

### Overview

#### HPE Aruba Networking CX 10000 Switch Series with AMD Pensando

Designed with the next generation of large-scale data centers in mind, HPE Aruba Networking CX 10000 Switch Series with AMD Pensando delivers a flexible and innovative approach to address the security compliance, performance, agility, and scalability demands of the highly distributed, hybrid, multi-cloud application era.

In conjunction with Pensando, HPE Aruba Networking has defined a new market category of data center switches. The HPE Aruba Networking CX 10000 Switch Series with AMD Pensando combines the best-of-breed network operating system, HPE Aruba Networking AOS-CX, for data center, campus, and edge in addition to the fully programmable DPU. This allows HPE Aruba Networking CX 10000 Switch Series with AMD Pensando to deliver stateful software-defined services inline, at scale, with wire-rate performance and orders of magnitude scale and performance improvements over traditional L2/3 switches at a fraction of their TCO.

HPE Aruba Networking CX 10000 Switch Series with AMD Pensando allows operators to extend industry standard leaf-spine networking with distributed stateful segmentation, east-west firewalling, NAT<sup>1</sup>, encryption<sup>1</sup>, and telemetry services—all delivered inline, all the time, on every access port, closer to where critical enterprise applications run. HPE Aruba Networking CX 10000 Switch Series with AMD Pensando distributed services architecture is agnostic of network deployment architecture. This allows the flexibility to enable stateful services delivery, when deployed as access, leaf Top of Rack (ToR), or End of Row (EoR) in a data center, and potentially in the aggregation layer in campus or edge data center designs.

HPE Aruba Networking CX 10000 Switch Series with AMD Pensando offers 3.6Tbps of line-rate switching capacity with interface configurations supporting 1/10/25GbE (SFP/ SFP+/SFP28) and 40/100GbE (QSFP+/QSFP28) connectivity, in a compact 1U form factor. Consequently, these switches offer a fantastic investment for customers migrating from older 1GbE/10GbE to faster 25GbE, or from 10GbE/40GbE to 100GbE ports.

**Notes:** <sup>1</sup>Supported in future software release.

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HPE Aruba Networking CX 10000 Switch Series with AMD Pensando

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## Standard Features

### AOS-CX - A Modern Software System

The HPE Aruba Networking CX 10000 Switch Series with AMD Pensando 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 past trends analysis. This helps predict and avoid future problems due to scale, security, and performance bottlenecks.

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, perpetual AOS-CX Foundation license at no additional cost with the option to upgrade to an CX Advanced license.

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

- HPE Aruba 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 HPE Aruba Networking NetEdit

The HPE Aruba Networking CX 10000 Switch Series with AMD Pensando requires an additional HPE Aruba Networking CX Advanced license to extend the CX Foundation network features with distributed, accelerated stateful firewall, pervasive telemetry services, and visibility and assurance with CX Edge Insights.

The HPE Aruba Networking CX 10000 Switch Series with AMD Pensando can further be upgraded with the HPE Aruba Networking CX Premium license that includes all CX Foundation and Advanced functionality and adds accelerated IPSec VPN Encryption, NAT, and additional network and security services at a future date.

For more information on the CX Advanced License, read the [\*\*HPE Aruba Networking 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 features:

- Easy access to all network state information for 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
  - Near real-time state and resiliency and the ability to independently upgrade individual software modules for higher availability
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## Standard Features

### Pensando Stateful Software Services

Embedded natively in the HPE Aruba Networking CX 10000 Switch Series, the AOS-CX operating system is an industry unique, inline stateful software service, enabled through Pensando's programmable DPU, delivered at scale with wire-rate performance. The services include stateful firewalling and secure segmentation, DDoS protection, and deep flow-based session-level telemetry, enabled natively in the fabric switching infrastructure without requiring host-based agents or dedicated appliances.

Stateful software benefits include:

- Improves security posture, limiting appliance sprawl
- Extends Zero Trust segmentation deeper into the data center for any type of host
- Delivers isolation and multi-tenancy for virtualized, bare-metal, or containerized workloads
- Optimizes network traffic flows, bandwidth, and performance, which reduces operational complexity associated with service stitching
- Overcomes centralized networking service layer chokepoints, which reduces downtime
- Simplifies operations via unified network and security automation and management with HPE Aruba Fabric Composer
- Addresses deployments where security agents can't be deployed into servers
- Accelerates infrastructure service provisioning
- Lowers capex/opex expenditure on security and services

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## Managing the HPE Aruba Networking CX 10000 Switch Series

### HPE Aruba Fabric Composer

HPE Aruba Fabric Composer is an intelligent, API-driven, Software-defined orchestration solution that simplifies and accelerates leaf-spine fabric provisioning and day-to-day operations across rack-scale compute and storage infrastructure. What makes HPE Aruba Fabric Composer different from other solutions is that the software can orchestrate a discrete set of switches as a single entity, which significantly simplifies operations and troubleshooting. This solution is fully infrastructure and application aware, providing automation of various configuration and lifecycle events.

HPE Aruba Fabric Composer also provides unified network and security management for the HPE Aruba Networking CX 10000 Switch Series with AMD Pensando platform. This provides automated switch and network configurations, while also unifying security policy and distributed firewalls across the entire switching fabric. This unified network and security policy management significantly simplifies operations and troubleshooting. This solution is implemented to augment switch-by-switch configuration, so operators can access any device directly and make local changes, which means you get the best environment for both traditional network operators in addition to DevOps and SecOps automation.

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### Unified Security Policy Configuration

- **Ease of Deployment** - Beyond traditional Zero Touch deployment approaches, which require significant up-front work, AFC user-friendly, guided wizards provide turnkey workflows that walk customers through the fabric deployment process, radically simplifying operations. AFC is agnostic of topology and can equally support standards based VXLAN EVPN fabric as well as traditional VSX deployments seamlessly. Any complexity of deploying the fabric is hidden, ensuring that network operators don't need to understand the specific protocols and commands in AOS-CX in order to deploy best practice architectures.
- **Service Orchestration** - The operational benefits of AFC also extend to services because now, with the CX10000, you can orchestrate provisioning and securing tenants on the fabric in a simplified wizard driven workflow. This is enabled through an integration with Pensando Policy and Services Manager. The solution allows SecOps and NetOps teams to accelerate application rollouts, while ensuring strict compliance and secure segmentation requirements are met. From rapid and error-free fabric deployment to automation and security, we are truly delivering a cloud-like experience to our customers with AFC and Pensando across virtualized, bare-metal, and containerized deployments.
- **Easy Integration** - The event driven automation engine within AFC (StackStorm) supports Integration Packs that are easily installed and offer integrations with VMware Cloud Foundation, vCenter, vSAN, Nutanix, HPE SimpliVity, and HPE iLo Amplifier. Integrations allow customers to enjoy the benefits of automated fabric provisioning, event-based workflow automations, end-to-end network and host visibility, and automatic storage traffic optimization.
- **Pervasive Visibility** - Network and virtualization admins have complete, end-to-end network visibility of connectivity of hosts, virtual machines, VLANs, services, and workloads to simplify troubleshooting of connectivity and performance problems. Automatically detect and dynamically solve network issues before your business is impacted. Integration with

## Standard Features

Pensando provides not just visibility into the network and compute, but also extends to services allowing customers to utilize flow logging, to understand communication patterns in the data center, and to more accurately segment and firewall application tiers, workloads, and services.

