# ARUBA CX 6300 SWITCH SERIES

## PRODUCT OVERVIEW

The Aruba CX 6300 Switch Series is a modern, flexible and intelligent family of stackable switches ideal for enterprise network access, aggregation and core. Created for game-changing operational efficiency with built-in security and resiliency, the 6300 switches provide the foundation for high-performance networks supporting IoT, mobile and cloud applications.

Built from the ground up with a combination of cutting-edge hardware, software and analytics and automation tools, the stackable 6300 switches are part of the Aruba CX switching portfolio, designed for today's enterprise campus, branch and data center networks. By combining a modern, fully programmable OS with the Aruba Network Analytics Engine, the 6300 switches provide industry leading monitoring and troubleshooting capabilities for the access layer.

A powerful Aruba Gen7 ASIC architecture delivers performance and robust feature support with flexible programmability for tomorrow's applications. The Aruba Virtual Stacking Framework (VSF) allows for stacking of up to 10 switches, providing scale and simplified management. This flexible series has built-in wirespeed 1/10/25/50GbE uplinks and supports high density IEEE 802.3bt high power PoE. HPE Smart Rate multi-gigabit Ethernet paves the way for high speed access points and IoT devices by delivering fast connectivity and high power PoE using existing cabling. Modular models offer redundancy and PoE customization. Modular power supplies and field replaceable fans are also supported.

Aruba Dynamic Segmentation extends Aruba's foundational wireless role-based policy capability to Aruba wired switches. What this means is that the same security, user experience and simplified IT management can be enjoyed throughout the network. Regardless of how users and IoT devices connect, consistent policies are enforced across wired and wireless networks, keeping traffic secure and separate.
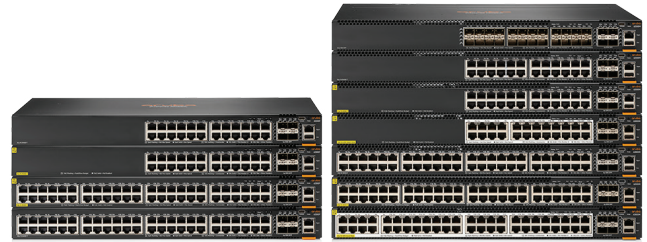
## KEY BENEFITS

- Stackable Layer 3 switches with BGP, EVPN, VXLAN, VRF, and OSPF with robust security and QoS
- High performance 880 Gbps system switching capacity, 660 MPPS of system throughput and up to 200 Gbps stacking bandwidth
- Compact 1U switches with full density HPE Smart Rate (1/2.5/5GbE) multi-gigabit, 60W PoE and SFP+ models
- Built-in high speed 10GbE/25GbE/50GbE uplinks
- Intelligent monitoring, visibility, and remediation with Aruba Network Analytics Engine
- One touch deployment with the Aruba CX Mobile App
- Aruba NetEdit support for automated configuration and verification
- Aruba Dynamic Segmentation enables secure and simple access for users and IoT

## PRODUCT DIFFERENTIATORS

### AOS-CX - a modern operating system

The Aruba CX 6300 Switch Series is based on AOS-CX, a modern, database-driven operating system that automates and simplifies many critical and complex network tasks. A built-in time series database enables customers and developers to utilize software scripts for historical troubleshooting, as well as analysis of past trends. This helps predict and avoid future problems due to scale, security, and performance bottlenecks.

Our AOS-CX software also includes Aruba Network Analytics Engine (NAE) and support for Aruba NetEdit. Because AOS-CX is built on a modular Linux architecture with a stateful database, our operating system provides the following unique capabilities:

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

### Aruba Network Analytics Engine - advanced monitoring and diagnostics

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

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

### Aruba NetEdit – automated switch configuration and management

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

- Centralized configuration with validation for consistency and compliance

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

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

### Aruba CX Mobile App – true deployment convenience

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

### Aruba ASICs - programmable innovation

Based on over 30 years of continuous investment, Aruba's ASICs create the basis for innovative and agile software feature advancements, unparalleled performance and deep visibility. These programmable ASICs are purpose-built to allow for a tighter integration of switch hardware and software within campus and data center architectures to optimize performance and capacity. Virtual Output Queuing (VOQ) isolates congestion, prevents Head of Line Blocking (HOLB) and allows full line rate on outgoing (egress) ports. Flexible ASIC resources enable Aruba's NAE solution to inspect all data, which allows for industry-leading analytics capabilities. The Aruba CX 6300 is based on the Aruba Gen7 ASIC architecture.

### Aruba Dynamic Segmentation – improved segmentation and simplicity

For enhanced security, Aruba Dynamic Segmentation automatically applies and enforces user, device and application-aware policies on Aruba wired and wireless infrastructure. Automated device profiling, role-based access control, and Layer 7 firewall features deliver enhanced visibility and performance for a better overall experience for both IT and end-users alike.

The Aruba CX 6300 introduces a policy-driven standards-based segmented network solution with higher performance and scale with switch-to-switch tunnels using VXLAN and BGP EVPN. This offers the choice of tunnelling to the

controller to use L4-L7 services or tunnelling to another Aruba switch for low-latency and high performance use cases. Simplified IT controls include:

- A secure tunnel from Aruba switches or access points transports user traffic to an Aruba Controller or Gateway. Policies can be written on the Controller or Gateway – or the Aruba ClearPass Policy Manager can be used to centrally configure policies to further simplify micro-segmentation of networks.
- The utilization of user roles will include a set of switch-based rules to define authentication, authorization and QoS values for each connecting device. A user role can be assigned to a group of users or devices, regardless of using local user roles written on the switch or downloaded from ClearPass.
- Switch-to-switch tunnels enables scalable multi-tenancy support with VXLAN to VRF mapping while allowing policy application via User Roles.

## Mobility and IoT performance

The Aruba CX 6300 Switch Series uses a fully distributed architecture that utilizes the Aruba Gen7 ASICs. This ensures that our switches offer very low latency, increased packet buffering, and adaptive power consumption. All switching and routing are wire-speed to meet the demands of bandwidth-intensive applications today and in the future. Each switch includes the following:

- Up to 880 Gbps in non-blocking bandwidth and up to 660 Mpps for forwarding
- 50GbE uplinks and large TCAM sizes ideal for mobility and IoT deployments in large campuses with several thousand clients
- Selectable queue configurations that allow for increased performance by defining a number of queues and associated memory buffering to best meet the requirements of network applications

## VSF Stacking - scale and simplicity

The Aruba Virtual Switching Framework (VSF) allows you to quickly grow your network using high performance front plane stacking. Four built-in 50G SFP ports support speeds of 1GbE, 10GbE, 25GbE and 50GbE for a total of up to 200 Gbps of stacking throughput per switch. Additional features include:

- Support for up to 10 switches (or members) in a stack via chain or ring topology

- Flexibility to create stacks that span longer distances such as hundreds of meters across campuses to kilometres between sites using long-range 10/25/50GbE transceivers
- Flexibility to mix both modular and fixed Aruba 6300 models within a single stack to meet your deployment requirements
- Simplified configuration and management as the switches act as a single chassis when stacked
- The Aruba CX Mobile app provides support for a validated stack deployment that ensure that all stack links and uplinks are connected properly

## An Aruba CX 6300 switch for any enterprise environment

Whether in the branch office or a small to large enterprise environment, you can choose from eleven, 24 and 48 port 1U models. Each switch includes four high-speed built-in uplinks that auto-negotiate from 1GbE, 10GbE to 25GbE to 50GbE to deliver non-blocking performance. Fixed format (F) models include built-in power supplies. The modular (M) models have rear slots for hot swappable power supplies that allow you to customize your PoE requirements, and its fans are field replaceable. Additional highlights:

- Compact 1U models support:
  - 24 and 48 ports of HPE Smart Rate Multi-gigabit Ethernet IEEE 802.3bz (100M/1GbE/2.5GbE/5GbE) supporting high power IEEE 802.3bt Class 6 (60W)
  - High density 24 port SFP+ model which is ideal for aggregation
  - 10GbE/25GbE/50GbE uplink port connectivity
- HPE Smart Rate multi-gigabit (IEEE 802.3bz) Ethernet supports high speed wireless access points
- For deployments that need higher port and PoE density, the 6300 supports 60W of PoE in every port of a 48-port switch for a total of 2880W of PoE
- Industry standard IEEE 802.3bt High Power PoE support (class 6) provides up to 60W per port for support of the latest IoT devices and APs. PoE support for IEEE 802.3at Power over Ethernet (PoE+) provides up to 30W per port as well as any IEEE 802.3af-compliant end device
- Support for pre-standard PoE detection provides power to legacy PoE devices
- High availability with always-on PoE that supplies PoE power even during scheduled reboots and firmware upgrades

