)

HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU Sw Bdl NoLoc — R9W88A#AC3

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

1, 2, 3, 4, 5, 6, 7, 8, 9, 10 HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU Sw Bdl — R9W89A

- Includes 2 Power Supplies with No open PS slots
- Includes 3 Fan Tray with No open FT Slots
- Includes 1 2-Post Rack Kit
- Min=0 \ Max= 4 SFP/SFP+ 1/10G Transceivers
- Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter

(see rule 6)

- 1U - Height

HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU Sw Bdl PDU — R9W89A#B2B

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

HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU Sw Bdl PDU — R9W89A#B2C

- C13 PDU Jumper Cord (ROW)

HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU Sw Bdl 220v — R9W89A#B2E

- HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)

HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU Sw Bdl NoLoc — R9W89A#AC3

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

1, 2, 3, 4, 5, 6, 7, 8, 9 HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU Switch Bdl — R9W90A

- Includes 2 Power Supplies with No open PS slots
- Includes 3 Fan Tray with No open FT Slots
- Includes 1 2-Post Rack Kit

Configuration Information

- Min=0 \ Max= 48 SFP/SFP+ 1/10G Transceivers
- Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter

(see rule 6)

- 1U - Height

	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU SW Bundle PDU	R9WA90#B2B
	• C13 PDU Jumper Cord (NA/MEX/TW/JP)	
	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU Switch Bundle PDU	R9W90A#B2C
	• C13 PDU Jumper Cord (ROW)	
	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU Switch Bdl 220v	R9W90A#B2E
	• HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)	
	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU Switch Bdl NoLoc	R9W90A#AC3
	• No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	
1, 2, 3, 4, 5, 6, 7, 8, 9	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 BF Airflow 3F 2AC PSU Switch Bdl	R9W91A

- Includes 2 Power Supplies with No open PS slots
- Includes 3 Fan Tray with No open FT Slots
- Includes 1 2-Post Rack Kit
- Min=0 \ Max= 48 SFP/SFP+ 1/10G Transceivers
- Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter

(see rule 6)

- 1U - Height

	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 BF Airflow 3F 2AC PSU Switch Bdl PDU	R9W91A#B2B
	• C13 PDU Jumper Cord (NA/MEX/TW/JP)	
	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 BF Airflow 3F 2AC PSU Switch Bdl PDU	R9W91A#B2C
	• C13 PDU Jumper Cord (ROW)	
	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 BF Airflow 3F 2AC PSU Switch Bdl 220v	R9W91A#B2E
	• HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)	
	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 BF Airflow 3F 2AC PSU Switch Bdl NoLoc	R9W91A#AC3
	• No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	
1, 2, 3, 4, 5, 6, 7, 8, 9	HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 FB 3F 2AC PSU Sw Bdl	R9W92A

- Includes 2 Power Supplies with No open PS slots
- Includes 3 Fan Tray with No open FT Slots
- Includes 1 2-Post Rack Kit
- Min=0 \ Max= 8 SFP/SFP+ 1/10G Transceivers
- Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter

Configuration Information

(see rule 6)

- 1U - Height

HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 FB 3F 2AC PSU Sw Bdl PDU — R9W92A#B2B

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

HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 FB 3F 2AC PSU Sw Bdl PDU — R9W92A#B2C

- C13 PDU Jumper Cord (ROW)

HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 FB 3F 2AC PSU Sw Bdl 220v — R9W92A#B2E

- HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)

HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 FB 3F 2AC PSU Sw Bdl NoLoc — R9W92A#AC3

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

1, 2, 3, 4, 5, 6, 7, 8, 9 — HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 BF 3F 2AC PSU Switch Bdl — R9W93A

- Includes 2 Power Supplies with No open PS slots
- Includes 3 Fan Tray with No open FT Slots
- Includes 1 2-Post Rack Kit
- Min=0 \ Max= 8 SFP/SFP+ 1/10G Transceivers
- Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter

(see rule 6)

- 1U - Height

HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 BF 3F 2AC PSU Sw Bdl PDU — R9W93A#B2B

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

HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 BF 3F 2AC PSU Sw Bdl PDU — R9W93A#B2C

- C13 PDU Jumper Cord (ROW)

HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 BF 3F 2AC PSU Sw Bdl 220v — R9W93A#B2E

- HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)

HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 BF 3F 2AC PSU Sw Bdl NoLoc — R9W93A#AC3

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

Configuration Rules

Rule #	Description	
1	The following Transceivers install into this Switch: (Use BTO only when adding to switch)	
	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

Configuration Information

2	The following Transceivers install into this Switch: (Use BTO only when adding to switch)	
	HPE Aruba Networking 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver	JL563B
	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 SR 300m MMF TAA Transceiver	JL748A
	HPE Aruba Networking 10G SFP+ LC LR 10km SMF TAA Transceiver	JL749A
	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 Switch: (Use BTO only when adding to switch)	
	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 Aruba Networking 40G QSFP+ to QSFP+ 7m Active Optical Cable	R0Z22A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 15m Active Optical Cable	R0Z23A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 30m Active Optical Cable	R0Z24A
	HPE QSFP28 to SFP28 Adapter	845970-B21
4	The following Transceivers install into this Switch: (Use BTO only when adding to switch)	
	HPE Aruba Networking 100G QSFP28 MPO SR4 100m 12-fiber MPO OM3 MMF Transceiver	JL309A
	HPE 100Gb QSFP28 Bidirectional Transceiver	845972-B21
	HPE Aruba Networking 100G QSFP28 LC LR4 10km SMF 2-strand Transceiver	JL310A
	HPE Aruba Networking 100G QSFP28 LC CWDM4 2km SMF Transceiver	R0Z30A
	HPE Aruba Networking 100G QSFP28 LC FR1 SMF 2km Transceiver	R9B63A
	HPE Aruba Networking 100G DR QSFP28 LC 500m SMF Transceiver	S3N88A
	HPE Aruba Networking 100G LR QSFP28 LC 10km SMF Transceiver	S3N89A
	HPE Aruba Networking 100G QSFP28 to QSFP28 3m Direct Attach Copper Cable	JL307A
	HPE Aruba Networking 100G QSFP28 to QSFP28 1m Direct Attach Copper Cable	R0Z25A
	HPE Aruba Networking 100G QSFP28 to QSFP28 5m Direct Attach Copper Cable	R0Z26A
	HPE Aruba Networking 100G QSFP28 to QSFP28 2m Active Optical Cable	JL856A
	HPE Aruba Networking 100G QSFP28 to QSFP28 7m Active Optical Cable	R0Z27A
	HPE Aruba Networking 100G QSFP28 to QSFP28 15m Active Optical Cable	R0Z28A
	HPE Aruba Networking 100G QSFP28 to QSFP28 30m Active Optical Cable	R0Z29A
	HPE Aruba Networking 200G DD-2xQSFP28 100G 3m Active Optic Cable	R9B60A
	HPE Aruba Networking 200G DD-2xQSFP28 100G 7m Active Optic Cable	R9B58A
	HPE Aruba Networking 200G DD-2xQSFP28 100G 15m Active Optic Cable	R9B62A
	HPE Aruba Networking 200G DD-2xQSFP28 100G 30m Active Optic Cable	R9B61A
	HPE Aruba Networking 200G DD-2xQSFP28 100G 50m Active Optic Cable	R9B59A
	HPE QSFP28 to SFP28 Adapter	845970-B21