### HPE Aruba Network Analytics Engine

For enhanced visibility and troubleshooting, HPE Aruba's Network Analytics Engine (NAE) automatically interrogates and analyses events that can impact network health. Advanced telemetry and automation allow you to easily identify and troubleshoot network, system, application, and security issues using python agents and REST APIs.

The Time Series Database (TSDB) stores configuration and operational data to help quickly resolve network issues. You can also use the data to analyse trends, identify anomalies, and predict future capacity requirements.

### HPE Aruba Networking NetEdit—Automated switch configuration and management

The entire HPE Aruba Networking CX portfolio empowers IT teams to orchestrate multiple switch configuration changes for smooth end-to-end service rollouts. HPE Aruba Networking NetEdit introduces automation that allows for rapid network-wide changes and ensures policy conformance after 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 Aruba NAE integration

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

### HPE Aruba Networking Virtual Switching Extension

The ability of AOS-CX to maintain synchronous state across dual control planes allows a unique high availability solution called HPE Aruba 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 Multi-chassis Link Aggregation (MC-LAG) and Virtual Switching Framework (VSF), HPE Aruba 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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## Standard Features

### 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 [HPE Aruba Central SaaS Subscription Ordering Guide](#).

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## Product Capabilities

### Performance

#### High-speed fully distributed architecture

- Provides 3.6Tbps for bidirectional switching and 2,000 Mpps for forwarding. All switching and routing are wire-speed to meet the demands of bandwidth-intensive applications today and in the future
- 800G of stateful services performance through dual Pensando DPU's

### Scalable system design

- Provides investment protection to support future technologies and higher-speed connectivity

### Connectivity

#### High density port options

Compact, high port density 1U switch with airflow direction flexibility include model with 48 ports of 1GbE/10GbE/25GbE (SFP/SFP+/SFP28) [1GBASE-T and 10GBASE-T transceiver support] + 6 ports of 40GbE/100GbE (QSFP+/QSFP28) [optional 4x10 and 4x25 breakout]

#### Jumbo frames

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

### Unsupported Transceiver Mode (UTM)

- Allows ability to insert and enable 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, 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) 7 priorities per port
  - Enhanced Transmission Service (ETS)
  - DCB Exchange Protocol (Pre-standard LLDP DCBX IEEE 1.01 version)



## Standard Features

- **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 (NVMeOF)

### Resiliency and high availability

#### Redundant and load-sharing fans and power supplies

- N+1 fans and power supplies provide redundancy

#### Hot swappable power supply and fan modules

- Allows replacement of accessory modules without operationally impacting other modules or switch operations

#### Separate data and control paths

- Separates control from services to keep service processing isolated and increases security and performance

#### HPE Aruba Virtual Switching Extension (VSX)

- 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 up each other to create highly available routed environments

#### Bidirectional Forward Detection (BFD)

- Enables 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 LAGs, with up to 16 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 Network Analytics Engine, HPE Aruba Networking CX 10000 Switch Series with AMD Pensando offers the following capabilities

#### REST API

- Built-in programmable and easy to use

#### Management Interface Control

- Enables or disables the console port or reset button, depending on security preferences



## Standard Features

### 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
- Provides SNMP access with ACLs
- Local and remote Syslog capabilities allow access logging

### IPSLA

- Monitors network for degradation of various services, including voice
- Enables monitoring via the NAE for history and for immediate 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, allowing 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 trace route 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

### LACP-fallback

- Enables Zero Touch Provisioning over Link Aggregation Groups.

### Dual images

- Provides independent primary and secondary operating system files for backup while upgrading

### Multiple configuration files

- Stores files easily to the flash image



## Standard Features

### Layer 2 Switching

#### VLAN

- Supports up to 4,018 port-based or IEEE 802.1Q-based user configurable VLANs

#### VLAN Translation

- Remaps VLANs during transit across a core network

#### Bridge Protocol Data Unit (BPDU)

- 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

- 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

#### Ipv4 Multicast in VXLAN/EVPN Overlay

- Enables 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

### Layer 3 Services

#### Address Resolution Protocol (ARP)

- Determines the MAC address of another IP host in the same subnet and 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





## Standard Features

### 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
- DHCP Smart Relay

### Domain Name System (DNS)

- Provides a distributed database that translates domain names and IP addresses, which simplifies network design.
- Supports client and server

### Generic Routing Encapsulation (GRE)

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

## 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

### 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

### 6in4 tunnels

- Supports the tunneling of IPv6 traffic in an IPv4 network



## Standard Features

### 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

### IP sub-interface

- Enables IP sub-interface for ingress & egress ACL/Policies, routing, VSX-keep alive

### Dynamic pool configuration

- Enables lossless pool configuration without switch reboot

### 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
- 32 way ECMP

### Generic Routing Encapsulation (GRE)

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

## Security

### TAA and FIPS 140-2 Compliance

- HPE Aruba Networking CX 10000 Switch Series with AMD Pensando with AOS-CX, a TAA compliant product, uses FIPS 140-2 validated cryptography for protection of sensitive information

### Federal Certification

- Compliant with DoDIN, APL, NDcPP, FIPS, and USGv6 requirements for federal certifications.

### Access control list (ACL) Features

- Supports powerful ACLs for both IPv4 and IPv6.
- Supports creating object groups representing sets of devices
- Protects control plane services such as SSH, SNMP, NTP or web servers

### Dynamic policy refresh

- Enforce policy changes immediately to terminate malicious flows

### 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



## Standard Features

### RadSec

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

### Management access security

- AOS-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
- Secure port access - 802.1x, Mac-auth, LUR, DUR, Port-Access Policy, Static Port Filtering
- TACACS+ can also provide user authorization services

### Secure port access

- 802.1x, Mac-auth, LUR, DUR, Port-Access Policy, Static Port Filtering

### 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

#### Multicast Listener Discovery (MLD)

- Enables discovery of IPv6 multicast listeners
- Supports MLDv1 and v2

#### PIM Multicast Boundary (v4)

- VSX Graceful shutdown for IGMP/MLD
- Multicast NSF

#### 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

- Avoids SA messages flooding to other mesh group peers.

#### 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, which 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 speed 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.

Support for Microsoft **Network Load Balancer** (NLB) for server applications.



## Standard Features

### Microsoft Network Load Balancer (NLB)

- Supports server applications

### 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
- Supports PIM Sparse Mode (PIM-SM, IPv4 and IPv6)

### Additional information

- Green initiative support
- Provides support for RoHS (EN 50581:2012) regulations

### Customer first, customer last support

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

Foundation Care for HPE Aruba support services include priority access to HPE Aruba Technical Assistance Center (TAC) engineers 24x7x365, flexible hardware and onsite support options, and total coverage for HPE Aruba products. HPE Aruba Networking switches with assigned HPE Aruba Networking Central subscriptions have the added benefit of additional hardware support only.

HPE Aruba Pro Care adds fast access to senior HPE Aruba TAC engineers, who are assigned as a single point of contact for case management, reducing the time spent addressing and resolving issues.