- Auto-MDIX provides automatic adjustments for straight-through or crossover cables on all 10/100/1000, Smart Rate and 10GBASE-T ports
- IPv6 capabilities include:
  - IPv6 host enables switches to be managed in an IPv6 network
  - Dual stack (IPv4 and IPv6) transitions from IPv4 to IPv6, supporting connectivity for both protocols
  - MLD snooping forwards IPv6 multicast traffic to the appropriate interface
  - IPv6 ACL/QoS supports ACL and QoS for IPv6 network traffic
  - IPv6 routing supports Static and OSPFv3 protocols
  - Security provides RA guard, DHCPv6 protection, dynamic IPv6 lockdown, and ND snooping
- Jumbo frames allow for high-performance backups and disaster-recovery systems; provides a maximum frame size of 9198 bytes
- Packet storm protection against broadcast, multicast and unknown unicast storms with user-defined thresholds

## High availability and resiliency

To ensure a high degree of up-time we offer high availability and multicast features needed for a full Layer 3 deployment at access and aggregation such as PBR, BFD, MSDP, BSR, and IP SLA without the need for software licenses. This includes:

- Hot Swappable Power Supplies available in the 6300 "M" models
  - Provides N+1 and N+N redundancy for high reliability in the event of power line or supply failures
  - Optional secondary power supplies to increase the total available PoE power
  - Fixed power supplies in 6300 "F" models
- Bidirectional Forward Detection (BFD) enables sub-second failure detection for rapid routing protocol re-balancing
- Virtual Router Redundancy Protocol (VRRP) allows groups of two routers to dynamically create highly available routed environments in IPV4 and IPV6 networks
- Uni-directional Link Detection (UDLD) to monitor link connectivity and shut down ports at both ends if uni-directional traffic is detected, preventing loops in STP-based networks
- IEEE 802.3ad LACP supports up to 256 LAGs, each with up to 8 links per LAG; and provides support for static or dynamic groups and a user-selectable hashing algorithm

- IEEE 802.1s Multiple Spanning Tree provides high link availability in VLAN environments where multiple spanning trees are required; and legacy support for IEEE 802.1d and IEEE 802.1w
- IEEE 802.3ad link-aggregation-control protocol (LACP) and port trunking support static and dynamic trunks where each trunk supports up to eight links (ports) per static trunk
- Support for Microsoft Network Load Balancer (NLB) for server applications

## Quality of Service (QoS) features

To support congestion actions and traffic prioritization, the Aruba CX 6300 Series includes the following:

- Strict priority (SP) queuing and Deficit Weighted Round Robin (DWRR)
- Traffic prioritization (IEEE 802.1p) for real-time classification into 8 priority levels that are mapped to 8 queues
- Layer 4 prioritization based on TCP/UDP port numbers
- Class of Service (CoS) sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ
- Rate limiting sets per-port ingress enforced maximums and per-port, per-queue minimums
- Transmission rates of egressing frames can be limited on a per-queue basis using Egress Queue Shaping (EQS)
- Large buffers for graceful congestion management

## Simplified configuration and management

In addition to the Aruba CX Mobile App, Aruba NetEdit and Aruba Network Analytics Engine, the 6300 series offers the following:

- Built-in programmable and easy to use REST API interface
- Simple day zero provisioning
- Scalable ASIC-based wire speed network monitoring and accounting with no impact on network performance; network operators can gather a variety of network statistics and information for capacity planning and real-time network monitoring purposes
- Management interface control enables or disables each of the following depending on security preferences, console port, or reset button
- Industry-standard CLI with a hierarchical structure for reduced training time and expense. Delivers increased productivity in multivendor environments

- Management security restricts access to critical configuration commands, provides multiple privilege levels with password protection and local and remote syslog capabilities allow logging of all access
- SNMP v2c/v3 provides SNMP read and trap support of industry standard Management Information Base (MIB), and private extensions
- Remote monitoring (RMON) with standard SNMP to monitor essential network functions. Supports events, alarms, history, and statistics groups as well as a private alarm extension group; RMON, and sFlow provide advanced monitoring and reporting capabilities for statistics, history, alarms and events
- TFTP and SFTP support offers different mechanisms for configuration updates; trivial FTP (TFTP) allows bidirectional transfers over a TCP/ IP network; Secure File Transfer Protocol (SFTP) runs over an SSH tunnel to provide additional security
- Debug and sampler utility supports ping and traceroute for IPv4 and IPv6
- Network Time Protocol (NTP) synchronizes timekeeping among distributed time servers and clients; keeps timekeeping consistent among all clock-dependent devices within the network so the devices can provide diverse applications based on the consistent time
- 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
- Assignment of descriptive names to ports for easy identification
- Multiple configuration files can be stored to a flash image
- Ingress and egress port monitoring enable more efficient network problem solving
- Unidirectional link detection (UDLD) monitors the link between two switches and blocks the ports on both ends of the link if the link goes down at any point between the two devices
- IP SLA for Voice monitors quality of voice traffic using the UDP Jitter and UDP Jitter for VoIP tests

## Layer 2 Switching

The following layer 2 services are supported:

- VLAN support and tagging for IEEE 802.1Q (4094 VLAN IDs)
- Jumbo packet support improves the performance of large data transfers; supports frame size of up to 9198 bytes
- IEEE 802.1v protocol VLANs isolate select non-IPv4 protocols automatically into their own VLANs
- Rapid Per-VLAN Spanning Tree (RPVST+) allows each VLAN to build a separate spanning tree to improve link bandwidth usage; is compatible with PVST+
- MVRP allows automatic learning and dynamic assignment of VLANs
- VXLAN encapsulation (tunnelling) protocol for overlay network that enables a more scalable virtual network deployment
- Bridge Protocol Data Unit (BPDU) tunnelling Transmits STP BPDUs transparently, allowing correct tree calculations across service providers, WANs, or MANs
- Port mirroring duplicates port traffic (ingress and egress) to a monitoring port; supports 4 mirroring groups
- STP supports standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- Internet Group Management Protocol (IGMP) Controls and manages the flooding of multicast packets in a Layer 2 network

## Layer 3 Services

The following layer 3 services are supported:

- Bidirectional Forwarding Detection (BFD) enables link connectivity monitoring and reduces network convergence time for static route, OSPFv2 and VRRP
- User Datagram Protocol (UDP) helper function allows UDP broadcasts to be directed across router interfaces to specific IP unicast or subnet broadcast addresses and prevents server spoofing for UDP services such as DHCP
- Loopback interface address defines an address in Open Shortest Path First (OSPF), improving diagnostic capability
- Route maps provide more control during route redistribution; allow filtering and altering of route metrics
- 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

- Dynamic Host Configuration Protocol (DHCP) simplifies the management of large IP networks and supports client; DHCP Relay enables DHCP operation across subnets
- DHCP server centralizes and reduces the cost of IPv4 address management
- 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

The following layer 3 routing services are supported:

- Border Gateway Protocol (BGP) provides IPv4 and IPv6 routing, which is scalable, robust, and flexible
- 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 with graceful restart capability
- Equal-Cost Multipath (ECMP) enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth
- Multi-protocol BGP (MP-BGP) enables sharing of IPv6 routes using BGP and connections to BGP peers using IPv6
- 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
- OSPF provides OSPFv2 for IPv4 routing and OSPFv3 for IPv6 routing
- Static IP routing provides manually configured routing; includes ECMP capability
- Policy-based routing uses a classifier to select traffic that can be forwarded based on policy set by the network administrator
- Static IPv4 and IPv6 routing provides simple manually configured IPv4 and IPv6 routes
- 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
- 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

## Security

The Aruba CX 6300 Switch Series come with an integrated trusted platform module (TPM) for platform integrity. This ensures the boot process started from a trusted combination of Aruba AOS-CX switches. Other security features include:

- TAA Compliance uses FIPS 140-2 validated cryptography for protection of sensitive information
- Access control list (ACL) support for both IPv4 and IPv6; allows for filtering traffic to prevent unauthorized users from accessing the network, or for controlling network traffic to save resources; rules can either deny or permit traffic to be forwarded; rules can be based on a Layer 2 header or a Layer 3 protocol header
- ACLs also provide filtering based on the IP field, source/ destination IP address/subnet, and source/ destination TCP/UDP port number on a per-VLAN or per-port basis
- Remote Authentication Dial-In User Service (RADIUS)
- Terminal Access Controller Access-Control System (TACACS+) delivers an authentication tool using TCP with encryption of the full authentication request, providing additional security
- Management access security for both on- and off-box authentication for administrative access. RADIUS or TACACS+ can be used to provide encrypted user authentication. Additionally, TACACS+ can also provide admin authorization services
- Control Plane Policing sets rate limit on control protocols to protect CPU overload from DOS attacks
- Supports multiple user authentication methods. Uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards
- Web based authentication using Captive Portal on ClearPass is supported for use cases such as Guest Access and for devices that don't support 802.1x or MAC Auth.
- Supports MAC-based client authentication
- Concurrent IEEE 802.1X, Web, and MAC authentication schemes per switch port accepts up to 32 sessions of IEEE 802.1X, Web, and MAC authentications
- DHCP protection blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- Secure management access delivers secure encryption of all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3
- Switch CPU protection provides automatic protection against malicious network traffic trying to shut down the switch

- ICMP throttling defeats ICMP denial-of-service attacks by enabling any switch port to automatically throttle ICMP traffic
- Identity-driven ACL enables implementation of a highly granular and flexible access security policy and VLAN assignment specific to each authenticated network user
- STP BPDU port protection blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- Dynamic IP lockdown works with DHCP protection to block traffic from unauthorized hosts, preventing IP source address spoofing
- Dynamic ARP protection blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- STP root guard protects the root bridge from malicious attacks or configuration mistakes
- Port security allows access only to specified MAC addresses, which can be learned or specified by the administrator
- MAC address lockout prevents particular configured MAC addresses from connecting to the network
- Source-port filtering allows only specified ports to communicate with each other
- Secure shell encrypts all transmitted data for secure remote CLI access over IP networks
- Secure Sockets Layer (SSL) encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- Secure FTP allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- Critical Authentication Role ensures that important infrastructure devices such as IP phones are allowed network access even in the absence of a RADIUS server
- MAC Pinning allows non-chatty legacy devices to stay authenticated by pinning client MAC addresses to the port until the clients logoff or get disconnected
- Management Interface Wizard helps secure management interfaces such as SNMP, telnet, SSH, SSL, Web, and USB at the desired level
- Security banner displays a customized security policy when users log in to the switch

## Multicast

- IGMP Snooping allows multiple VLANs to receive the same IPv4 multicast traffic, lessening network bandwidth demand by reducing multiple streams to each VLAN

- Multicast Listener Discovery (MLD) enables discovery of IPv6 multicast listeners; support MLD v1 and v2
- Protocol Independent Multicast (PIM) defines modes of IPv4 and IPv6 multicasting to allow one-to-many and many-to-many transmission of information; supports PIM Sparse Mode (SM) and Dense Mode (DM) for both IPv4 and IPv6
- Internet Group Management Protocol (IGMP) utilizes Any-Source Multicast (ASM) to manage IPv4 multicast networks; supports IGMPv1, v2, and v3
- Multicast Service Discovery Protocol (MSDP) efficiently routes multicast traffic through core networks

## Convergence

- IP multicast routing includes PIM Sparse and Dense modes to route IP multicast traffic
- IP multicast snooping (data-driven IGMP) prevents flooding of IP multicast traffic
- Protocol Independent Multicast for IPv6 supports one-to-many and many-to-many media casting use cases such as IPTV over IPv6 networks
- LLDP-MED (Media Endpoint Discovery) defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones
- PoE allocations supports multiple methods (allocation by usage or class, with LLDP and LLDP-MED) to allocate PoE power for more efficient power management and energy savings.
- Auto VLAN configuration for voice RADIUS VLAN uses a standard RADIUS attribute and LLDP-MED to automatically configure a VLAN for IP phones
- CDPv2 uses CDPv2 to configure legacy IP phones

## Additional information

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

## Warranty, services and support

- Limited Lifetime Warranty, see https://www.arubanetworks.com/support-services/product-warranties/ for warranty and support information included with your product purchase
- For Software Releases and Documentation, refer to https://asp.arubanetworks.com/downloads
- For support and services information, visit https://www.arubanetworks.com/support-services/arubacare/

## SPECIFICATIONS

| | Aruba 6300M 24-port SFP+ and 4-port SFP56 Switch (JL658A) | Aruba 6300M 48-port HPE Smart Rate 1/2.5/5GbE Class 6 PoE and 4-port SFP56 Switch (JL659A) | Aruba 6300M 24-port HPE Smart Rate 1/2.5/5GbE Class 6 PoE and 4-port SFP56 Switch (JL660A) | Aruba 6300M 48-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL661A) |
|---|---|---|---|---|
| Description | 24x 1G/10G SFP+ ports<br><br>4x 1/10/25/50G SFP ports<br><br>1x USB-C Console Port<br>1x OOBM port<br>1x USB Type A Host port<br>1x Bluetooth dongle to be used with CX Mobile App | 48x ports SmartRate 100M/1G/2.5G/5G BaseT Class 6 PoE ports supporting up to 60W per port<br><br>4x 1/10/25/50G SFP ports<br><br>Supports PoE Standards IEEE 802.3af, 802.3at and 802.3bt (up to 60W)<br><br>1x USB-C Console Port<br>1x OOBM port<br>1x USB Type A Host port<br>1x Bluetooth dongle to be used with CX Mobile App | 24x ports Smart Rate 100M/1G/2.5G/5G BaseT Class 6 PoE ports supporting up to 60W per port<br><br>4x 1/10/25/50G SFP ports<br><br>Supports PoE Standards IEEE 802.3af, 802.3at and 802.3bt (up to 60W)<br><br>1x USB-C Console Port<br>1x OOBM port<br>1x USB Type A Host port<br>1x Bluetooth dongle to be used with CX Mobile App | 48x ports 10/100/1000 BaseT PoE+ ports supporting up to 30W per port<br><br>4x 1/10/25/50G SFP ports<br><br>Supports PoE Standards IEEE 802.3af, 802.3at<br><br>1x USB-C Console Port<br>1x OOBM port<br>1x USB Type A Host port<br>1x Bluetooth dongle to be used with CX Mobile App |
| Power supplies | 2 field-replaceable, hot-swappable power supply slots<br><br>1 minimum power supply required (ordered separately)<br><br>Supports JL085A PSU | 2 field-replaceable, hot-swappable power supply slots<br><br>1 minimum power supply required (ordered separately)<br><br>Supported PSUs<br>JL086A<br>JL087A<br>JL670A<br><br>Max PoE Power: 2880W | 2 field-replaceable, hot-swappable power supply slots<br><br>1 minimum power supply required (ordered separately)<br><br>Supported PSUs<br>JL086A<br>JL087A<br>JL670A<br><br>Max PoE Power: 1440W | 2 field-replaceable, hot-swappable power supply slots<br><br>1 minimum power supply required (ordered separately)<br><br>Supported PSUs<br>JL086A<br>JL087A<br>JL670A<br><br>Max PoE Power: 1440W |
| Fans | Switch has two fan tray slots and comes with two fan trays installed.<br>• Min 2 fan trays required.<br>• Fan trays are field replaceable and hot-swappable.<br>• Each fan tray contains two fans. | Switch has two fan tray slots and comes with two fan trays installed.<br>• Min 2 fan trays required.<br>• Fan trays are field replaceable and hot-swappable.<br>• Each fan tray contains two fans. | Switch has two fan tray slots and comes with one fan tray installed.<br>• Min 1 fan tray required.<br>• Fan trays are field replaceable and hot-swappable.<br>• Each fan tray contains two fans. | Switch has two fan tray slots and comes with one fan tray installed.<br>• Min 1 fan tray required.<br>• Fan trays are field replaceable and hot-swappable.<br>• Each fan tray contains two fans. |
| **Physical characteristics** | | | | |
| Dimensions | (H) 4.4 cm x<br>(W) 44.2 cm x<br>(D) 38.5 cm<br>(1.73" x 17.4" x 15.2") | (H) 4.4 cm x<br>(W) 44.2 cm x<br>(D) 38.5 cm<br>(1.73" x 17.4" x 15.2") | (H) 4.4 cm x<br>(W) 44.2 cm x<br>(D) 38.5 cm<br>(1.73" x 17.4" x 15.2") | (H) 4.4 cm x<br>(W) 44.2 cm x<br>(D) 38.5 cm<br>(1.73" x 17.4" x 15.2") |
| Configuration Weight | 5.8 Kg (12.78 lbs) | 6.71 kg (14.8 lbs) | 6.06 (13.36 lbs) | 5.72 kg (12.61 lbs) |
| **Additional Specifications** | | | | |
| CPU | Quad Core ARM Cortex™ A72 @ 1.8GHz | Quad Core ARM Cortex™ A72 @ 1.8GHz | Quad Core ARM Cortex™ A72 @ 1.8GHz | Quad Core ARM Cortex™ A72 @ 1.8GHz |
| Memory and Flash | 8 GB DDR4<br>32 GB eMMC | 8 GB DDR4<br>32 GB eMMC | 8 GB DDR4<br>32 GB eMMC | 8 GB DDR4<br>32 GB eMMC |
| Packet Buffer | 8 MB Packet Buffer Memory | 8 MB Packet Buffer Memory | 8 MB Packet Buffer Memory | 8 MB Packet Buffer Memory |