Configuration Information

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

6 If qty1 of the following QSA28 Adapter(845970-B21) is selected, then increase max QSFP28 Port qty by 1 and 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 SR 300m MMF TAA Transceiver	JL748A
HPE Aruba Networking 10G SFP+ LC LR 10km SMF TAA Transceiver	JL749A
HPE Aruba Networking 25G SFP28 LC SR 100m MMF Transceiver	JL484A
HPE Aruba Networking 25G SFP28 LC eSR 400m MMF Transceiver	JL485A
HPE Aruba Networking 25G SFP28 LC LR 10km SMF Transceiver	JL486A

7 If ANY Option is integrated 0D1 to this Switch, then the Switch requires 0D1. (Box level integration is not allowed)

8 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:

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

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

9 The following Splitter Cables install into this Switch: (Use BTO only when adding to switch)

HPE BladeSystem c-Class QSFP+ to 4x10G SFP+ 15m Active Optical Cable	721076-B21

10 The following Splitter Cables install into this Switch: (Use BTO only when adding to switch)

HPE 100Gb QSFP28 to 4x25Gb SFP28 3m Direct Attach Copper Cable	845416-B21
HPE QSFP28 to 4x25Gb SFP28 7m Active Optical Cable	845420-B21
HPE QSFP28 to 4x25Gb SFP28 15m Active Optical Cable	845424-B21

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

– OCA Only Model Selection Form - HPE Offering > HPE Aruba Networking >

Rack Level Integration CTO Models

Rule #	Description	SKU
1, 2, 3, 4, 5, 6, 7, 8, 9, 10	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU Switch Bundle • Includes 2 Power Supplies with No open PS slots • Includes 3 Fan Trays with No open FT Slots • Includes 1 2-Post Rack Kit • Min=0 \ Max= 24 SFP/SFP+ 1/10G Transceivers • Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter (see rule 6) • 1U - Height	R9W86A
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU SW Bundle PDU • C13 PDU Jumper Cord (NA/MEX/TW/JP)	R9W86A#B2B
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU SW Bundle PDU • C13 PDU Jumper Cord (ROW)	R9W86A#B2C
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU SW Bundle 220v • HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)	R9W86A#B2E
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU SW Bundle NoLoc • No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	R9W86A#AC3
1, 2, 3, 4, 5, 6, 7, 8, 9, 10	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 BF Airflow 3Fan 2AC PSU Switch Bundle • Includes 2 Power Supplies with No open PS slots • Includes 3 Fan Tray with No open FT Slots • Includes 1 2-Post Rack Kit • Min=0 \ Max= 24 SFP/SFP+ 1/10G Transceivers • Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter (see rule 6) • 1U - Height	R9W87A
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 BF Airflow 3Fan 2AC PSU SW Bundle PDU • C13 PDU Jumper Cord (NA/MEX/TW/JP)	R9W87A#B2B
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 BF Airflow 3Fan 2AC PSU SW Bundle PDU • C13 PDU Jumper Cord (ROW)	R9W87A#B2C
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 BF Airflow 3Fan 2AC PSU SW Bundle 220v • HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)	R9W87A#B2E
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 BF Airflow 3Fan 2AC PSU SW Bundle NoLoc	R9W87A#AC3

Configuration Information

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

1, 2, 3, 4, 5, 6, 7, 8, 9, 10 HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU Switch Bundle — R9W88A

- Includes 2 Power Supplies with No open PS slots
- Includes 3 Fan Tray with No open FT Slots
- Includes 1 2-Post Rack Kit
- Min=0 \ Max= 4 SFP/SFP+ 1/10G Transceivers
- Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter

(see rule 6)

- 1U - Height

HPE Aruba Networking CX8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU SW Bundle PDU B — R9W88A#B2

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

HPE Aruba Networking CX8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU SW Bundle PDU C — R9W88A#B2

- C13 PDU Jumper Cord (ROW)

HPE Aruba Networking CX8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU SW Bundle 220v E — R9W88A#B2

- HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)

HPE Aruba Networking CX8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle NoLoc 3 — R9W88A#AC3

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

1, 2, 3, 4, 5, 6, 7, 8, 9, 10 HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU SW Bundle — R9W89A

- Includes 2 Power Supplies with No open PS slots
- Includes 3 Fan Tray with No open FT Slots
- Includes 1 2-Post Rack Kit
- Min=0 \ Max= 4 SFP/SFP+ 1/10G Transceivers
- Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter

(see rule 6)

- 1U - Height

HPE Aruba Networking CX8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU SW Bundle PDU B — R9W89A#B2

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

HPE Aruba Networking CX8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU SW Bundle PDU C — R9W89A#B2

- C13 PDU Jumper Cord (ROW)

HPE Aruba Networking CX8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU SW Bundle 220v E — R9W89A#B2

- HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)

HPE Aruba Networking CX8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle NoLoc 3 — R9W89A#AC3

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

Configuration Information

1, 2, 3, 4, 5, 6, 7, 8, 9	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 FB Airflow 3Fan 2AC PSU Switch Bundle • Includes 2 Power Supplies with No open PS slots • Includes 3 Fan Tray with No open FT Slots • Includes 1 2-Post Rack Kit • Min=0 \ Max= 48 SFP/SFP+ 1/10G Transceivers • Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter (see rule 6) • 1U - Height	R9W90A
	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU SW Bundle PDU • C13 PDU Jumper Cord (NA/MEX/TW/JP)	R9WA90#B2B
	HPE Aruba Networking CX8100 48x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU SW Bundle PDU • C13 PDU Jumper Cord (ROW)	R9W90A#B2C
	HPE Aruba Networking CX8100 48x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU SW Bundle 220v • HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)	R9W90A#B2E
	HPE Aruba Networking CX8100 48x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU SW Bundle NoLoc • No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	R9W90A#AC3
1, 2, 3, 4, 5, 6, 7, 8, 9	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 BF Airflow 3Fan 2AC PSU Switch Bundle • Includes 2 Power Supplies with No open PS slots • Includes 3 Fan Tray with No open FT Slots • Includes 1 2-Post Rack Kit • Min=0 \ Max= 48 SFP/SFP+ 1/10G Transceivers • Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter (see rule 6) • 1U - Height	R9W91A
	HPE Aruba Networking CX8100 48x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU SW Bundle PDU • C13 PDU Jumper Cord (NA/MEX/TW/JP)	R9W91A#B2B
	HPE Aruba Networking CX8100 48x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU SW Bundle PDU • C13 PDU Jumper Cord (ROW)	R9W91A#B2C
	HPE Aruba Networking CX8100 48x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU SW Bundle 220v • HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)	R9W91A#B2E
	HPE Aruba Networking CX8100 48x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU SW Bundle NoLoc • No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	R9W91A#AC3
1, 2, 3, 4, 5, 6, 7, 8, 9	HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU Switch Bundle	R9W92A