For complete details on Foundation Care and HPE Aruba Pro Care, please visit:

<https://www.arubanetworks.com/supportservices/>

### Warranty, services and support Limited 1 Year Warranty

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

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

- [AOS-CX Switch Software Documentation Portal](#)
- [HPE Aruba Switch Feature Navigator](#)

For **Support and Services** information, visit <https://www.arubanetworks.com/support-services/arubacare/>

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## Configuration Information

### BTO Models

Rule #	Description	SKU
1, 2, 3, 4, 5, 6, 7, 8	<b>Switch Bundles</b>	
	HPE Aruba Networking CX 10000-48Y6C Distributed Services Front-to-Back 6 Fans 2 PSU Switch Bdl	R8P13A
	<ul style="list-style-type: none"> <li>Includes 2 FB (Port to Power) Power Supplies (R8R51A) with no additional open PS slots</li> <li>Includes 6 FB (Port to Power) Fan Tray Bundles (R8R53A) with no additional open FT Slots</li> <li>Must select a Rack Kit</li> <li>Min=0 \ Max= 48 SFP/SFP+/SFP28 1/10/25G Transceivers</li> <li>Min=0 \ Max = 6 QSFP+/QSFP28 40/100G Transceivers</li> <li>1U - Height</li> </ul>	
	HPE Aruba Networking CX 10000-48Y6C Distributed Services Front-to-Back 6 Fans 2 PSU Switch Bdl	R8P13A
	<ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (NA/MEX/TW/JP) (J9943A C15 equivalent)</li> </ul>	
	HPE Aruba Networking CX 10000-48Y6C Distributed Services Front-to-Back 6 Fans 2 PSU Switch Bdl	R8P13A
	<ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (ROW) (J9944A C15 equivalent)</li> </ul>	
	HPE Aruba Networking CX 10000-48Y6C Distributed Services Front-to-Back 6 Fans 2 PSU Switch Bdl	R8P13A
	<ul style="list-style-type: none"> <li>HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)</li> </ul>	
	HPE Aruba Networking CX 10000-48Y6C Distributed Services Front-to-Back 6 Fans 2 PSU Switch Bdl	R8P13A
	<ul style="list-style-type: none"> <li>No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)</li> </ul>	
	1, 2, 3, 4, 5, 6, 7, 8	HPE Aruba Networking CX 10000-48Y6C Distributed Services Back-to-Front 6 Fans 2 PSU Switch Bdl
<ul style="list-style-type: none"> <li>Includes 2 BF(Power to Port) Power Supplies (R8R52A) with no additional open PS slots</li> <li>Includes 6 BF(Power to Port) Fan Tray Bundles (R8R54A) with no additional open FT Slots</li> <li>Must select a Rack Kit</li> <li>Min=0 \ Max= 48 SFP/SFP+/SFP28 1/10/25G Transceivers</li> <li>Min=0 \ Max = 6 QSFP+/QSFP28 40/100G Transceivers</li> <li>1U - Height</li> </ul>		
HPE Aruba Networking CX 10000-48Y6C Distributed Services Back-to-Front 6 Fans 2 PSU Switch Bdl		R8P14A
<ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (NA/MEX/TW/JP) (J9943A C15 equivalent)</li> </ul>		
HPE Aruba Networking CX 10000-48Y6C Distributed Services Back-to-Front 6 Fans 2 PSU Switch Bdl		R8P14A
<ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (ROW) (J9944A C15 equivalent)</li> </ul>		
HPE Aruba Networking CX 10000-48Y6C Distributed Services Back-to-Front 6 Fans 2 PSU Switch Bdl		R8P14A
<ul style="list-style-type: none"> <li>HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)</li> </ul>		
HPE Aruba Networking CX 10000-48Y6C Distributed Services Back-to-Front 6 Fans 2 PSU Switch Bdl		R8P14A
<ul style="list-style-type: none"> <li>No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)</li> </ul>		

## Configuration Information

### TAA Switch Bundles

1, 2, 3, 4, 5, 6, 7, 8	<p>HPE Aruba Networking CX 10000 48p SFP28 10G/25G 6p QSFP28 100G Front-to-Back 6xFan 2xPSU TAA Bundle <span style="float: right;">SOF97A</span></p> <ul style="list-style-type: none"> <li>• Includes 2 FB (Port to Power) Power Supplies (R8R51A) with no additional open PS slots</li> <li>• Includes 6 FB (Port to Power) Fan Tray Bundles (R8R53A) with no additional open FT Slots</li> <li>• Must select a Rack Kit</li> <li>• Min=0 \ Max= 48 SFP/SFP+/SFP28 1/10/25G Transceivers</li> <li>• Min=0 \ Max = 6 QSFP+/QSFP28 40/100G Transceivers</li> <li>• 1U - Height</li> </ul> <p>HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Front-to-Back 6xFan 2xPSU TAA Bundle PDU <span style="float: right;">SOF97A#B2B</span></p> <ul style="list-style-type: none"> <li>• C13 PDU Jumper Cord (NA/MEX/TW/JP) (J9943A C15 equivalent)</li> </ul> <p>HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Front-to-Back 6xFan 2xPSU TAA Bundle PDU <span style="float: right;">SOF97A#B2C</span></p> <ul style="list-style-type: none"> <li>• C13 PDU Jumper Cord (ROW) (J9944A C15 equivalent)</li> </ul> <p>HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Front-to-Back 6Fs 2xPSU TAA 220v Bundle <span style="float: right;">SOF97A#B2E</span></p> <ul style="list-style-type: none"> <li>• HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)</li> </ul> <p>HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Front-to-Back 6Fs 2xPSU TAA Bdl No Loc <span style="float: right;">SOF97A#AC3</span></p> <ul style="list-style-type: none"> <li>• No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)</li> </ul>
1, 2, 3, 4, 5, 6, 7, 8	<p>HPE Aruba Networking CX 10000 48p SFP28 10G/25G 6p QSFP28 100G Back-to-Front 6xFan 2xPSU TAA Bundle <span style="float: right;">SOF98A</span></p> <ul style="list-style-type: none"> <li>• Includes 2 BF(Power to Port) Power Supplies (R8R52A) with no additional open PS slots</li> <li>• Includes 6 BF(Power to Port) Fan Tray Bundles (R8R54A) with no additional open FT Slots</li> <li>• Must select a Rack Kit</li> <li>• Min=0 \ Max= 48 SFP/SFP+/SFP28 1/10/25G Transceivers</li> <li>• Min=0 \ Max = 6 QSFP+/QSFP28 40/100G Transceivers</li> <li>• 1U - Height</li> </ul> <p>HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Back-to-Front 6xFan 2xPSU TAA Bundle PDU <span style="float: right;">SOF98A#B2B</span></p> <ul style="list-style-type: none"> <li>• C13 PDU Jumper Cord (NA/MEX/TW/JP) (J9943A C15 equivalent)</li> </ul> <p>HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Back-to-Front 6xFan 2xPSU TAA Bundle PDU <span style="float: right;">SOF98A#B2C</span></p> <ul style="list-style-type: none"> <li>• C13 PDU Jumper Cord (ROW) (J9944A C15 equivalent)</li> </ul> <p>HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Back-to-Front 6Fs 2xPSU TAA 220v Bundle <span style="float: right;">SOF98A#B2E</span></p> <ul style="list-style-type: none"> <li>• HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)</li> </ul> <p>HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Back-to-Front 6Fs 2xPSU TAA Bdl No Loc <span style="float: right;">SOF98A#AC3</span></p> <ul style="list-style-type: none"> <li>• No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)</li> </ul>