## SPECIFICATIONS (CONTINUED)

| | Aruba 6300M 24-port SFP+ and 4-port SFP56 Switch (JL658A) | Aruba 6300M 48-port HPE Smart Rate 1/2.5/5GbE Class 6 PoE and 4-port SFP56 Switch (JL659A) | Aruba 6300M 24-port HPE Smart Rate 1/2.5/5GbE Class 6 PoE and 4-port SFP56 Switch (JL660A) | Aruba 6300M 48-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL661A) |
|---|---|---|---|---|
| **Performance** | | | | |
| System Switching Capacity | 880 Gbps | 880 Gbps | 880 Gbps | 880 Gbps |
| System Throughput Capacity | 660 Mpps | 660 Mpps | 660 Mpps | 660 Mpps |
| Model Switching Capacity | 880 Gbps | 880 Gbps | 640 Gbps | 496 Gbps |
| Model Throughput Capacity | 654 Mpps | 654 Mpps | 476 Mpps | 369 Mpps |
| Average Latency (LIFO-64-bytes packets) | 1Gbps: 1.99µSec<br>10Gbps: 1.49µSec<br>25Gbps: 2.85µSec<br>50Gbps: 2.82µSec | 1Gbps: 4.24µSec<br>10Gbps: 1.50µSec<br>25Gbps: 2.91µSec<br>50Gbps: 3.49µSec | 1Gbps: 4.24µSec<br>10Gbps: 1.50µSec<br>25Gbps: 2.91µSec<br>50Gbps: 3.49µSec | 1Gbps: 2.28µSec<br>10Gbps: 1.46µSec<br>25Gbps: 1.90µSec<br>50Gbps: 3.49µSec |
| Stack Size | 10 members | 10 members | 10 members | 10 members |
| Max. Stacking Distance | Up to 10 kms with long range transceivers | Up to 10 kms with long range transceivers | Up to 10 kms with long range transceivers | Up to 10 kms with long range transceivers |
| Stacking Bandwidth | 200 Gbps | 200 Gbps | 200 Gbps | 200 Gbps |
| Switched Virtual Interfaces (dual stack) | 1,000 | 1,000 | 1,000 | 1,000 |
| IPv4 Host Table (ARP) | 28,800 | 28,800 | 28,800 | 28,800 |
| IPv6 Host Table (ND) | 28,800 | 28,800 | 28,800 | 28,800 |
| IPv4 Unicast Routes | 64,000 | 64,000 | 64,000 | 64,000 |
| IPv6 Unicast Routes | 32,000 | 32,000 | 32,000 | 32,000 |
| IPv4 Multicast Routes | 8,000 | 8,000 | 8,000 | 8,000 |
| IPv6 Multicast Routes | 8,000 | 8,000 | 8,000 | 8,000 |
| MAC Table Capacity | 29,490 | 29,490 | 29,490 | 29,490 |
| IGMP Groups | 8,000 | 8,000 | 8,000 | 8,000 |
| MLD Groups | 4,000 | 4,000 | 4,000 | 4,000 |
| IPv4/IPv6/MAC ACL Entries (ingress) | 5000/1250/5000 | 5000/1250/5000 | 5000/1250/5000 | 5000/1250/5000 |
| IPv4/IPv6/MAC ACL Entries (egress) | 2000/500/2000 | 2000/500/2000 | 2000/500/2000 | 2000/500/2000 |
| **Environment** | | | | |
| Operating Temperature | 32°F to 113°F (0°C to 45°C) up to 5,000 ft. Derate -1 degree C for every 1,000 ft from 5,000 ft to 10,000 ft. Can support excursion to 131°F (55°C) for short periods[1] of time. Operating temperature is reduced to 32°F (0°C) to 104°F (40°C) up to 5000ft when 10G SFP+ LR or ER Transceivers are installed. | 32°F to 113°F (0°C to 45°C) up to 5,000 ft. Derate -1 degree C for every 1,000 ft from 5,000 ft to 10,000 ft | 32°F to 113°F (0°C to 45°C) up to 5,000 ft. Derate -1 degree C for every 1,000 ft from 5,000 ft to 10,000 ft. Can support excursion to 131°F (55°C) for short periods[1] of time. Requires two fan trays to support excursion. | 32°F to 113°F (0°C to 45°C) up to 5,000 ft. Derate -1 degree C for every 1,000 ft from 5,000 ft to 10,000 ft. Can support excursion to 131°F (55°C) for short periods[1] of time. |
| Operating Relative Humidity | 15% to 95% @ 104°F (40°C) non-condensing | 15% to 95% @ 104°F (40°C) non-condensing | 15% to 95% @ 104°F (40°C) non-condensing | 15% to 95% @ 104°F (40°C) non-condensing |

## SPECIFICATIONS (CONTINUED)

| | Aruba 6300M 24-port SFP+ and 4-port SFP56 Switch (JL658A) | Aruba 6300M 48-port HPE Smart Rate 1/2.5/5GbE Class 6 PoE and 4-port SFP56 Switch (JL659A) | Aruba 6300M 24-port HPE Smart Rate 1/2.5/5GbE Class 6 PoE and 4-port SFP56 Switch (JL660A) | Aruba 6300M 48-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL661A) |
|---|---|---|---|---|
| **Environment (continued)** | | | | |
| Non-Operating | -40°F to 158°F (-40°C to 70°C) up to 15,000 ft | -40°F to 158°F (-40°C to 70°C) up to 15,000 ft | -40°F to 158°F (-40°C to 70°C) up to 15,000 ft | -40°F to 158°F (-40°C to 70°C) up to 15,000 ft |
| Non-Operating Storage relative humidity | 15% to 90% @ 149°F (65°C) non-condensing | 15% to 90% @ 149°F (65°C) non-condensing | 15% to 90% @ 149°F (65°C) non-condensing | 15% to 90% @ 149°F (65°C) non-condensing |
| Max Operating Altitude | 10,000 feet (3.04 km) Max | 10,000 feet (3.04 km) Max | 10,000 feet (3.04 km) Max | 10,000 feet (3.04 km) Max |
| Max non-operating Altitude | 15,000 feet (4.6 km) Max | 15,000 feet (4.6 km) Max | 15,000 feet (4.6 km) Max | 15,000 feet (4.6 km) Max |
| Acoustic | Sound Power, $L_{WAd}$ = 4.9 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 31.0 dB | Sound Power, $L_{WAd}$ = 4.8 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 30.6 dB | Sound Power, $L_{WAd}$ = 5.2 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 34.2 dB | Sound Power, $L_{WAd}$ = 4.7 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 29.8 dB |
| Primary Airflow | Front and side to back | Front and side to back | Front and side to back | Front and side to back |
| **Electrical Characteristics** | | | | |
| Frequency | 50Hz/60Hz | 50Hz/60Hz | 50Hz/60Hz | 50Hz/60Hz |
| AC Voltage | JL085A PSU: 100V-240V | JL670A PSU: 110V-120V/208V-240V JL086A PSU: 100V-240V JL087A PSU: 110V-240V | JL670A PSU: 110V-120V/208V-240V JL086A PSU: 100V-240V JL087A PSU: 110V-240V | JL670A PSU: 110V-120V/208V-240V JL086A PSU: 100V-240V JL087A PSU: 110V-240V |
| Current (for voltages listed above) | JL085A PSU: 3A/1.2A | JL670A PSU: 11A/8A JL086A PSU: 8A/3.5A JL087A PSU: 12A/5A | JL670A PSU: 11A/8A JL086A PSU: 8A/3.5A JL087A PSU: 12A/5A | JL670A PSU: 11A/8A JL086A PSU: 8A/3.5A JL087A PSU: 12A/5A |
| Power Consumption (230VAC) | Hibernation (0 rpm fan): 9W Idle: 51W 100% Traffic Rate: 85W | With JL086A PSU: Hibernation (0 rpm fan): 24W Idle: 133W 100% Traffic Rate: 199W<br><br>With JL087A PSU: Hibernation (0 rpm fan): 22W Idle: 138W 100% Traffic Rate: 193W<br><br>With JL670A PSU: Hibernation (0 rpm fan): 21W Idle: 140W 100% Traffic Rate: 201W | With JL086A PSU: Hibernation (0 rpm fan): 24W Idle: 93W 100% Traffic Rate: 137W<br><br>With JL087A PSU: Hibernation (0 rpm fan): 22W Idle: 91W 100% Traffic Rate: 131W<br><br>With JL670A PSU: Hibernation (0 rpm fan): 21W Idle: 98W 100% Traffic Rate: 139W | With JL086A PSU: Hibernation (0 rpm fan): 18W Idle: 70W 100% Traffic Rate: 90W<br><br>With JL087A PSU: Hibernation (0 rpm fan): 16W Idle: 71W 100% Traffic Rate: 88W<br><br>With JL670A PSU: Hibernation (0 rpm fan): 16W Idle: 73W 100% Traffic Rate: 96W |
| **Safety** | | | | |
| | Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013<br><br>US: UL 60950-1 2nd Ed.<br><br>Canada: CAN/CSA-C22.2 No. 60950-1-07<br><br>Worldwide: IEC 60950-1:2005 w/all known National Deviations | Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013<br><br>US: UL 60950-1 2nd Ed.<br><br>Canada: CAN/CSA-C22.2 No. 60950-1-07<br><br>Worldwide: IEC 60950-1:2005 w/all known National Deviations | Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013<br><br>US: UL 60950-1 2nd Ed.<br><br>Canada: CAN/CSA-C22.2 No. 60950-1-07<br><br>Worldwide: IEC 60950-1:2005 w/all known National Deviations | Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013<br><br>US: UL 60950-1 2nd Ed.<br><br>Canada: CAN/CSA-C22.2 No. 60950-1-07<br><br>Worldwide: IEC 60950-1:2005 w/all known National Deviations |