Configuration Information

- Includes 2 Power Supplies with No open PS slots
- Includes 3 Fan Tray with No open FT Slots
- Includes 1 2-Post Rack Kit
- Min=0 \ Max= 8 SFP/SFP+ 1/10G Transceivers
- Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter

(see rule 6)

- 1U - Height

HPE Aruba Networking CX8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU SW Bundle PDU — R9W92A#B2B

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

HPE Aruba Networking CX8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU SW Bundle PDU — R9W92A#B2C

- C13 PDU Jumper Cord (ROW)

HPE Aruba Networking CX8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2AC PSU SW Bundle 220v — R9W92A#B2E

- HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)

HPE Aruba Networking CX8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle NoLoc — R9W92A#AC3

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

1, 2, 3, 4, 5, 6, 7, 8, 9 — HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU Switch Bundle — R9W93A

- Includes 2 Power Supplies with No open PS slots
- Includes 3 Fan Tray with No open FT Slots
- Includes 1 2-Post Rack Kit
- Min=0 \ Max= 8 SFP/SFP+ 1/10G Transceivers
- Min=0 \ Max = 4 QSFP+/QSFP28 40/100G Transceiver / QSA28 Adapter

(see rule 6)

- 1U - Height

HPE Aruba Networking CX8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU SW Bundle PDU — R9W93A#B2B

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

HPE Aruba Networking CX8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU SW Bundle PDU — R9W93A#B2C

- C13 PDU Jumper Cord (ROW)

HPE Aruba Networking CX8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2AC PSU SW Bundle 220v — R9W93A#B2E

- HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)

HPE Aruba Networking CX8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle NoLoc — R9W93A#AC3

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

Configuration Rules

Rule #	Description	
1	The following Transceivers install into this Switch (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

Configuration Information

	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 Switch(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 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 SR 300m MMF TAA Transceiver	JL748A
	HPE Aruba Networking 10G SFP+ LC LR 10km SMF TAA Transceiver	JL749A
	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 Switch (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 Aruba Networking 40G QSFP+ to QSFP+ 7m Active Optical Cable	R0Z22A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 15m Active Optical Cable	R0Z23A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 30m Active Optical Cable	R0Z24A
	HPE QSFP28 to SFP28 Adapter	845970-B21
4	The following Transceivers install into this Switch: (Use 0D1 or B01 quoted to switch if switch is CTO) - if applicable:	
	HPE Aruba Networking 100G QSFP28 MPO SR4 100m 12-fiber MPO OM3 MMF Transceiver	JL309A
	HPE 100Gb QSFP28 Bidirectional Transceiver	845972-B21
	HPE Aruba Networking 100G QSFP28 LC LR4 10km SMF 2-strand Transceiver	JL310A
	HPE Aruba Networking 100G QSFP28 LC CWDM4 2km SMF Transceiver	R0Z30A
	HPE Aruba Networking 100G QSFP28 LC FR1 SMF 2km Transceiver	R9B63A
	HPE Aruba Networking 100G DR QSFP28 LC 500m SMF Transceiver	S3N88A
	HPE Aruba Networking 100G LR QSFP28 LC 10km SMF Transceiver	S3N89A
	HPE Aruba Networking 100G QSFP28 to QSFP28 3m Direct Attach Copper Cable	JL307A
	HPE Aruba Networking 100G QSFP28 to QSFP28 1m Direct Attach Copper Cable	R0Z25A
	HPE Aruba Networking 100G QSFP28 to QSFP28 5m Direct Attach Copper Cable	R0Z26A
	HPE Aruba Networking 100G QSFP28 to QSFP28 2m Active Optical Cable	JL856A
	HPE Aruba Networking 100G QSFP28 to QSFP28 7m Active Optical Cable	R0Z27A
	HPE Aruba Networking 100G QSFP28 to QSFP28 15m Active Optical Cable	R0Z28A
	HPE Aruba Networking 100G QSFP28 to QSFP28 30m Active Optical Cable	R0Z29A
	HPE Aruba Networking 200G DD-2xQSFP28 100G 3m Active Optic Cable	R9B60A

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	HPE Aruba Networking 200G DD-2xQSFP28 100G 7m Active Optic Cable	R9B58A
	HPE Aruba Networking 200G DD-2xQSFP28 100G 15m Active Optic Cable	R9B62A
	HPE Aruba Networking 200G DD-2xQSFP28 100G 30m Active Optic Cable	R9B61A
	HPE Aruba Networking 200G DD-2xQSFP28 100G 50m Active Optic Cable	R9B59A
	HPE QSFP28 to SFP28 Adapter	845970-B21
5	Localization required on orders without #B2B, #B2C, #B2E or #AC3 options.	
6	If qty1 of the following QSA28 Adapter(845970-B21) is selected, then increase max SFP+ QSFP28 Port qty by 1 and allow user selection of the following SFP Transceivers. Refer to qty and port restrictions for individual Switch in the "Additional Info" sections: (Use #0D1 for this XCVR Adapter since switch is factory racked)	
	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 SR 300m MMF TAA Transceiver	JL748A
	HPE Aruba Networking 10G SFP+ LC LR 10km SMF TAA Transceiver	JL749A
	HPE Aruba Networking 25G SFP28 LC SR 100m MMF Transceiver	JL484A
	HPE Aruba Networking 25G SFP28 LC eSR 400m MMF Transceiver	JL485A
	HPE Aruba Networking 25G SFP28 LC LR 10km SMF Transceiver	JL486A
7	If the CTO Switch Chassis needs to be racked, Then the CTO Base Model needs to integrate (with #0D1) to the HPE Network Rack.	
8	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:	
	HPE 2.0m C13 to C14 PDU India Power Cord	JL671A
	HPE 2.5m C15 to C14 PDU India Power Cord	JL672A
	HPE 2.5m C19 to C20 PDU India Power Cord	JL673A
	• For Factory Integration of Power Cord, please add "#0D1" to the Power Cord Sku suffix. (Ex. JL671A#0D1)	
9	The following Splitter Cables install into this Switch: (Use 0D1 or B01 quoted to switch if switch is CTO) - if applicable:	
	HPE BladeSystem c-Class QSFP+ to 4x10G SFP+ 15m Active Optical Cable	721076-B21
10	The following Splitter Cables install into this Switch: (Use 0D1 or B01 quoted to switch if switch is CTO) - if applicable:	
	HPE 100Gb QSFP28 to 4x25Gb SFP28 3m Direct Attach Copper Cable	845416-B21
	HPE QSFP28 to 4x25Gb SFP28 7m Active Optical Cable	845420-B21
	HPE QSFP28 to 4x25Gb SFP28 15m Active Optical Cable	845424-B21