### Configuration Rules

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

## Configuration Information

	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	<b>The following Transceivers install into this Switch: (Use BTO only when adding to switch)</b>	
	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 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 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	<b>The following Transceivers install into this Switch: (Use BTO only when adding to switch)</b>	
	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
	HPE Aruba Networking 25G SFP28 to SFP28 0.65m Direct Attach Cable	JL487A
	HPE Aruba Networking 25G SFP28 to SFP28 3m Direct Attach Copper Cable	JL488A
	HPE Aruba Networking 25G SFP28 to SFP28 5m Direct Attach Copper Cable	JL489A
	HPE Aruba Networking 25G SFP28 to SFP28 3m Active Optical Cable	ROM44A
	HPE Aruba Networking 25G SFP28 to SFP28 7m Active Optical Cable	ROM45A
	HPE Aruba Networking 25G SFP28 to SFP28 15m Active Optical Cable	ROZ21A
	HPE 25Gb SFP28 to SFP28 3m Direct Attach Copper Cable	844477-B21
	HPE 25Gb SFP28 to SFP28 5m Direct Attach Copper Cable	844480-B21
4	<b>The following Transceivers install into this Switch: (Use BTO only when adding to switch)</b>	
	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	ROZ22A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 15m Active Optical Cable	ROZ23A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 30m Active Optical Cable	ROZ24A
	HPE BladeSystem c-Class 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	721064-B21
5	<b>The following Transceivers install into this Switch: (Use BTO only when adding to switch)</b>	
	HPE Aruba Networking 100G QSFP28 MPO SR4 100m 12-fiber MPO OM3 MMF Transceiver	JL309A
	HPE Aruba Networking 100G QSFP28 LC LR4 10km SMF 2-strand Transceiver	JL310A
	HPE Aruba Networking 100G QSFP28 LC CWDM4 2km SMF Transceiver	ROZ30A
	HPE Aruba Networking 100G QSFP28 LC FR1 SMF 2km Transceiver	R9B63A
	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	ROZ25A
	HPE Aruba Networking 100G QSFP28 to QSFP28 5m Direct Attach Copper Cable	ROZ26A
	HPE 100Gb QSFP28 to 4x25Gb SFP28 3m Direct Attach Copper Cable	845416-B21
	HPE Aruba Networking 100G QSFP28 to QSFP28 2m Active Optical Cable	JL856A
	HPE Aruba Networking 100G QSFP28 to QSFP28 7m Active Optical Cable	ROZ27A
	HPE Aruba Networking 100G QSFP28 to QSFP28 15m Active Optical Cable	ROZ28A
	HPE Aruba Networking 100G QSFP28 to QSFP28 30m Active Optical Cable	ROZ29A
6	<b>Localization required on orders without B2B, B2C, B2E or AC3 options.</b>	
7	<b>If ANY Option is integrated OD1 to this Switch, then the Switch requires OD1. (Box level integration is not allowed)</b>	

## Configuration Information

- 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:

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:
  - Switch/Router/Power Supply to PDU Power Cord - B2B in North America, Mexico, Taiwan, and Japan or B2C ROW. (OCA Default B2B or B2C for Rack Level CTO)
  - Switch/Router/Power Supply to Wall Power Cord - Localized Option (OCA Default for BTO and Box Level CTO)
  - High Volt Switch/Router/Power Supply to Wall Power Cord - B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)
  - No Power Cord - AC3 Option
- Locking Power Cord (J9955A) L6-20P is available through the OCA Accessories tab
- OCA Only Model Selection Form - HPE Offering > HPE Aruba > Switches > HPE ArubaOS > AOS-CX:  
HPE Aruba Networking CX 10000 Switch Series





## Configuration Information

### Rack Level Integration CTO Models

Rule #	Description	SKU
1, 2, 3, 4, 5, 6, 7, 8	<p>HPE Aruba Networking CX 10000-48Y6C Distributed Services Front-to-Back 6 Fans 2 PSU Switch Bdl</p> <ul style="list-style-type: none"> <li>Includes 2 FB(Port to Power) Power Supplies (R8R51A) with no additional open PS slots</li> <li>Includes 6 FB(Port to Power) Fan Tray Bundles (R8R53A) with no additional open FT Slots</li> <li>Must select 4 Post Rack Kit (R8R56A)</li> <li>Min=0 \ Max= 48 SFP/SFP+/SFP28 1/10/25G Transceivers</li> <li>Min=0 \ Max = 6 QSFP+/QSFP28 40/100G Transceivers</li> <li>1U - Height</li> </ul>	R8P13A
	<p>HPE Aruba Networking CX 10000-48Y6C Distributed Services Front-to-Back 6 Fans 2 PSU Switch Bdl</p> <ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (NA/MEX/TW/JP) (J9943A C15 equivalent)</li> </ul>	R8P13A
	<p>HPE Aruba Networking CX 10000-48Y6C Distributed Services Front-to-Back 6 Fans 2 PSU Switch Bdl</p> <ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (ROW) (J9944A C15 equivalent)</li> </ul>	R8P13A
	<p>HPE Aruba Networking CX 10000-48Y6C Distributed Services Front-to-Back 6 Fans 2 PSU Switch Bdl</p> <ul style="list-style-type: none"> <li>HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)</li> </ul>	R8P13A
	<p>HPE Aruba Networking CX 10000-48Y6C Distributed Services Front-to-Back 6 Fans 2 PSU Switch Bdl</p> <ul style="list-style-type: none"> <li>No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)</li> </ul>	R8P13A
1, 2, 3, 4, 5, 6, 7, 8	<p>HPE Aruba Networking CX 10000-48Y6C Distributed Services Back-to-Front 6 Fans 2 PSU Switch Bdl</p> <ul style="list-style-type: none"> <li>Includes 2 BF(Power to Port) Power Supplies (R8R52A) with no additional open PS slots</li> <li>Includes 6 BF(Power to Port) Fan Tray Bundles (R8R54A) with no additional open FT Slots</li> <li>Must select 4 Post Rack Kit (R8R56A)</li> <li>Min=0 \ Max= 48 SFP/SFP+/SFP28 1/10/25G Transceivers</li> <li>Min=0 \ Max = 6 QSFP+/QSFP28 40/100G Transceivers</li> <li>1U - Height</li> </ul>	R8P14A
	<p>HPE Aruba Networking CX 10000-48Y6C Distributed Services Back-to-Front 6 Fans 2 PSU Switch Bdl</p> <ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (NA/MEX/TW/JP) (J9943A C15 equivalent)</li> </ul>	R8P14A
	<p>HPE Aruba Networking CX 10000-48Y6C Distributed Services Back-to-Front 6 Fans 2 PSU Switch Bdl</p> <ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (ROW) (J9944A C15 equivalent)</li> </ul>	R8P14A
	<p>HPE Aruba Networking CX 10000-48Y6C Distributed Services Back-to-Front 6 Fans 2 PSU Switch Bdl</p> <ul style="list-style-type: none"> <li>HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)</li> </ul>	R8P14A
	<p>HPE Aruba Networking CX 10000-48Y6C Distributed Services Back-to-Front 6 Fans 2 PSU Switch Bdl</p> <ul style="list-style-type: none"> <li>No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)</li> </ul>	R8P14A
	<p><b>TAA Switch Bundles</b></p>	
1, 2, 3, 4, 5, 6, 7, 8	<p>HPE Aruba Networking CX 10000 48p SFP28 10G/25G 6p QSFP28 100G Front-to-Back 6xFan 2xPSU TAA Bundle</p> <ul style="list-style-type: none"> <li>Includes 2 FB(Port to Power) Power Supplies (R8R51A) with no additional open PS slots</li> <li>Includes 6 FB(Port to Power) Fan Tray Bundles (R8R53A) with no additional open FT Slots</li> </ul>	S0F97A