## SPECIFICATIONS (CONTINUED)

| | Aruba 6300M 24-port SFP+ and 4-port SFP56 Switch (JL658A) | Aruba 6300M 48-port HPE Smart Rate 1/2.5/5GbE Class 6 PoE and 4-port SFP56 Switch (JL659A) | Aruba 6300M 24-port HPE Smart Rate 1/2.5/5GbE Class 6 PoE and 4-port SFP56 Switch (JL660A) | Aruba 6300M 48-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL661A) |
|---|---|---|---|---|
| **Emissions** | | | | |
| | Europe:<br>EN 55022:2010, Class A<br>EN 55032:2012, Class A<br>EN 55024:2010<br>EN 61000-3-2:2014<br>EN 61000-3-3:2013<br><br>US:<br>FCC part 15 Class A<br><br>Canada:<br>ICES-003 Class A<br><br>Worldwide:<br>VCCI Class A<br>CISPR 22 Class A<br>CISPR 32 Class A<br>CISPR 24:2010 | Europe:<br>EN 55022:2010, Class A<br>EN 55032:2012, Class A<br>EN 55024:2010<br>EN 61000-3-2:2014<br>EN 61000-3-3:2013<br><br>US:<br>FCC part 15 Class A<br><br>Canada:<br>ICES-003 Class A<br><br>Worldwide:<br>VCCI Class A<br>CISPR 22 Class A<br>CISPR 32 Class A<br>CISPR 24:2010 | Europe:<br>EN 55022:2010, Class A<br>EN 55032:2012, Class A<br>EN 55024:2010<br>EN 61000-3-2:2014<br>EN 61000-3-3:2013<br><br>US:<br>FCC part 15 Class A<br><br>Canada:<br>ICES-003 Class A<br><br>Worldwide:<br>VCCI Class A<br>CISPR 22 Class A<br>CISPR 32 Class A<br>CISPR 24:2010 | Europe:<br>EN 55022:2010, Class A<br>EN 55032:2012, Class A<br>EN 55024:2010<br>EN 61000-3-2:2014<br>EN 61000-3-3:2013<br><br>US:<br>FCC part 15 Class A<br><br>Canada:<br>ICES-003 Class A<br><br>Worldwide:<br>VCCI Class A<br>CISPR 22 Class A<br>CISPR 32 Class A<br>CISPR 24:2010 |
| **Lasers** | | | | |
| | EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only) | EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only) | EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only) | EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only) |
| **Immunity** | | | | |
| Generic | CISPR 24 / CISPR 35 | CISPR 24 / CISPR 35 | CISPR 24 / CISPR 35 | CISPR 24 / CISPR 35 |
| EN | EN 55024:2010 / EN 55035:2017 | EN 55024:2010 / EN 55035:2017 | EN 55024:2010 / EN 55035:2017 | EN 55024:2010 / EN 55035:2017 |
| ESD | IEC 61000-4-2 | IEC 61000-4-2 | IEC 61000-4-2 | IEC 61000-4-2 |
| Radiated | IEC 61000-4-3 | IEC 61000-4-3 | IEC 61000-4-3 | IEC 61000-4-3 |
| EFT/Burst | IEC 61000-4-4 | IEC 61000-4-4 | IEC 61000-4-4 | IEC 61000-4-4 |
| Surge | IEC 61000-4-5 | IEC 61000-4-5 | IEC 61000-4-5 | IEC 61000-4-5 |
| Conducted | IEC 61000-4-6 | IEC 61000-4-6 | IEC 61000-4-6 | IEC 61000-4-6 |
| Power frequency magnetic field | IEC 61000-4-8 | IEC 61000-4-8 | IEC 61000-4-8 | IEC 61000-4-8 |
| Voltage dips and interruptions | IEC 61000-4-11 | IEC 61000-4-11 | IEC 61000-4-11 | IEC 61000-4-11 |
| Harmonics | IEC 61000-3-2, EN 61000-3-2 | IEC 61000-3-2, EN 61000-3-2 | IEC 61000-3-2, EN 61000-3-2 | IEC 61000-3-2, EN 61000-3-2 |
| Flicker | IEC 61000-3-3, EN 61000-3-3 | IEC 61000-3-3, EN 61000-3-3 | IEC 61000-3-3, EN 61000-3-3 | IEC 61000-3-3, EN 61000-3-3 |
| **Mounting and Enclosure** | | | | |
| | Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. Horizontal surface mounting only. 2-post rack kit included. | Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. Horizontal surface mounting only. 2-post rack kit included. | Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. Horizontal surface mounting only. 2-post rack kit included. | Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. Horizontal surface mounting only. 2-post rack kit included. |