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

Configuration Information

– OCA Display **Notes:** Locking Power Cord (J9955A) L6-20P is available through the OCA Accessories tab

Transceivers

SFP Transceivers

Rule #	Description	SKU
	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

SFP+ Transceivers

Rule #	Description	SKU
	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 SR 300m MMF TAA Transceiver	JL748A
	HPE Aruba Networking 10G SFP+ LC LR 10km SMF TAA Transceiver	JL749A
	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

SFP28 Transceivers

Rule #	Description	SKU
	HPE Aruba Networking 25G SFP28 LC SR 100m MMF Transceiver	JL484A
	HPE Aruba Networking 25G SFP28 LC eSR 400m MMF Transceiver	JL485A
	HPE Aruba Networking 25G SFP28 LC LR 10km SMF Transceiver	JL486A

QSFP+ Transceivers

Rule #	Description	SKU
	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 Aruba Networking 40G QSFP+ to QSFP+ 7m Active Optical Cable	R0Z22A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 15m Active Optical Cable	R0Z23A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 30m Active Optical Cable	R0Z24A
	HPE BladeSystem c-Class QSFP+ to 4x10G SFP+ 15m Active Optical Cable	721076-B21
Notes:	QSFP+ side can only be used in the 24 Port Models; SFP+ side can be used in all models	

QSFP28 Transceivers

Rule #	Description	SKU

Configuration Information

	HPE Aruba Networking 100G QSFP28 MPO SR4 100m 12-fiber MPO OM3 MMF Transceiver	JL309A
	HPE 100Gb QSFP28 Bidirectional Transceiver	845972-B21
	HPE Aruba Networking 100G QSFP28 LC LR4 10km SMF 2-strand Transceiver	JL310A
	HPE Aruba Networking 100G QSFP28 LC CWDM4 2km SMF Transceiver	R0Z30A
3	HPE Aruba Networking 100G QSFP28 LC FR1 SMF 2km Transceiver	R9B63A
	HPE Aruba Networking 100G DR QSFP28 LC 500m SMF Transceiver	S3N88A
	HPE Aruba Networking 100G LR QSFP28 LC 10km SMF Transceiver	S3N89A
	HPE Aruba Networking 100G QSFP28 to QSFP28 3m Direct Attach Copper Cable	JL307A
	HPE Aruba Networking 100G QSFP28 to QSFP28 1m Direct Attach Copper Cable	R0Z25A
	HPE Aruba Networking 100G QSFP28 to QSFP28 5m Direct Attach Copper Cable	R0Z26A
	HPE 100Gb QSFP28 to 4x25Gb SFP28 3m Direct Attach Copper Cable	845416-B21
Notes:	QSFP28 side can only be used in the 24 Port Models; SFP28 cannot be used in any model	
	HPE Aruba Networking 100G QSFP28 to QSFP28 2m Active Optical Cable	JL856A
	HPE Aruba Networking 100G QSFP28 to QSFP28 7m Active Optical Cable	R0Z27A
	HPE Aruba Networking 100G QSFP28 to QSFP28 15m Active Optical Cable	R0Z28A
	HPE Aruba Networking 100G QSFP28 to QSFP28 30m Active Optical Cable	R0Z29A
	HPE QSFP28 to 4x25Gb SFP28 7m Active Optical Cable • QSFP28 side can only be used in the 24 Port Models; SFP28 cannot be used in any model	845420-B21
	HPE QSFP28 to 4x25Gb SFP28 15m Active Optical Cable • QSFP28 side can only be used in the 24 Port Models; SFP28 cannot be used in any model	845424-B21
2	HPE Aruba Networking 200G DD-2xQSFP28 100G 3m Active Optic Cable • QSFP28 side can be used in all models, QSFP-DD side cannot be used in any model	R9B60A
2	HPE Aruba Networking 200G DD-2xQSFP28 100G 7m Active Optic Cable • QSFP28 side can be used in all models, QSFP-DD side cannot be used in any model	R9B58A
2	HPE Aruba Networking 200G DD-2xQSFP28 100G 15m Active Optic Cable • QSFP28 side can be used in all models, QSFP-DD side cannot be used in any model	R9B62A
2	HPE Aruba Networking 200G DD-2xQSFP28 100G 30m Active Optic Cable • QSFP28 side can be used in all models, QSFP-DD side cannot be used in any model	R9B61A
2	HPE Aruba Networking 200G DD-2xQSFP28 100G 50m Active Optic Cable • QSFP28 side can be used in all models, QSFP-DD side cannot be used in any model	R9B59A

QSA28 Adapter

Rule #	Description	SKU
1	HPE QSFP28 to SFP28 Adapter	845970-B21

Configuration Rules

Rule #	Description
1	If selecting the 845970-B21 - QSFP28 to SFP28 Adapter, then see HPE Aruba Networking Transceiver Guide for details.
2	ONLY the 2x QSFP28 side of this AOC cable can be inserted into the 8100. This 200G AOC cable can only be connected to the 8100 using the 2xQSFP28 sides of the cable. It typically connects the 1st end to the first switch and the 2nd end to a second switch

Configuration Information

3	The following B2F Switches are limited to qty 2 of R9B63A - HPE Aruba Networking 100G QSFP28 LC FR1 SMF 2km Transceiver: R9W87A, R9W89A, R9W91A, R9W93A. Warning - For B2F airflow configuration R9B63A 100G XCVR is restricted to the LOWER QSFP ports. Max 2

Rack Mount Kits

Rule #	Description	SKU
	HPE Aruba Networking X414 1U Universal 4-post Rack Mount Kit	J9583B

Notes:

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

– 1 2-Post Rack Mount Kit(JL602A) is included with the Switch Bundle

Air Duct Kit

Rule #	Description	SKU
2, 3	HPE Aruba Networking X544 Universal 4-post Duct Kit (Must order 4-post rack mount kit) Only for Power to Port Bundles	JL716A

Notes:

– For optimal performance, it is recommended that the user select the Duct Kit for Power to Port Switch Bundles

– If this Air Duct Kit is selected then the following 4 Post Rack Mount kit must be selected:
J9583B - HPE Aruba Networking X414 1U Universal 4-post Rack Mount Kit

India PDU Cable

Rule #	Description	SKU
1	HPE 2.0m C13 to C14 PDU India Power Cord • C13 India PDU Cable for Factory Racked Systems Only	JL671A

Configuration Rules

Rule #	Description
1	This cable is intended for India use only. Typically power cord is ordered when power supply option #AC3 is selected.