## Configuration Information

	<ul style="list-style-type: none"> <li>• Must select 4 Post Rack Kit (R8R56A)</li> <li>• Min=0 \ Max= 48 SFP/SFP+/SFP28 1/10/25G Transceivers</li> <li>• Min=0 \ Max = 6 QSFP+/QSFP28 40/100G Transceivers</li> <li>• 1U - Height</li> </ul>	
	HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Front-to-Back 6xFan 2xPSU TAA Bundle PDU	S0F97A#B2B
	<ul style="list-style-type: none"> <li>• C13 PDU Jumper Cord (NA/MEX/TW/JP) (J9943A C15 equivalent)</li> </ul>	
	HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Front-to-Back 6xFan 2xPSU TAA Bundle PDU	S0F97A#B2C
	<ul style="list-style-type: none"> <li>• C13 PDU Jumper Cord (ROW) (J9944A C15 equivalent)</li> </ul>	
	HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Front-to-Back 6Fs 2xPSU TAA 220v Bundle	S0F97A#B2E
	<ul style="list-style-type: none"> <li>• HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)</li> </ul>	
	HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Front-to-Back 6Fs 2xPSU TAA Bdl No Loc	S0F97A#AC3
	<ul style="list-style-type: none"> <li>• No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)</li> </ul>	
1, 2, 3, 4, 5, 6, 7, 8	HPE Aruba Networking CX 10000 48p SFP28 10G/25G 6p QSFP28 100G Back-to-Front 6xFan 2xPSU TAA Bundle	S0F98A
	<ul style="list-style-type: none"> <li>• Includes 2 BF(Power to Port) Power Supplies (R8R52A) with no additional open PS slots</li> <li>• Includes 6 BF(Power to Port) Fan Tray Bundles (R8R54A) with no additional open FT Slots</li> <li>• Min=0 \ Max= 48 SFP/SFP+/SFP28 1/10/25G Transceivers</li> <li>• Min=0 \ Max = 6 QSFP+/QSFP28 40/100G Transceivers</li> <li>• 1U - Height</li> </ul>	
	HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Back-to-Front 6xFan 2xPSU TAA Bundle PDU	S0F98A#B2B
	<ul style="list-style-type: none"> <li>• C13 PDU Jumper Cord (NA/MEX/TW/JP) (J9943A C15 equivalent)</li> </ul>	
	HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Back-to-Front 6xFan 2xPSU TAA Bundle PDU	S0F98A#B2C
	<ul style="list-style-type: none"> <li>• C13 PDU Jumper Cord (ROW) (J9944A C15 equivalent)</li> </ul>	
	HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Back-to-Front 6Fs 2xPSU TAA 220v Bundle	S0F98A#B2E
	<ul style="list-style-type: none"> <li>• HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)</li> </ul>	
	HPE Aruba Networking 10000 48p SFP28 10G/25G 6p QSFP28 100G Back-to-Front 6Fs 2xPSU TAA Bdl No Loc	S0F98A#AC3
	<ul style="list-style-type: none"> <li>• No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)</li> </ul>	

### Configuration Rules

#### Rule #

#### Description

1	<p>The following Transceivers install into this Switch: (Use OD1 or B01 quoted to switch if switch is CTO) - if applicable:</p> <p>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</p>
2	<p>The following Transceivers install into this Switch: (Use OD1 quoted to switch if switch is CTO) - if applicable:</p> <p>HPE Aruba Networking 10GBASE-T SFP+ RJ45 30m Cat6A Transceiver JL563B  HPE Aruba Networking 10G SFP+ LC SR 300m OM3 MMF Transceiver J9150D</p>

## Configuration Information

	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 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	<b>The following Transceivers install into this Switch: (Use OD1 or B01 quoted to switch if switch is CTO) - if applicable:</b>	
	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
	HPE Aruba Networking 25G SFP28 to SFP28 0.65m Direct Attach Cable	JL487A
	HPE Aruba Networking 25G SFP28 to SFP28 3m Direct Attach Copper Cable	JL488A
	HPE Aruba Networking 25G SFP28 to SFP28 5m Direct Attach Copper Cable	JL489A
	HPE Aruba Networking 25G SFP28 to SFP28 3m Active Optical Cable	ROM44A
	HPE Aruba Networking 25G SFP28 to SFP28 7m Active Optical Cable	ROM45A
	HPE Aruba Networking 25G SFP28 to SFP28 15m Active Optical Cable	ROZ21A
	HPE 25Gb SFP28 to SFP28 3m Direct Attach Copper Cable	844477-B21
	HPE 25Gb SFP28 to SFP28 5m Direct Attach Copper Cable	844480-B21
4	<b>The following Transceivers install into this Switch: (Use OD1 or B01 quoted to switch if switch is CTO) - if applicable:</b>	
	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	ROZ22A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 15m Active Optical Cable	ROZ23A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 30m Active Optical Cable	ROZ24A
	HPE BladeSystem c-Class 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	721064-B21
5	<b>The following Transceivers install into this Switch: (Use OD1 or B01 quoted to switch if switch is CTO) - if applicable:</b>	
	HPE Aruba Networking 100G QSFP28 MPO SR4 100m 12-fiber MPO OM3 MMF Transceiver	JL309A
	HPE Aruba Networking 100G QSFP28 LC LR4 10km SMF 2-strand Transceiver	JL310A
	HPE Aruba Networking 100G QSFP28 LC CWDM4 2km SMF Transceiver	ROZ30A
	HPE Aruba Networking 100G QSFP28 LC FR1 SMF 2km Transceiver	R9B63A
	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	ROZ25A
	HPE Aruba Networking 100G QSFP28 to QSFP28 5m Direct Attach Copper Cable	ROZ26A
	HPE 100Gb QSFP28 to 4x25Gb SFP28 3m Direct Attach Copper Cable	845416-B21
	HPE Aruba Networking 100G QSFP28 to QSFP28 2m Active Optical Cable	JL856A
	HPE Aruba Networking 100G QSFP28 to QSFP28 7m Active Optical Cable	ROZ27A
	HPE Aruba Networking 100G QSFP28 to QSFP28 15m Active Optical Cable	ROZ28A
	HPE Aruba Networking 100G QSFP28 to QSFP28 30m Active Optical Cable	ROZ29A
6	<b>Localization required on orders without B2B, B2C, B2E or AC3 options.</b>	
7	<b>If the CTO Switch Chassis needs to be racked, Then the CTO Base Model needs to integrate (with OD1) to the HPE Network Rack.</b>	
8	<b>Unbuildable/FAN required, generates CFGU: If order is quoted for India and contains "#B2C" Option, then Display the following:</b>	

## Configuration Information

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:
  - Switch/Router/Power Supply to PDU Power Cord - B2B in North America, Mexico, Taiwan, and Japan or B2C ROW. (OCA Default B2B or B2C for Rack Level CTO)
  - Switch/Router/Power Supply to Wall Power Cord - Localized Option (OCA Default for BTO and Box Level CTO)
  - High Volt Switch/Router/Power Supply to Wall Power Cord - B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)
  - No Power Cord - AC3 Option
- Locking Power Cord (J9955A) L6-20P is available through the OCA Accessories tab

## Transceivers

SFP Transceivers		
Rule #	Description	SKU
1	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 Rules		
Rule #	Description	
1	<ul style="list-style-type: none"> <li>– min 0 // max 48 of XCVRs (J8177D) can be installed into the following Switches: R8P13A, R8P14A, S0F97A, S0F98A</li> <li>– J8177D Max of 48 in either the R8P13A/R8P14A/S0F97A/S0F98A and can be installed into ports 1-48 excluding 3rd row of ports.</li> </ul>	