## SPECIFICATIONS

| | Aruba 6300M 24-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL662A) | Aruba 6300M 48-port 1GbE and 4-port SFP56 Switch (JL663A) | Aruba 6300M 24-port 1GbE and 4-port SFP56 Switch (JL664A) | Aruba 6300F 48-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL665A) |
|---|---|---|---|---|
| Description | 24x ports 10/100/1000 BaseT PoE+ ports supporting up to 30W per port<br><br>4x 1/10/25/50G SFP ports<br><br>Supports PoE Standards IEEE 802.3af, 802.3at<br><br>1x USB-C Console Port<br>1x OOBM port<br>1x USB Type A Host port<br>1x Bluetooth dongle to be used with CX Mobile App | 48x ports 10/100/1000 BaseT ports<br><br>4x 1/10/25/50G SFP ports<br><br>1x USB-C Console Port<br>1x OOBM port<br>1x USB Type A Host port<br>1x Bluetooth dongle to be used with CX Mobile App | 24x ports 10/100/1000 BaseT ports<br><br>4x 1/10/25/50G SFP ports<br><br>1x USB-C Console Port<br>1x OOBM port<br>1x USB Type A Host port<br>1x Bluetooth dongle to be used with CX Mobile App | 48x ports 10/100/1000BaseT PoE+ Ports supporting up to 30W per port<br><br>4x 1/10/25/50G SFP ports<br><br>Supports PoE Standards IEEE 802.3af, 802.3at<br><br>1x USB-C Console Port<br>1x OOBM port<br>1x USB Type A Host port<br>1x Bluetooth dongle to be used with CX Mobile App |
| Power supplies | 2 field-replaceable, hot-swappable power supply slots<br><br>1 minimum power supply required (ordered separately)<br><br>Supported PSUs<br>JL086A<br>JL087A<br>JL670A<br><br>Max PoE Power: 720W | 2 field-replaceable, hot-swappable power supply slots<br><br>1 minimum power supply required (ordered separately)<br><br>Supports JL085A PSU | 2 field-replaceable, hot-swappable power supply slots<br><br>1 minimum power supply required (ordered separately)<br><br>Supports JL085A PSU | Internal (fixed) power supply (900W)<br><br>Max PoE Power: 720W |
| Fans | Switch has two fan tray slots and comes with one fan tray installed.<br>• Min 1 fan tray required. Optional second fan tray ordered separately.<br>• Fan trays are field replaceable and hot-swappable.<br>• Each fan tray contains two fans. | Switch has two fan tray slots and comes with one fan tray installed.<br>• Min 1 fan tray required. Optional second fan tray ordered separately.<br>• Fan trays are field replaceable and hot-swappable.<br>• Each fan tray contains two fans. | Switch has two fan tray slots and comes with one fan tray installed.<br>• Min 1 fan tray required. Optional second fan tray ordered separately.<br>• Fan trays are field replaceable and hot-swappable.<br>• Each fan tray contains two fans. | Fixed fans |
| **Physical characteristics** | | | | |
| Dimensions | (H) 4.4 cm x<br>(W) 44.2 cm x<br>(D) 38.5 cm<br>(1.73" x 17.4" x 15.2") | (H) 4.4 cm x<br>(W) 44.2 cm x<br>(D) 38.5 cm<br>(1.73" x 17.4" x 15.2") | (H) 4.4 cm x<br>(W) 44.2 cm x<br>(D) 38.5 cm<br>(1.73" x 17.4" x 15.2") | (H) 4.39 cm x<br>(W) 44.2 cm x<br>(D) 32.7 cm<br>(1.73" x 17.4" x 12.9") |
| Configuration Weight | 5.55 kg (12.23 lbs) | 5.51 kg (12.14 lbs) | 5.43 kg (11.97 lbs) | 5.10 kg (11.24 lbs) |
| **Additional Specifications** | | | | |
| CPU | Quad Core ARM Cortex™ A72 @ 1.8GHz | Quad Core ARM Cortex™ A72 @ 1.8GHz | Quad Core ARM Cortex™ A72 @ 1.8GHz | Quad Core ARM Cortex™ A72 @ 1.8GHz |
| Memory and Flash | 8 GB DDR4<br>32 GB eMMC | 8 GB DDR4<br>32 GB eMMC | 8 GB DDR4<br>32 GB eMMC | 8 GB DDR4<br>32 GB eMMC |
| Packet Buffer | 8 MB Packet Buffer Memory | 8 MB Packet Buffer Memory | 8 MB Packet Buffer Memory | 8 MB Packet Buffer Memory |

## SPECIFICATIONS (CONTINUED)

| | Aruba 6300M 24-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL662A) | Aruba 6300M 48-port 1GbE and 4-port SFP56 Switch (JL663A) | Aruba 6300M 24-port 1GbE and 4-port SFP56 Switch (JL664A) | Aruba 6300F 48-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL665A) |
|---|---|---|---|---|
| **Performance** | | | | |
| System Switching Capacity | 880 Gbps | 880 Gbps | 880 Gbps | 880 Gbps |
| System Throughput Capacity | 660 Mpps | 660 Mpps | 660 Mpps | 660 Mpps |
| Model Switching Capacity | 448 Gbps | 496 Gbps | 448 Gbps | 496 Gbps |
| Model Throughput Capacity | 334 Mpps | 369 Mpps | 334 Mpps | 369 Mpps |
| Average Latency (LIFO-64-bytes packets) | 1Gbps: 2.28µSec 10Gbps: 1.46µSec 25Gbps: 1.90µSec 50Gbps: 3.49µSec | 1Gbps: 2.28µSec 10Gbps: 1.46µSec 25Gbps: 1.90µSec 50Gbps: 3.49µSec | 1Gbps: 2.28µSec 10Gbps: 1.46µSec 25Gbps: 1.90µSec 50Gbps: 3.49µSec | 1Gbps: 2.28µSec 10Gbps: 1.46µSec 25Gbps: 1.90µSec 50Gbps: 3.49µSec |
| Stack Size | 10 members | 10 members | 10 members | 10 members |
| Max. Stacking Distance | Up to 10 kms with long range transceivers | Up to 10 kms with long range transceivers | Up to 10 kms with long range transceivers | Up to 10 kms with long range transceivers |
| Stacking Bandwidth | 200 Gbps | 200 Gbps | 200 Gbps | 200 Gbps |
| Switched Virtual Interfaces (dual stack) | 1,000 | 1,000 | 1,000 | 1,000 |
| IPv4 Host Table (ARP) | 28,800 | 28,800 | 28,800 | 28,800 |
| IPv6 Host Table (ND) | 28,800 | 28,800 | 28,800 | 28,800 |
| IPv4 Unicast Routes | 64,000 | 64,000 | 64,000 | 64,000 |
| IPv6 Unicast Routes | 32,000 | 32,000 | 32,000 | 32,000 |
| IPv4 Multicast Routes | 8,000 | 8,000 | 8,000 | 8,000 |
| IPv6 Multicast Routes | 8,000 | 8,000 | 8,000 | 8,000 |
| MAC Table Capacity | 29,490 | 29,490 | 29,490 | 29,490 |
| IGMP Groups | 8,000 | 8,000 | 8,000 | 8,000 |
| MLD Groups | 4,000 | 4,000 | 4,000 | 4,000 |
| IPv4/IPv6/MAC ACL Entries (ingress) | 5000/1250/5000 | 5000/1250/5000 | 5000/1250/5000 | 5000/1250/5000 |
| IPv4/IPv6/MAC ACL Entries (egress) | 2000/500/2000 | 2000/500/2000 | 2000/500/2000 | 2000/500/2000 |
| **Environment** | | | | |
| Operating Temperature | 32°F to 113°F (0°C to 45°C) up to 5,000 ft. Derate -1 degree C for every 1,000 ft from 5,000 ft to 10,000 ft Can support excursion to 131°F (55°C) for short periods[1] of time. | 32°F to 113°F (0°C to 45°C) up to 5,000 ft. Derate -1 degree C for every 1,000 ft from 5,000 ft to 10,000 ft Can support excursion to 131°F (55°C) for short periods[1] of time. | 32°F to 113°F (0°C to 45°C) up to 5,000 ft. Derate -1 degree C for every 1,000 ft from 5,000 ft to 10,000 ft Can support excursion to 131°F (55°C) for short periods[1] of time. | 32°F to 113°F (0°C to 45°C) up to 5,000 ft. Derate -1 degree C for every 1,000 ft from 5,000 ft to 10,000 ft Can support excursion to 131°F (55°C) for short periods[1] of time. |
| Operating Relative Humidity | 15% to 95% @ 104°F (40°C) non-condensing | 15% to 95% @ 104°F (40°C) non-condensing | 15% to 95% @ 104°F (40°C) non-condensing | 15% to 95% @ 104°F (40°C) non-condensing |
| Non-Operating | -40°F to 158°F (-40°C to 70°C) up to 15,000 ft | -40°F to 158°F (-40°C to 70°C) up to 15,000 ft | -40°F to 158°F (-40°C to 70°C) up to 15,000 ft | -40°F to 158°F (-40°C to 70°C) up to 15,000 ft |
| Non-Operating Storage relative humidity | 15% to 90% @ 149°F (65°C) non-condensing | 15% to 90% @ 149°F (65°C) non-condensing | 15% to 90% @ 149°F (65°C) non-condensing | 15% to 90% @ 149°F (65°C) non-condensing |