USB Console Cables

Rule #	Description	SKU
	HPE Aruba Networking X2C2 RJ45 to DB9 Console Cable	JL448A
	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

Spare Items

Rule #	Description	SKU
	HPE Aruba Networking CX 8100 24x10G SFP+ 4x40/100G QSFP28 Switch • This is a Spare only • Must be used with 2 Power Units (JL600A, JL712A) • Must be used with 3 Fan Tray (JL714A, JL715A) • 2 Post Rack Kit included, must use 4 Post Rack Mount Kit(J9583B) with HPE Racks • 1U - Height	R9W94A

Configuration Information

	HPE Aruba Networking CX 8100 24x10G Base-T 4x10G SFP+ 4x40/100G QSFP28 Switch • This is a Spare only • Must be used with 2 Power Units (JL600A, JL712A) • Must be used with 3 Fan Tray (JL714A, JL715A) • 2 Post Rack Kit included, must use 4 Post Rack Mount Kit(J9583B) with HPE Racks • 1U - Height	R9W95A
	HPE Aruba Networking CX 8100 48x10G SFP+ 4x40/100G QSFP28 Switch • This is a Spare only • Must be used with 2 Power Units (JL600A, JL712A) • Must be used with 3 Fan Tray (JL714A, JL715A) • 2 Post Rack Kit included, must use 4 Post Rack Mount Kit(J9583B) with HPE Racks • 1U - Height	R9W96A
	HPE Aruba Networking CX 8100 40x10G Base-T 8x10G SFP+ 4x40/100G QSFP28 Switch • This is a Spare only • Must be used with 2 Power Units (JL600A, JL712A) • Must be used with 3 Fan Tray (JL714A, JL715A) • 2 Post Rack Kit included, must use 4 Post Rack Mount Kit(J9583B) with HPE Racks • 1U - Height	R9W97A
1, 2	HPE Aruba Networking X391 550W Port-to-Power AC Power Supply • includes 1 x c13, 550w	JL600A
	HPE Aruba Networking X391 550W Port-to-Power AC Power Supply PDU • C13 PDU Jumper Cord (NA/MEX/TW/JP) (JL697A)	JL600A#B2B
	HPE Aruba Networking X391 550W Port-to-Power AC Power Supply PDU • C13 PDU Jumper Cord (ROW) (JL697A)	JL600A#B2C
	HPE Aruba Networking X391 550W Port-to-Power AC Power Supply 220v • HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)	JL600A#B2E
	HPE Aruba Networking X391 550W Port-to-Power AC Power Supply NoLoc • No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	JL600A#AC3
1, 2	HPE Aruba Networking X391 550W Power-to-Port AC Power Supply • includes 1 x c13, 550w	JL712A
	HPE Aruba Networking X391 550W Power-to-Port AC Power Supply PDU • C13 PDU Jumper Cord (NA/MEX/TW/JP) (JL697A)	JL712A#B2B
	HPE Aruba Networking X391 550W Power-to-Port AC Power Supply PDU • C13 PDU Jumper Cord (ROW) (JL697A)	JL712A#B2C
	HPE Aruba Networking X391 550W Power-to-Port AC Power Supply 220v • HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)	JL712A#B2E
	HPE Aruba Networking X391 550W Power-to-Port AC Power Supply NoLoc • No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)	JL712A#AC3

Configuration Information

	HPE Aruba Networking X741 Port-to-Power Fan	JL714A
	HPE Aruba Networking X742 Power-to-Port Fan	JL715A
	HPE Aruba Networking X412 1U Universal 2-post Rack Mount Kit	JL602A
	HPE Aruba Networking X414 1U Universal 4-post Rack Mount Kit	J9583B

Configuration Rules

Rule #	Description
1	Localization required on orders without #B2B, #B2C, #B2E or #AC3 options.
2	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:

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

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

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)
  - o No Localized Power Cord Selected - #AC3 Option

Notes:
- OCA Display **Notes:** Locking Power Cord (J9955A) L6-20P is available in the Accessories tab

Notes:
- OCA Display **Notes:** 2 Power Supply is included with the Switch Bundle

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Software

HPE Aruba Networking OS-CX Software

CX Advanced Software Licenses

Rule #	Description	SKU
	HPE Aruba Networking CX Software 8/9xxx Switch Advanced 1-year Subscription E-STU	S0T87AAE
	HPE Aruba Networking CX Software 8/9xxx Switch Advanced 3-year Subscription E-STU	S0T88AAE
	HPE Aruba Networking CX Software 8/9xxx Switch Advanced 5-year Subscription E-STU	S0T89AAE
	HPE Aruba Networking CX Software 8/9xxx Switch Advanced 7-year Subscription E-STU	S0T90AAE
	HPE Aruba Networking CX Software 8/9xxx Switch Advanced 10-year Subscription E-STU	S0T86AAE

HPE Aruba Networking Central

Cloud Services / 8XXX Switch Foundation Subscriptions

Configuration Information

HPE Aruba Networking Central Switch Class-5 Foundation 1 year Subscription E-STU	R3K03AAE
HPE Aruba Networking Central Switch Class-5 Foundation 3 year Subscription E-STU	R3K04AAE
HPE Aruba Networking Central Switch Class-5 Foundation 5 year Subscription E-STU	R3K05AAE
HPE Aruba Networking Central Switch Class-5 Foundation 7 year Subscription E-STU	R3K06AAE
HPE Aruba Networking Central Switch Class-5 Foundation 10 year Subscription E-STU	R3K07AAE

Notes: Add the Central Cloud Skus to the HPE Aruba Networking Catalog as Standalone: HPE Aruba Networking > Network Management > Central > Cloud Services

On-Prem Services / 8XXX Switch Foundation Subscriptions

HPE Aruba Networking Central on Prem Switch Class-5 Foundation 1 year Subscription E-STU	R6U88AAE
HPE Aruba Networking Central on Prem Switch Class-5 Foundation 3 year Subscription E-STU	R6U89AAE
HPE Aruba Networking Central on Prem Switch Class-5 Foundation 5 year Subscription E-STU	R6U90AAE
HPE Aruba Networking Central on Prem Switch Class-5 Foundation 7 year Subscription E-STU	R6U91AAE
HPE Aruba Networking Central on Prem Switch Class-5 Foundation 10 year Subscription E-STU	R6U92AAE

Notes: Add the Central On-Prem Skus to the HPE Aruba Networking Catalog as Standalone: HPE Aruba Networking > Network Management > Central > On-Prem Services