SFP+ Transceivers		
Rule #	Description	SKU
	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 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 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
	HPE Aruba Networking 25G SFP28 to SFP28 0.65m Direct Attach Cable	JL487A
	HPE Aruba Networking 25G SFP28 to SFP28 3m Direct Attach Copper Cable	JL488A
	HPE Aruba Networking 25G SFP28 to SFP28 5m Direct Attach Copper Cable	JL489A

## Configuration Information

HPE Aruba Networking 25G SFP28 to SFP28 3m Active Optical Cable	ROM44A
HPE Aruba Networking 25G SFP28 to SFP28 7m Active Optical Cable	ROM45A
HPE Aruba Networking 25G SFP28 to SFP28 15m Active Optical Cable	ROZ21A
HPE 25Gb SFP28 to SFP28 3m Direct Attach Copper Cable	844477-B21
HPE 25Gb SFP28 to SFP28 5m Direct Attach Copper Cable	844480-B21

- Notes:**
- The 48 x SFP28 Ports function in port groups of 4 ports. Each port group must operate at the same speed (ie. Group 1 = qty4 of 1G and 10G, or 25G transceivers).
    - Group 1 = ports 1-4
    - Group 2 = ports 5-9
    - Group 3 = ports 10-13
    - Group 4 = ports 14-17
    - Group 5 = ports 18-21
    - Group 6 = ports 22-25
    - Group 7 = ports 26-29
    - Group 8 = ports 30-33
    - Group 9 = ports 33-36
    - Group 10 = ports 37-40
    - Group 11 = ports 41-44
    - Group 12 = ports 45-48

### 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	ROZ22A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 15m Active Optical Cable	ROZ23A
	HPE Aruba Networking 40G QSFP+ to QSFP+ 30m Active Optical Cable	ROZ24A
	HPE BladeSystem c-Class 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	721064-B21

### QSFP28 Transceivers

Rule #	Description	SKU
	HPE Aruba Networking 100G QSFP28 MPO SR4 100m 12-fiber MPO OM3 MMF Transceiver	JL309A
	HPE Aruba Networking 100G QSFP28 LC LR4 10km SMF 2-strand Transceiver	JL310A
	HPE Aruba Networking 100G QSFP28 LC CWDM4 2km SMF Transceiver	ROZ30A
	HPE Aruba Networking 100G QSFP28 LC FR1 SMF 2km Transceiver	R9B63A
	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	ROZ25A
	HPE Aruba Networking 100G QSFP28 to QSFP28 5m Direct Attach Copper Cable	ROZ26A
	HPE 100Gb QSFP28 to 4x25Gb SFP28 3m Direct Attach Copper Cable	845416-B21
	HPE Aruba Networking 100G QSFP28 to QSFP28 2m Active Optical Cable	JL856A
	HPE Aruba Networking 100G QSFP28 to QSFP28 7m Active Optical Cable	ROZ27A
	HPE Aruba Networking 100G QSFP28 to QSFP28 15m Active Optical Cable	ROZ28A
	HPE Aruba Networking 100G QSFP28 to QSFP28 30m Active Optical Cable	ROZ29A

## Configuration Information

### Switch Options

Rule #	Description	SKU
<b>Rack Mount Kits</b>		
1	HPE Aruba Networking CX 10000 1U 2 post Rack Mount Kit	R8R55A
	HPE Aruba Networking CX 10000 1U 4 post Rack Mount Kit	R8R56A
<b>Configuration Rules</b>		
1	If the switch will be factory racked into an HPE Universal Rack, then (Min 1) of the 4 Post Rack Mount kit is required.	
<b>India PDU Cable</b>		
	For Switch System (std 0 // max 2) User Selection (0 or 2) per enclosure	
	HPE Networking 2.0m C13 to C14 PDU India Power Cord	JL671A
	<ul style="list-style-type: none"> <li>C13 India PDU Cable for Factory Racked Systems Only</li> </ul>	
<b>Notes:</b>	This Power Cord is only available when the #AC3 option is selected for the supported power supply and intended for India	

### Accessories

Rule #	Description	SKU
<b>Spare Items</b>		
1	HPE Aruba Networking CX 10000-48Y6C Dist Services 48p 25G SFP/SFP+/SFP28 6p 100G QSFP+/QSFP28 Switch <ul style="list-style-type: none"> <li>OCA Display</li> </ul> <b>Notes: This is a Spare Chassis only</b> <ul style="list-style-type: none"> <li>Must be used with 2 Power Units (R8R51A or R8R52A)</li> <li>Must be used with 6 Fan Tray (R8R53A or R8R54A)</li> <li>2 Post Rack Kit included, must use 4 Post Rack Mount Kit(R8R56A) with HPE Racks</li> <li>1U - Height</li> </ul>	R8S96A
1	HPE Aruba Networking CX 10000-48Y6C Port-to-Power(FB) AC Power Supply Unit <ul style="list-style-type: none"> <li>includes 1 x c13, 550w</li> </ul>	R8R51A
	HPE Aruba Networking CX 10000-48Y6C Port-to-Power(FB) AC Power Supply Unit PDU <ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (NA/MEX/TW/JP) (JL697A)</li> </ul>	R8R51A#B2B
	HPE Aruba Networking CX 10000-48Y6C Port-to-Power(FB) AC Power Supply Unit PDU <ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (ROW) (JL697A)</li> </ul>	R8R51A#B2C
	HPE Aruba Networking CX 10000-48Y6C Port-to-Power(FB) AC Power Supply Unit 220v <ul style="list-style-type: none"> <li>HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)</li> </ul>	R8R51A#B2E
	HPE Aruba Networking CX 10000-48Y6C Port-to-Power(FB) AC Power Supply Unit NoLoc <ul style="list-style-type: none"> <li>No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)</li> </ul>	R8R51A#AC3
1	HPE Aruba Networking CX 10000-48Y6C Power-to-Port(BF) AC Power Supply Unit <ul style="list-style-type: none"> <li>includes 1 x c13, 550w</li> </ul>	R8R52A
	HPE Aruba Networking CX 10000-48Y6C Power-to-Port(BF) AC Power Supply Unit PDU <ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (NA/MEX/TW/JP) (JL697A)</li> </ul>	R8R52A#B2B
	HPE Aruba Networking CX 10000-48Y6C Power-to-Port(BF) AC Power Supply Unit PDU <ul style="list-style-type: none"> <li>C13 PDU Jumper Cord (ROW) (JL697A)</li> </ul>	R8R52A#B2C
	HPE Aruba Networking CX 10000-48Y6C Power-to-Port(BF) AC Power Supply Unit 220v <ul style="list-style-type: none"> <li>HPE 2.3m C13 to NEMA 6-15P Pwr Cord(J9936A)</li> </ul>	R8R52A#B2E
	HPE Aruba Networking CX 10000-48Y6C Power-to-Port(BF) AC Power Supply Unit NoLoc <ul style="list-style-type: none"> <li>No Localized Power Cord Selected. Use J9955A to obtain a Locking Plug Power Cord (L6-20P)</li> </ul>	R8R52A#AC3
	HPE Aruba Networking CX 10000-48Y6C Port-to-Power(FB) Fan	R8R53A
	HPE Aruba Networking CX 10000-48Y6C Power-to-Port(BF) Fan	R8R54A
	HPE Aruba Networking CX 10000 1U 2 post Rack Mount Kit	R8R55A
	HPE Aruba Networking CX 10000 1U 4 post Rack Mount Kit	R8R56A

## Configuration Information

HPE Aruba Networking X2C2 RJ45 to DB9 Console Cable JL448A  
 HPE Aruba Networking CX Switch Bluetooth Adapter S1H23A