## SPECIFICATIONS (CONTINUED)

| | Aruba 6300M 24-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL662A) | Aruba 6300M 48-port 1GbE and 4-port SFP56 Switch (JL663A) | Aruba 6300M 24-port 1GbE and 4-port SFP56 Switch (JL664A) | Aruba 6300F 48-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL665A) |
|---|---|---|---|---|
| **Environment (continued)** | | | | |
| Max Operating Altitude | 10,000 feet (3.04 km) Max | 10,000 feet (3.04 km) Max | 10,000 feet (3.04 km) Max | 10,000 feet (3.04 km) Max |
| Max non-operating Altitude | 15,000 feet (4.6 km) Max | 15,000 feet (4.6 km) Max | 15,000 feet (4.6 km) Max | 15,000 feet (4.6 km) Max |
| Acoustic | Sound Power, $L_{WAd}$ = 4.7 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 29.4 dB | Sound Power, $L_{WAd}$ = 4.6 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 28.7 dB | Sound Power, $L_{WAd}$ = 4.6 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 28.6 dB | Sound Power, $L_{WAd}$ = 5.2 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 34.9 dB |
| Primary Airflow | Front and side to back | Front and side to back | Front and side to back | Front and side to back |
| **Electrical Characteristics** | | | | |
| Frequency | 50Hz/60Hz | 50Hz/60Hz | 50Hz/60Hz | 50Hz/60Hz |
| AC Voltage | JL670A PSU: 110V-120V/208V-240V JL086A PSU: 100V-240V JL087A PSU: 110V-240V | JL085A PSU: 100V-240V | JL085A PSU: 100V-240V | Fixed PSU: 100V-120V/200V-240V |
| Current (for voltages listed above) | JL670A PSU: 11A/8A JL086A PSU: 8A/3.5A JL087A PSU: 12A/5A | JL085A PSU: 3A/1.2A | JL085A PSU: 3A/1.2A | Fixed PSU: 11A/6A |
| Power Consumption (230VAC) | With JL086A PSU: Hibernation (0 rpm fan): 20W Idle: 60W 100% Traffic Rate: 76W<br><br>With JL087A PSU: Hibernation (0 rpm fan): 17W Idle: 59W 100% Traffic Rate: 74W<br><br>With JL670A PSU: Hibernation (0 rpm fan): 16W Idle: 62W 100% Traffic Rate: 81W | Hibernation (0 rpm fan): 9W Idle: 56W 100% Traffic Rate: 75W | Hibernation (0 rpm fan): 9W Idle: 49W 100% Traffic Rate: 64W | Hibernation (0 rpm fan): 12W Idle: 63W 100% Traffic Rate: 86W |
| **Safety** | | | | |
| | Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013<br><br>US: UL 60950-1 2nd Ed.<br><br>Canada: CAN/CSA-C22.2 No. 60950-1-07<br><br>Worldwide: IEC 60950-1:2005 w/all known National Deviations | Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013<br><br>US: UL 60950-1 2nd Ed.<br><br>Canada: CAN/CSA-C22.2 No. 60950-1-07<br><br>Worldwide: IEC 60950-1:2005 w/all known National Deviations | Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013<br><br>US: UL 60950-1 2nd Ed.<br><br>Canada: CAN/CSA-C22.2 No. 60950-1-07<br><br>Worldwide: IEC 60950-1:2005 w/all known National Deviations | Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013<br><br>US: UL 60950-1 2nd Ed.<br><br>Canada: CAN/CSA-C22.2 No. 60950-1-07<br><br>Worldwide: IEC 60950-1:2005 w/all known National Deviations |

## SPECIFICATIONS (CONTINUED)

| | Aruba 6300M 24-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL662A) | Aruba 6300M 48-port 1GbE and 4-port SFP56 Switch (JL663A) | Aruba 6300M 24-port 1GbE and 4-port SFP56 Switch (JL664A) | Aruba 6300F 48-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL665A) |
|---|---|---|---|---|
| **Emissions** | | | | |
| | Europe:<br>EN 55022:2010, Class A<br>EN 55032:2012, Class A<br>EN 55024:2010<br>EN 61000-3-2:2014<br>EN 61000-3-3:2013<br><br>US:<br>FCC part 15 Class A<br><br>Canada:<br>ICES-003 Class A<br><br>Worldwide:<br>VCCI Class A<br>CISPR 22 Class A<br>CISPR 32 Class A<br>CISPR 24:2010 | Europe:<br>EN 55022:2010, Class A<br>EN 55032:2012, Class A<br>EN 55024:2010<br>EN 61000-3-2:2014<br>EN 61000-3-3:2013<br><br>US:<br>FCC part 15 Class A<br><br>Canada:<br>ICES-003 Class A<br><br>Worldwide:<br>VCCI Class A<br>CISPR 22 Class A<br>CISPR 32 Class A<br>CISPR 24:2010 | Europe:<br>EN 55022:2010, Class A<br>EN 55032:2012, Class A<br>EN 55024:2010<br>EN 61000-3-2:2014<br>EN 61000-3-3:2013<br><br>US:<br>FCC part 15 Class A<br><br>Canada:<br>ICES-003 Class A<br><br>Worldwide:<br>VCCI Class A<br>CISPR 22 Class A<br>CISPR 32 Class A<br>CISPR 24:2010 | Europe:<br>EN 55022:2010, Class A<br>EN 55032:2012, Class A<br>EN 55024:2010<br>EN 61000-3-2:2014<br>EN 61000-3-3:2013<br><br>US:<br>FCC part 15 Class A<br><br>Canada:<br>ICES-003 Class A<br><br>Worldwide:<br>VCCI Class A<br>CISPR 22 Class A<br>CISPR 32 Class A<br>CISPR 24:2010 |
| **Lasers** | | | | |
| | EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only) | EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only) | EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only) | EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only) |
| **Immunity** | | | | |
| Generic | CISPR 24 / CISPR 35 | CISPR 24 / CISPR 35 | CISPR 24 / CISPR 35 | CISPR 24 / CISPR 35 |
| EN | EN 55024:2010 / EN 55035:2017 | EN 55024:2010 / EN 55035:2017 | EN 55024:2010 / EN 55035:2017 | EN 55024:2010 / EN 55035:2017 |
| ESD | IEC 61000-4-2 | IEC 61000-4-2 | IEC 61000-4-2 | IEC 61000-4-2 |
| Radiated | IEC 61000-4-3 | IEC 61000-4-3 | IEC 61000-4-3 | IEC 61000-4-3 |
| EFT/Burst | IEC 61000-4-4 | IEC 61000-4-4 | IEC 61000-4-4 | IEC 61000-4-4 |
| Surge | IEC 61000-4-5 | IEC 61000-4-5 | IEC 61000-4-5 | IEC 61000-4-5 |
| Conducted | IEC 61000-4-6 | IEC 61000-4-6 | IEC 61000-4-6 | IEC 61000-4-6 |
| Power frequency magnetic field | IEC 61000-4-8 | IEC 61000-4-8 | IEC 61000-4-8 | IEC 61000-4-8 |
| Voltage dips and interruptions | IEC 61000-4-11 | IEC 61000-4-11 | IEC 61000-4-11 | IEC 61000-4-11 |
| Harmonics | IEC 61000-3-2, EN 61000-3-2 | IEC 61000-3-2, EN 61000-3-2 | IEC 61000-3-2, EN 61000-3-2 | IEC 61000-3-2, EN 61000-3-2 |
| Flicker | IEC 61000-3-3, EN 61000-3-3 | IEC 61000-3-3, EN 61000-3-3 | IEC 61000-3-3, EN 61000-3-3 | IEC 61000-3-3, EN 61000-3-3 |
| **Mounting and Enclosure** | | | | |
| | Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. Horizontal surface mounting only. 2-post rack kit included. | Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. Horizontal surface mounting only. 2-post rack kit included. | Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. Horizontal surface mounting only. 2-post rack kit included. | Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. Horizontal surface mounting only. 2-post rack kit included. |

## SPECIFICATIONS

| | Aruba 6300F 24-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL666A) | Aruba 6300F 48-port 1GbE and 4-port SFP56 Switch (JL667A) | Aruba 6300F 24-port 1GbE and 4-port SFP56 Switch (JL668A) |
|---|---|---|---|
| Description | 24x ports 10/100/1000BaseT Ports supporting up to 30W per port<br><br>4x 1/10/25/50G SFP ports<br><br>1x USB-C Console Port<br>1x OOBM port<br>1x USB Type A Host port<br>1x Bluetooth dongle to be used with CX Mobile App | 48x ports 10/100/1000BaseT Ports<br><br>4x 1/10/25/50G SFP ports<br><br>1x USB-C Console Port<br>1x OOBM port<br>1x USB Type A Host port<br>1x Bluetooth dongle to be used with CX Mobile App | 24x ports 10/100/1000BaseT Ports<br><br>4x 1/10/25/50G SFP ports<br><br>1x USB-C Console Port<br>1x OOBM port<br>1x USB Type A Host port<br>1x Bluetooth dongle to be used with CX Mobile App |
| Power supplies | Internal (fixed) power supply (900W)<br><br>Max PoE Power: 370W | Internal (fixed) power supply (160W) | Internal (fixed) power supply (160W) |
| Fans | Fixed fans | Fixed fans | Fixed fans |
| **Physical characteristics** | | | |
| Dimensions | (H) 4.39 cm x<br>(W) 44.2 cm x<br>(D) 32.7 cm<br>(1.73" x 17.4" x 12.9") | (H) 4.39 cm x<br>(W) 44.2 cm x<br>(D) 32.7 cm<br>(1.73" x 17.4" x 12.9") | (H) 4.39 cm x<br>(W) 44.2 cm x<br>(D) 32.7 cm<br>(1.73" x 17.4" x 12.9") |
| Configuration Weight | 4.95 kg (10.91 lbs) | 4.46 kg (9.83 lbs) | 4.36 kg (9.61 lbs) |
| **Additional Specifications** | | | |
| CPU | Quad Core ARM Cortex™ A72 @ 1.8GHz | Quad Core ARM Cortex™ A72 @ 1.8GHz | Quad Core ARM Cortex™ A72 @ 1.8GHz |
| Memory and Flash | 8 GB DDR4<br>32 GB eMMC | 8 GB DDR4<br>32 GB eMMC | 8 GB DDR4<br>32 GB eMMC |
| Packet Buffer | 8 MB Packet Buffer Memory | 8 MB Packet Buffer Memory | 8 MB Packet Buffer Memory |
| **Performance** | | | |
| System Switching Capacity | 880 Gbps | 880 Gbps | 880 Gbps |
| System Throughput Capacity | 660 Mpps | 660 Mpps | 660 Mpps |
| Model Switching Capacity | 448 Gbps | 496 Gbps | 448 Gbps |
| Model Throughput Capacity | 334 Mpps | 369 Mpps | 334 Mpps |
| Average Latency (LIFO-64-bytes packets) | 1Gbps: 2.28µSec<br>10Gbps: 1.46µSec<br>25Gbps: 1.90µSec<br>50Gbps: 3.49µSec | 1Gbps: 2.28µSec<br>10Gbps: 1.46µSec<br>25Gbps: 1.90µSec<br>50Gbps: 3.49µSec | 1Gbps: 2.28µSec<br>10Gbps: 1.46µSec<br>25Gbps: 1.90µSec<br>50Gbps: 3.49µSec |
| Stack Size | 10 members | 10 members | 10 members |
| Max. Stacking Distance | Up to 10 kms with long range transceivers | Up to 10 kms with long range transceivers | Up to 10 kms with long range transceivers |
| Stacking Bandwidth | 200 Gbps | 200 Gbps | 200 Gbps |