On-Prem Services / 8XXX/9XXX/10XXX Switch Advanced Subscriptions

HPE Aruba Networking Central On-Premises Switch Class5 Advanced 7-year Subscription E-STU	R6V11AAE
HPE Aruba Networking Central On-Premises Switch Class5 Advanced 5-year Subscription E-STU	R6V10AAE
HPE Aruba Networking Central On-Premises Switch Class5 Advanced 3-year Subscription E-STU	R6V09AAE
HPE Aruba Networking Central On-Premises Switch Class5 Advanced 1-year Subscription E-STU	R6V08AAE
HPE Aruba Networking Central On-Premises Switch Class5 Advanced 10-year Subscription E-STU	R6V12AAE

Notes: 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 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 – For IRIS reference only. No action required for OCX and Clic	
	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

Specifications		HPE Aruba Networking CX 8100 24x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU Switch Bundle R9W87A (Back to Front)	HPE Aruba Networking CX 8100 24x10GBase-T 4x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU Switch Bundle R9W89A (Back to Front)	HPE Aruba Networking CX 8100 48x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU Switch Bundle R9W91A (Back to Front)	HPE Aruba Networking CX 8100 40x10GBase-T 8x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU Switch Bundle R9W93A (Back to Front)
I/O ports and slots		24 ports of 1GbE/10GbE (SFP/SFP+) 4 ports of 40GbE/100GbE (QSFP+/QSFP28)	24 ports of 100M/1/2.5/5/10 GbE 4 ports of 1/GbE/10GbE (SFP/SFP+) 4 ports of 40GbE/100GbE (QSFP+/QSFP28)	48 ports of 1GbE/10GbE (SFP/SFP+) 4 ports of 40GbE/100GbE (QSFP+/QSFP28)	40 ports of 100M/1/2.5/5/10 GbE 8 ports of 1/GbE/10GbE (SFP/SFP+) 4 ports of 40GbE/100GbE (QSFP+/QSFP28
Additional ports and slots	**Power Supplies**	2 field-replaceable and hot-swappable power supplies[1]			
	Fans	3 field-replaceable and hot-swappable fans[2]			
	Management	RJ-45 serial and USB-C console; RJ-45 Ethernet port; USB-Type A			
	Notes:	– [1]Bundles include the 2 power supplies (2xJL712A in R9W87A, R9W89A, R9W91A, & R9W93A) – [2]Bundles include the 3 fans (3x JL715A in R9W87A, R9W89A, R9W91A, & R9W93A)			
Physical characteristics	**Physical Dimensions (HxWxD)**	1.73in x 17.4in x 16.0in (44.0mm x 442.5mm x 406.4mm)			
	Full configuration weight	18.0 lbs (8.16 kg)	18.3 lbs (8.30 kg)	18.5 lbs (8.39 kg)	18.9 lbs (8.57 kg)
Memory and Processor	**CPU**	1.8 GHz 4-core 64-bit			
	Memory, Drive and Flash	16GB RAM, 32GB Flash/Storage			
	Packet Buffer	32MB			
Performance	**Switching Capacity**	1.28 Tbps/952 Mpps	1.36 Tbps/1,011 Mpps	1.76 Tbps/1,309 Mpps	1.76 Tbps/1,309 Mpps
	MAC Address Table Size	147,456			
	IPv4 Host Table	65,536			
	IPv6 Host Table	65,536			
	IPv4 Unicast Routes	24,576			
	IPv6 Unicast Routes	12,288			

	Maximum Number of Access Control List (ACL) Entries Ingress	IPv4 16,384, IPv6 4,096 , MAC 16,384

Performance	**Maximum Number of Access Control List (ACL) Entries Egress**	IPv4 2,048 , IPv6 512, MAC 2,048			
	Maximum VLANs	1,024			
	IGMP Groups	4,096			
	MLD Groups	4,096			
	IPv4 Multicast Routes	4,096			
	IPv6 Multicast Routes	4,096			
Environment	**Operating Temperature**[3]	32°F to 104°F (0°C to 40°C) up to 5000 ft			
	Operating Relative Humidity	15% to 95% relative humidity at 104°F (40°C), non-condensing			
	Non-Operating Temperature	-40°C to 70°C (-40°F to 158°F) up to 4.6km (15,000 ft.)			
	Non-Operating/ Storage Relative Humidity	15% to 95% at 149°F (65°C) non-condensing			
	Maximum Operating Altitude	Up to 10,000ft (3.048Km)			
	Maximum Non-Operating Altitude	Up to 15,000ft (4.6Km)			
	Primary Airflow	Back to Front			
	BTU/hr*	1275	1364	1535	1705
	Acoustics[4]	LWAd = 5.9 Bel LpAm (Bystander) = 41.2 dB	LWAd = 6.6 Bel LpAm (Bystander) = 47.7 dB	LWAd = 6.3 Bel LpAm (Bystander) = 44.9 dB	LWAd = 6.8 Bel LpAm (Bystander) = 49.3 dB
	Notes:	– [3]Derate -1°C for every 1000 ft from 5000 ft to 10000 ft regardless of airflow direction – [4]Acoustics measured in 23°C semi-anechoic chamber with a loading of 50% traffic on all ports. Measured in accordance with ECMA 74.. Declared in accordance with ECMA 109. Values presented are the Declared A-Weighted Sound Power Level (LWAd) and the mean			

Technical Specifications

		Bystander A-Weighted Sound Pressure Level (LpAm). – *BTU/hr is derived from the max power			
Electrical Characteristics	**Frequency**	47-63 Hz			
	AC Voltage Current	100-127V - 7.1 A for 100-127VAC 200-240V - 3.4A for 200-240VAC			
	Power Consumption	120W Idle Power / 375W Max Power	120W Idle Power / 400W Max Power	120W Idle Power / 450W Max Power	120 W Idle Power / 500W Max Power
Regulatory	**Compliance**	Products comply with CE Markings according to directives 2014/30/EU (EMC) and 2014/35/EU (Safety)			
	RoHS	EN 63000:2018			
Safety	**EU**	EN62368-1, Ed.2:2014 EN62368-1, Ed.3:2020			
	North America	UL62368-1, CSA 22.2 No 62368-1			
	Worldwide	IEC 62368-1:2014 IEC 62368-1:2018			

EMC	EN55032:2015/CISPR 32, Class A FCC CFR 47 Part 15:2018, Class A ICES-003, Class A CNS 13438 Class A KN32 Class A VCCI Class A AS/NZS CISPR 32 Class A EN55035:2017/CISPR 35 EN/IEC 61000-4-2 EN/IEC 61000-4-3 EN/IEC 61000-4-4 EN/IEC 61000-4-5 EN/IEC 61000-4-6 EN/IEC 61000-4-8 EN/IEC 61000-4-11 EN/IEC 61000-3-2:2019 EN/IEC 61000-3-3:2013
Laser	EN60825-1:2014 / IEC 60825-1: 2014 Class 1 Class 1 Laser Products / Laser Klasse 1