Rule #	Description	
1	Localization required on orders without B2B, B2C, B2E or AC3 options.	
Notes:	<ul style="list-style-type: none"> <li>- Drop down under power supply should offer the following options and results:               <ul style="list-style-type: none"> <li>o Switch/Router/Power Supply to PDU Power Cord - #B2B in North America, Mexico, Taiwan, and Japan or #B2C ROW. (OCA Default B2B or B2C for Rack Level CTO)</li> <li>o Switch/Router/Power Supply to Wall Power Cord - Localized Option (OCA Default for BTO)</li> <li>o High Volt Switch/Router/Power Supply to Wall Power Cord - #B2E Option. (Offered only in North America, Mexico, Taiwan, and Japan)</li> <li>o No Power Cord - #AC3 Option</li> </ul> </li> <li>- Locking Power Cord (J9955A) L6-20P is available in the Accessories tab</li> <li>- 2 Power Supply is included with the Switch Bundle</li> </ul>	

## Software

### CX Software

#### CX Advanced Software Licenses

HPE Aruba Networking CX Software 10xxx Advanced License E-LTU	R9H25AAE
HPE Aruba Networking CX Software 10xxx Switch Advanced 1-year Subscription E-STU	SOT97AAE
HPE Aruba Networking CX Software 10xxx Switch Advanced 3-year Subscription E-STU	SOT98AAE
HPE Aruba Networking CX Software 10xxx Switch Advanced 5-year Subscription E-STU	SOT99AAE

#### CX Premium Software Licenses

HPE Aruba Networking IPSec Encryption/NAT/Advanced DDoS/Load Balancing Protection for CX 10000 E-LTU	R9H26AAE
HPE Aruba Networking CX Software 10xxx Switch Premium 1-year Subscription E-STU	SOU02AAE
HPE Aruba Networking CX Software 10xxx Switch Premium 3-year Subscription E-STU	SOU03AAE
HPE Aruba Networking CX Software 10xxx Switch Premium 5-year Subscription E-STU	SOU04AAE

### HPE Aruba Networking Fabric Composer

#### Single Node Subscription

HPE Aruba Networking Fabric Composer Device Management Service Tier 4 Switch 1y Subscription E-STU	R7G99AAE
HPE Aruba Networking Fabric Composer Device Management Service Tier 4 Switch 3y Subscription E-STU	R7H00AAE
HPE Aruba Networking Fabric Composer Device Management Service Tier 4 Switch 5y Subscription E-STU	R7H01AAE

### HPE Aruba Networking Central

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

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

#### Cloud Services / 8XXX/9XXX/10XXX Switch Foundation Subscriptions

2	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

## Configuration Information

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

### As-a-Service

#### HPE Aruba Networking Central

##### Cloud Services / Switch Advanced AAS Licenses

HPE Aruba Networking Central Switch Class-5 Advanced 7 year Subscription SaaS	SOW45AAS
HPE Aruba Networking Central Switch Class-5 Advanced 10 year Subscription SaaS	SOW46AAS
HPE Aruba Networking Central Switch Class-5 Advanced 1 year Subscription SaaS	SOW62AAS
HPE Aruba Networking Central Switch Class-5 Advanced 3 year Subscription SaaS	SOW63AAS
HPE Aruba Networking Central Switch Class-5 Advanced 5 year Subscription SaaS	SOW64AAS
HPE Aruba Networking Central Switch Class-5 Advanced 7 year Subscription SaaS	SOW65AAS
HPE Aruba Networking Central Switch Class-5 Advanced 10 year Subscription SaaS	SOW66AAS
HPE Aruba Networking Central Switch Class-5 Advanced 1 year Subscription SaaS	SOW87AAS
HPE Aruba Networking Central Switch Class-5 Advanced 3 year Subscription SaaS	SOW88AAS
HPE Aruba Networking Central Switch Class-5 Advanced 5 year Subscription SaaS	SOW89AAS

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





## Technical Specifications

<b>10000 48Y 6C Front-to-Back switch bundle (R8P13A)</b>	
<b>HPE ANW 10000 48Y 6C FB 6Fs TAA Bdl (S0F97A)</b>	
<b>Description</b>	<p>1 x R8P13A base 10000-48Y6C switch            6 x R8R53A Front-to-Back Fan            2 x R8R51A Front-to-Back Power Supply</p> <p>Supports 48 ports of 1G/10G/25GbE (SFP/SFP+/SFP28) and 6 ports of 40G/100GbE (QSFP+/QSFP28) (optional 1GBASE-T and 10GBASE-T transceivers, 4x10G and 4x25G breakout cables)</p>
<b>Power supplies</b>	Field-replaceable, hot-swappable, and up to 2 power supplies.
<b>Fans</b>	Field-replaceable, hot-swappable, and up to 6 fans.
<b>Physical characteristics</b>	<b>Dimensions</b> (H) 4.44 cm x (W) 43.82 cm x (D) 51.1 cm (1.75" x 17.25" x 20.12")
	<b>Weight</b> 9.75 kg (21.45 lb)
<b>Additional specifications</b>	<b>CPU</b> 2.9GHz
	<b>Memory, Drive and Flash</b> 32GB RAM, 64GB SSD
	<b>Packet Buffer</b> 32MB
<b>Performance<sup>2</sup></b>	<b>Switching capacity</b> 3.6Tbps (directional)
	<b>IPv4 Host Table</b> 120,000
	<b>IPv6 Host Table</b> 52,000
	<b>IPv4 Unicast Routes</b> 131,072
	<b>IPv6 Unicast Routes</b> 32,732
	<b>MAC address table size</b> 98,304
	<b>IGMP Groups</b> 4,094
	<b>MLD Groups</b> 4,094
	<b>IPv4 Multicast Routes</b> 4,094
	<b>IPv6 Multicast Routes</b> 4,094
	<b>Notes:</b> <sup>2</sup> Some of these scaling numbers assume shared tables.
<b>Environment</b>	<b>Operating temperature</b> 0°C to 40°C (32°F to 104°F) up to 3.0 km (10,000 ft.)
	<b>Operating relative humidity</b> 10% to 85% at 40°C (104°F) non-condensing
	<b>Non-operating temperature</b> -40°C to 70°C (-40°F to 158°F) up to 3.0 km (15,000 ft.)
	<b>Non-operating/storage relative humidity</b> 5% to 95% @ 65°C (149°F)
	<b>Max operating altitude</b> Up to 10,000ft (3.048 km)
	<b>Max non-operating altitude</b> Up to 15,000ft (4.6km)
	<b>Primary airflow</b> Front-to-Back Port to PSU or Back-to-Front PSU to Port
<b>Electrical characteristics</b>	<b>Frequency</b> 50-60 Hz
	<b>AC voltage</b> 100-240 volts
	<b>Current</b> 6A (low voltage) – 3A (high voltage)
	<b>Power consumption*</b> Max: 753W Typical: 550W Idle: 400W
	<b>Notes*:</b> <ul style="list-style-type: none"> <li>– Max measurement is collected under 100% line rate network traffic running, with all ports populated with SFP and QSFP modules.</li> <li>– Typical measurement is collected under 50% line rate network traffic running, with all ports populated with SFP and QSFP modules.</li> <li>– Idle measurement is collected with no network traffic or modules.</li> </ul>