Technical Specifications

Mounting	Mounts in an EIA standard 19-inch rack or other equipment cabinet; horizontal surface mounting only; 2-post and 4-post mounting options available[5].
	Notes: [5]Rack mounting kit must be ordered separately

Specifications		**HPE Aruba Networking CX 8100 24x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU Switch Bundle** R9W86A (Front to back)	**HPE Aruba Networking CX 8100 24x10GBase-T 4x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU Switch Bundle** R9W88A (Front to back)	**HPE Aruba Networking CX 8100 48x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU Switch Bundle** R9W90A (Front to back)	**HPE Aruba Networking CX 8100 40x10GBase-T 8x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU Switch Bundle** R9W92A (Front to back)
I/O ports and slots		24 ports of 1GbE/10GbE (SFP/SFP+) 4 ports of 40GbE/100GbE (QSFP+/QSFP28)	24 ports of 100M/1/2.5/5/10 GbE 4 ports of 1/GbE/10GbE (SFP/SFP+) 4 ports of 40GbE/100GbE (QSFP+/QSFP28)	48 ports of 1GbE/10GbE (SFP/SFP+) 4 ports of 40GbE/100GbE (QSFP+/QSFP28)	40 ports of 100M/1/2.5/5/10 GbE 8 ports of 1/GbE/10GbE (SFP/SFP+) 4 ports of 40GbE/100GbE (QSFP+/QSFP28
Additional ports and slots	**Power Supplies**	2 field-replaceable and hot-swappable power supplies[6]			
	Fans	3 field-replaceable and hot-swappable fans[7]			
	Management	RJ-45 serial and USB-C console; RJ-45 Ethernet port; USB-Type A			
	Notes:	– [6]Bundles include the 2 power supplies (2xJL712A in R9W87A, R9W89A, R9W91A, & R9W93A) – [7]Bundles include the 3 fans (3x JL715A in R9W87A, R9W89A, R9W91A, & R9W93A)			
Physical characteristics	**Physical Dimensions (HxWxD)**	1.73in x 17.4in x 16.0in (44.0mm x 442.5mm x 406.4)			
	Full configuration weight	18.0 lbs (8.16 kg)	18.3 lbs (8.30 kg)	18.5 lbs (8.39 kg)	18.9 lbs (8.57 kg)
Memory and Processor	**CPU**	1.8 GHz 4-core 64-bit			
	Memory, Drive and Flash	16GB RAM, 32GB Flash/Storage			
	Packet Buffer	32MB			
Performance	**Switching Capacity**	1.28 Tbps/952 Mpps	1.36 Tbps/1,011 Mpps	1.76 Tbps/1,309 Mpps	1.76 Tbps/1,309 Mpps

	MAC Address Table Size	147,456			
	IPv4 Host Table	65,536			
	IPv6 Host Table	65,536			
	IPv4 Unicast Routes	24,576			
	IPv6 Unicast Routes	12,288			
	Maximum Number of Access Control List (ACL) Entries Ingress	IPv4 16,384, IPv6 4,096 , MAC 16,384			
	Maximum Number of Access Control List (ACL) Entries Egress	IPv4 2,048 , IPv6 512, MAC 2,048			
	Maximum VLANs	1,024			
	IGMP Groups	4,096			
	MLD Groups	4,096			
	IPv4 Multicast Routes	4,096			
	IPv6 Multicast Routes	4,096			
Environment	**Operating Temperature**[8]	32°F to 113°F (0°C to 45°C) up to 5000 ft			
	Operating Relative Humidity	15% to 95% relative humidity at 113°F (45°C), non-condensing			
	Non-Operating Temperature	-40°C to 70°C (-40°F to 158°F) up to 4.6km (15,000 ft.)			
	Non-Operating/ Storage Relative Humidity	15% to 95% at 149°F (65°C) non-condensing			
	Maximum Operating Altitude	Up to 10,000ft (3.048Km)			
	Maximum Non-Operating Altitude	Up to 15,000ft (4.6Km)			
	Primary Airflow	Front-to-Back			
	BTU/hr*	1275	1364	1535	1705

Technical Specifications

	Acoustics[9]	LWAd = 6.3 Bel LpAm (Bystander) = 45.8 dB	LWAd = 6.6 Bel LpAm (Bystander) = 48.0 dB	LWAd = 6.4 Bel LpAm (Bystander) = 46.6 dB	LWAd = 6.6 Bel LpAm (Bystander) = 47.9 dB
	Notes:	– [8]Derate -1°C for every 1000 ft from 5000 ft to 10000 ft regardless of airflow direction – [9]Acoustics measured in 23°C semi-anechoic chamber with a loading of 50% traffic on all ports. Measured in accordance with ECMA 74.. Declared in accordance with ECMA 109. Values presented are the Declared A-Weighted Sound Power Level (LWAd) and the mean Bystander A-Weighted Sound Pressure Level (LpAm). – *BTU/hr is derived from the max power			
Electrical Characteristics	**Frequency**	47-63 Hz			
	AC Voltage Current	100-127V 7.1A for 100-127VAC 200-240V 3.4A for 200-240VAC			
	Power Consumption	120W Idle Power / 375W Max Power	120W Idle Power / 400W Max Power	120W Idle Power / 450W Max Power	120 W Idle Power / 500W Max Power
Regulatory	**Compliance**	Products comply with CE Markings according to directives 2014/30/EU (EMC) and 2014/35/EU (Safety)			
	RoHS	EN 63000:2018			
Safety	**EU**	EN62368-1, Ed.2:2014 EN62368-1, Ed. 3:2020			
	North America	UL62368-1, CSA 22.2 No 62368-1			
	Worldwide	IEC 62368-1:2014 IEC 62368-1: 2018			

EMC	EN55032:2015/CISPR 32, Class A FCC CFR 47 Part 15:2018, Class A ICES-003, Class A CNS 13438 Class A KN32 Class A VCCI Class A AS/NZS CISPR 32 Class A EN55035:2017/CISPR 35 EN/IEC 61000-4-2 EN/IEC 61000-4-3 EN/IEC 61000-4-4 EN/IEC 61000-4-5 EN/IEC 61000-4-6

	EN/IEC 61000-4-8 EN/IEC 61000-4-11 EN/IEC 61000-3-2:2019 EN/IEC 61000-3-3:2013
Laser	EN60825-1:2014 / IEC 60825-1: 2014 Class 1 Class 1 Laser Products / Laser Klasse 1
Mounting	Mounts in an EIA standard 19-inch rack or other equipment cabinet; horizontal surface mounting only; 2-post and 4-post mounting options available[10]. **Notes:** [10]Rack mounting kit must be ordered separately