## Technical Specifications

<b>Safety</b>	EN/IEC 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 EN/IEC 62368-1, 2nd. & 3rd. Ed. UL 62368-1, 3rd. Ed. CAN/CSA C22.2 No. 62368-1, 3rd. Ed.
<b>EMC</b>	EN 55032:2015/CISPR 32, Class A FCC CFR 47 Part 15: 2018 Class A ICES-003 Class A VCCI Class A CNS 13438 Class A KS C 9832 Class A AS/NZS CISPR 32 Class A EN 55035, CISPR 35, KS KS C 9835
<b>Lasers</b>	EN 60825-1:2014 / IEC 60825-1: 2014 Class 1 Class 1 Laser Products/Laser Klasse 1
<b>Management</b>	CLI REST API SNMP Aruba Fabric Composer NetEdit Aruba Central. Central support will come with Central 2.5.6 (not currently supported) RJ-45 serial USB micro USB console RJ-45 Ethernet port AMD Pensando Policy and Services Manager
<b>Mounting and enclosure</b>	Mounts in an EIA standard 19-inch rack or other equipment cabinet; horizontal surface mounting only; order 2-post or 4-post mounting kit separately

### 10000 48Y 6C Back-to-Front switch bundle (R8P14A)

### HPE ANW 10000 48Y 6C BF 6Fs 2PS TAA Bdl (S0F98A)

<b>I/O ports and slots</b>	1 x R8P14A base 10000-48Y6C switch 6 x R8R54A Front-to-Back Fan 2 x R8R52A Front-to-Back Power Supply  Supports 48 ports of 1G/10G/25GbE (SFP/SFP+/SFP28) and ports of 40G/100GbE (QSFP+/QSFP28) (optional 1GBASE-T and 10GBASE-T transceivers, 4x10G and 4x25G breakout cables)	
<b>Power supplies</b>	Field-replaceable, hot-swappable, and up to 2 power supplies.	
<b>Fans</b>	Field-replaceable, hot-swappable, and up to 6 fans.	
<b>Physical Dimensions</b>	<b>Dimensions</b>	(H) 4.44 cm x (W) 43.82 cm x (D) 51.1 cm (1.75" x 17.25" x 20.12")
	<b>Weight</b>	9.75 kg (21.45 lb)
<b>Additional Specifications</b>	<b>CPU</b>	2.9GHz
	<b>Memory, drive and Flash</b>	32GB RAM, 64GB SSD
	<b>Packet Buffer</b>	32MB
<b>Performance<sup>2</sup></b>	<b>Switching capacity</b>	3.6Tbps (directional)
	<b>IPv4 Host Table</b>	120,000
	<b>IPv6 Host Table</b>	52,000
	<b>IPv4 Unicast Routes</b>	131,072
	<b>IPv6 Unicast Routes</b>	32,732
	<b>MAC Table size</b>	98,304



## Technical Specifications

	<b>IGMP Groups</b>	4,094
	<b>MLD Groups</b>	4,094
	<b>IPv4 Multicast Routes</b>	4,094
	<b>IPv6 Multicast Routes</b>	4,094
	<b>Notes:</b> <sup>2</sup> Some of these scaling numbers assume shared tables.	
<b>Environment</b>	<b>Operating temperature</b>	0°C to 40°C (32°F to 104°F) up to 3.0 km (10,000 ft.)
	<b>Operating relative humidity</b>	10% to 85% at 40°C (104°F) non-condensing
	<b>Non-operating temperature</b>	-40°C to 70°C (-40°F to 158°F) up to 3.0 km (15,000 ft.)
	<b>Non-operating/storage relative humidity</b>	5% to 95% @ 65°C (149°F)
	<b>Max operating altitude</b>	Up to 10,000ft (3.048 km)
	<b>Max non-operating altitude</b>	Up to 15,000ft (4.6km)
	<b>Primary airflow</b>	Front-to-Back Port to PSU or Back-to-Front PSU to Port
<b>Electrical characteristics</b>	<b>Frequency</b>	50-60 Hz
	<b>AC voltage</b>	100-240 volts
	<b>Current</b>	6A (low voltage) – 3A (high voltage)
	<b>Power consumption*</b>	Max: 753W Typical: 550W Idle: 400W
	<b>*Notes:</b>	
	– Max measurement is collected under 100% line rate network traffic running, with all ports populated with SFP and QSFP modules.	
	– Typical measurement is collected under 50% line rate network traffic running, with all ports populated with SFP and QSFP modules.	
	– Idle measurement is collected with no network traffic or modules.	
<b>Safety</b>	EN/IEC 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 EN/IEC 62368-1, 2nd. & 3rd. Ed. UL 62368-1, 3rd. Ed. CAN/CSA C22.2 No. 62368-1, 3rd. Ed.	
<b>EMC</b>	EN 55032:2015/CISPR 32, Class A FCC CFR 47 Part 15: 2018 Class A ICES-003 Class A VCCI Class A CNS 13438 Class A KS C 9832 Class A AS/NZS CISPR 32 Class A EN 55035, CISPR 35, KS KS C 9835	
<b>Lasers</b>	EN 60825-1:2014 / IEC 60825-1: 2014 Class 1 Class 1 Laser Products/Laser Klasse 1	
<b>Management</b>	CLI REST API SNMP Aruba Fabric Composer NetEdit Aruba Central. Central support will come with Central 2.5.6 (not currently supported) RJ-45 serial USB micro USB console RJ-45 Ethernet port AMD Pensando Policy and Services Manager	
<b>Mounting and enclosure</b>	Mounts in an EIA standard 19-inch rack or other equipment cabinet; horizontal surface mounting only; order 2-post or 4-post mounting kit separately	

## Technical Specifications

### Standards and protocols

The following standards and protocols are supported.

- 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
- 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 802.3by 25 Gigabit Ethernet
- IEEE 802.3ba 40 and 100 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

## Technical Specifications

- 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
  - 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 5187 OSPFv3 Graceful Restart
  - 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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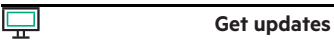
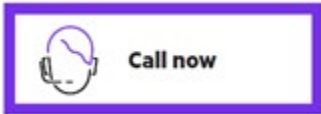
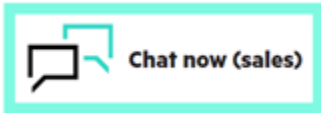
## Summary of Changes

Date	Version History	Action	Description of Change
03-Jun-2024	Version 18	Changed	Configuration Information section was updated
06-May-2024	Version 17	Changed	Configuration Information and Technical Specifications sections were updated
01-Apr-2024	Version 16	Changed	Configuration Information section was updated
04-Dec-2023	Version 15	Changed	Series name was updated.
14-Aug-2023	Version 14	Changed	Configuration Information section was updated
10-Jul-2023	Version 13	Changed	Configuration Information section was updated
05-Jun-2023	Version 12	Changed	Configuration Information section was updated
15-May-2023	Version 11	Changed	Configuration Information section was updated
13-Mar-2023	Version 10	Changed	Configuration Information section was updated
06-Feb-2023	Version 9	Changed	Standard Features and Configuration Information sections were updated.
19-Dec-2022	Version 8	Changed	Configuration Information section was updated
05-Dec-2022	Version 7	Changed	Configuration Information section was updated, new SKUs were also added.
07-Nov-2022	Version 6	Changed	Standard Features section was updated.
03-Oct-2022	Version 5	Changed	Configuration Information section was updated.
06-Jun-2022	Version 4	Changed	Standard Features and Configuration Information sections were updated.
07-Feb-2022	Version 3	Changed	Configuration Information section was updated.
10-Jan-2022	Version 2	Changed	Configuration Information section was updated, SKUs were added.
06-Dec-2021	Version 1	New	New QuickSpecs



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