Standards and protocols

The following standards and protocols are supported

- CPU DoS Protection
- IEEE 802.1AB-2009
- IEEE 802.1ak-2007
- IEEE 802.1AX-2008 Link Aggregation
- IEEE 802.1p Priority
- IEEE 802.1p Traffic Class Expediting and Dynamic Multicast Filtering
- IEEE 802.1Q VLANs
- IEEE 802.1s Multiple Spanning Trees
- IEEE 802.1t-2001
- IEEE 802.1v VLAN classification by Protocol and Port
- IEEE 802.1w Rapid Reconfiguration of Spanning Tree
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.3ae 10-Gigabit Ethernet
- IEEE 802.3an 10-GBASE-T-2006
- IEEE 802.3by 25 Gigabit Ethernet
- IEEE 802.3bz 2.5GBASE-T and 5GBASE-T
- IEEE 802.3cc 25 Gigabit Ethernet
- IEEE 802.3ba 40/100-Gigabit Ethernet
- IEEE 802.3cd 50-Gigabit Ethernet
- IEEE 802.3bj-100 Gigabit Ethernet
- IEEE 802.3x Flow Control
- IEEE 802.3z 1000BASE-X
- IEEE 802.3z Gigabit Ethernet
- RFC 1215 Convention for defining traps for use with the SNMP
- RFC 1256 ICMP Router Discovery Messages
- RFC 1350 TFTP Protocol (revision 2)
- RFC 1393 Traceroute Using an IP Option
- RFC 1403 BGP OSPF Interaction
- RFC 1519 CIDR
- RFC 1583 OSPF Version 2
- RFC 1591 Domain Name System Structure and Delegation
- RFC 1657 Definitions of Managed Objects for BGP-4 using SMIv2

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- RFC 1757 Remote Network Monitoring Management Information Base
- RFC 1772 Application of the Border Gateway Protocol in the Internet
- RFC 1812 Requirements for IP Version 4 Router
- RFC 1918 Address Allocation for Private 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 2131 DHCP
- RFC 2131 DHCP Options and BOOTP Vendor Extensions
- RFC 2236 IGMP
- RFC 2328 OSPF Version 2
- RFC 2375 IPv6 Multicast Address Assignments
- 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 2439 BGP Route Flap Damping
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 2464 Transmission of IPv6 over Ethernet Networks
- RFC 2545 Use of BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing
- RFC 2576 Coexistence between SNMP V1, V2, V3)
- RFC 2710 Multicast Listener Discovery (MLD) for IPv6
- RFC 2711 IPv6 Router Alert 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 3019 MLDv1 MIB
- RFC 3056 Connection of IPv6 Domains via IPv4 Clouds
- RFC 3065 Autonomous System Confederation for BGP
- RFC 3101 OSPF Not-so-stubby-area option
- RFC 3137 OSPF Stub Router Advertisement
- RFC 3176 InMon Corporation's sFlow: A Method for Monitoring Traffic in Switched and Routed Networks
- RFC 3376 IGMPv3
- RFC 3416 (SNMP Protocol Operations v2)
- RFC 3417 (SNMP Transport Mappings)
- RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)
- RFC 3484 Default Address Selection for IPv6
- RFC 3509 Alternative Implementations of OSPF Area Border Routers
- RFC 3623 Graceful OSPF Restart
- RFC 3768 VRRP
- RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6
- RFC 3973 PIM Dense Mode
- RFC 4022 MIB for TCP
- RFC 4113 MIB for UDP
- RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers
- RFC 4251 The Secure Shell (SSH) Protocol
- RFC 4252 SSHv6 Authentication
- RFC 4253 SSHv6 Transport Layer
- RFC 4254 SSHv6 Connection
- RFC 4271 A Border Gateway Protocol 4 (BGP-4)
- RFC 4273 Definitions of Managed Objects for BGP-4

Technical Specifications

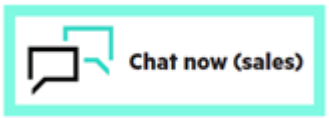
- RFC 4291 IP Version 6 Addressing Architecture
- RFC 4292 IP Forwarding Table MIB
- RFC 4293 Management Information Base for the Internet Protocol (IP)
- RFC 4360 BGP Extended Communities Attribute
- RFC 4419 Key Exchange for SSH
- RFC 4443 ICMPv6
- RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP)
- RFC 4486 Subcodes for BGP Cease Notification Message
- RFC 4541 IGMP & MLD Snooping Switch
- RFC 4552 Authentication/Confidentiality for OSPFv3
- RFC 4601 PIM Sparse Mode
- RFC 4724 Graceful Restart Mechanism for BGP
- RFC 4750 OSPFv2 MIB [partial support no Set MIB]
- RFC 4760 Multiprotocol Extensions for BGP-4
- RFC 4861 IPv6 Neighbor Discovery
- RFC 4862 IPv6 Stateless Address Auto-configuration
- RFC 4940 IANA Considerations for OSPF
- RFC 5065 Autonomous System Confederation for BGP
- RFC 5095 Deprecation of Type 0 Routing Headers in IPv6
- RFC 5187 OSPFv3 Graceful Restart
- RFC 5340 OSPFv3 for IPv6
- RFC 53492 Capabilities Advertisement with BGP-4
- RFC 5424 Syslog Protocol
- RFC 5519 Multicast Group Membership Discovery MIB (MLDv2 only)
- RFC 5701 IPv6 Address Specific BGP Extended Community Attribute
- RFC 5722 Handling of Overlapping IPv6 Fragments
- RFC 5798 VRRP (exclude Accept Mode and sub-sec timer)
- RFC 5880 Bidirectional Forwarding Detection
- RFC 6987 OSPF Stub Router Advertisement
- RFC 7047 The Open vSwitch Database Management Protocol
- RFC 7059 A Comparison of IPv6-overoIPv4 Tunnel Mechanisms
- RFC 7313 Enhanced Route Refresh Capability for BGP-4
- RFC 768 User Datagram Protocol
- RFC 783 TFTP Protocol (revision 2)
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 813 Window and Acknowledgement Strategy in TCP
- RFC 815 IP datagram reassembly algorithms
- RFC 8201 Path MTU Discovery for IP version 6
- RFC 826 ARP
- 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

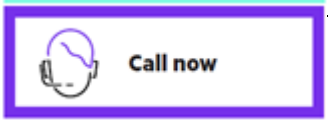
Summary of Changes

Date	Version History	Action	Description of Change
18-Nov-2024	Version 8	Changed	Standard Features and Configuration Information sections were updated
03-Sep-2024	Version 7	Changed	Configuration Information section was updated
06-Aug-2024	Version 6	Changed	Configuration Information section was updated.
03-Jun-2024	Version 5	Changed	Configuration Information section was updated.
04-Dec-2023	Version 4	Changed	Obsolete SKU was removed. Configuration Information section was updated. Series name was updated.
20-Jun-2023	Version 3	Changed	Standard Features and Technical Specifications sections were updated.
15-May-2023	Version 2	Changed	Configuration Information section was updated.
01-May-2023	Version 1	New	New QuickSpecs

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