## SPECIFICATIONS (CONTINUED)

| | Aruba 6300F 24-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL666A) | Aruba 6300F 48-port 1GbE and 4-port SFP56 Switch (JL667A) | Aruba 6300F 24-port 1GbE and 4-port SFP56 Switch (JL668A) |
|---|---|---|---|
| **Performance (continued)** | | | |
| Switched Virtual Interfaces (dual stack) | 1,000 | 1,000 | 1,000 |
| IPv4 Host Table (ARP) | 28,800 | 28,800 | 28,800 |
| IPv6 Host Table (ND) | 28,800 | 28,800 | 28,800 |
| IPv4 Unicast Routes | 64,000 | 64,000 | 64,000 |
| IPv6 Unicast Routes | 32,000 | 32,000 | 32,000 |
| IPv4 Multicast Routes | 8,000 | 8,000 | 8,000 |
| IPv6 Multicast Routes | 8,000 | 8,000 | 8,000 |
| MAC Table Capacity | 29,490 | 29,490 | 29,490 |
| IGMP Groups | 8,000 | 8,000 | 8,000 |
| MLD Groups | 4,000 | 4,000 | 4,000 |
| IPv4/IPv6/MAC ACL Entries (ingress) | 5000/1250/5000 | 5000/1250/5000 | 5000/1250/5000 |
| IPv4/IPv6/MAC ACL Entries (egress) | 2000/500/2000 | 2000/500/2000 | 2000/500/2000 |
| **Environment** | | | |
| Operating Temperature | 32°F to 113°F (0°C to 45°C) up to 5,000 ft. Derate -1 degree C for every 1,000 ft from 5,000 ft to 10,000 ft. Can support excursion to 131°F (55°C) for short periods[1] of time. | 32°F to 113°F (0°C to 45°C) up to 5,000 ft. Derate -1 degree C for every 1,000 ft from 5,000 ft to 10,000 ft. Can support excursion to 131°F (55°C) for short periods[1] of time. | 32°F to 113°F (0°C to 45°C) up to 5,000 ft. Derate -1 degree C for every 1,000 ft from 5,000 ft to 10,000 ft. Can support excursion to 131°F (55°C) for short periods[1] of time. |
| Operating Relative Humidity | 15% to 95% @ 104°F (40°C) non-condensing | 15% to 95% @ 104°F (40°C) non-condensing | 15% to 95% @ 104°F (40°C) non-condensing |
| Non-Operating | -40°F to 158°F (-40°C to 70°C) up to 15,000 ft | -40°F to 158°F (-40°C to 70°C) up to 15,000 ft | -40°F to 158°F (-40°C to 70°C) up to 15,000 ft |
| Non-Operating Storage relative humidity | 15% to 90% @ 149°F (65°C) non-condensing | 15% to 90% @ 149°F (65°C) non-condensing | 15% to 90% @ 149°F (65°C) non-condensing |
| Max Operating Altitude | 10,000 feet (3.04 km) Max | 10,000 feet (3.04 km) Max | 10,000 feet (3.04 km) Max |
| Max non-operating Altitude | 15,000 feet (4.6 km) Max | 15,000 feet (4.6 km) Max | 15,000 feet (4.6 km) Max |
| Acoustic | Sound Power, $L_{WAd}$ = 5.0 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 32.3 dB | Sound Power, $L_{WAd}$ = 4.9 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 31.5 dB | Sound Power, $L_{WAd}$ = 4.9 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 31.6 dB |
| Primary Airflow | Front and side to back | Front and side to back | Front and side to back |

## SPECIFICATIONS (CONTINUED)

| | Aruba 6300F 24-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL666A) | Aruba 6300F 48-port 1GbE and 4-port SFP56 Switch (JL667A) | Aruba 6300F 24-port 1GbE and 4-port SFP56 Switch (JL668A) |
|---|---|---|---|
| **Electrical Characteristics** | | | |
| Frequency | 50Hz/60Hz | 50Hz/60Hz | 50Hz/60Hz |
| AC Voltage | Fixed PSU: 100V-120V/200V-240V | Fixed PSU: 100V-120V/200V-240V | Fixed PSU: 100V-120V/200V-240V |
| Current (for voltages listed above) | Fixed PSU: 11A/6A | Fixed PSU: 2.5A/1.4A | Fixed PSU: 2.5A/1.4A |
| Power Consumption (230VAC) | Hibernation (0 rpm fan): 12W<br>Idle: 52W<br>100% Traffic Rate: 67W | Hibernation (0 rpm fan): 6W<br>Idle: 52W<br>100% Traffic Rate: 74W | Hibernation (0 rpm fan): 6W<br>Idle: 49W<br>100% Traffic Rate: 63W |
| **Safety** | | | |
| | Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013<br><br>US: UL 60950-1 2nd Ed.<br><br>Canada: CAN/CSA-C22.2 No. 60950-1-07<br><br>Worldwide: IEC 60950-1:2005 w/all known National Deviations | Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013<br><br>US: UL 60950-1 2nd Ed.<br><br>Canada: CAN/CSA-C22.2 No. 60950-1-07<br><br>Worldwide: IEC 60950-1:2005 w/all known National Deviations | Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013<br><br>US: UL 60950-1 2nd Ed.<br><br>Canada: CAN/CSA-C22.2 No. 60950-1-07<br><br>Worldwide: IEC 60950-1:2005 w/all known National Deviations |
| **Emissions** | | | |
| | Europe:<br>EN 55022:2010, Class A<br>EN 55032:2012, Class A<br>EN 55024:2010<br>EN 61000-3-2:2014<br>EN 61000-3-3:2013<br><br>US:<br>FCC part 15 Class A<br><br>Canada:<br>ICES-003 Class A<br><br>Worldwide:<br>VCCI Class A<br>CISPR 22 Class A<br>CISPR 32 Class A<br>CISPR 24:2010 | Europe:<br>EN 55022:2010, Class A<br>EN 55032:2012, Class A<br>EN 55024:2010<br>EN 61000-3-2:2014<br>EN 61000-3-3:2013<br><br>US:<br>FCC part 15 Class A<br><br>Canada:<br>ICES-003 Class A<br><br>Worldwide:<br>VCCI Class A<br>CISPR 22 Class A<br>CISPR 32 Class A<br>CISPR 24:2010 | Europe:<br>EN 55022:2010, Class A<br>EN 55032:2012, Class A<br>EN 55024:2010<br>EN 61000-3-2:2014<br>EN 61000-3-3:2013<br><br>US:<br>FCC part 15 Class A<br><br>Canada:<br>ICES-003 Class A<br><br>Worldwide:<br>VCCI Class A<br>CISPR 22 Class A<br>CISPR 32 Class A<br>CISPR 24:2010 |
| **Lasers** | | | |
| | EN 60825-1:2007 / IEC 60825-1:2007 Class 1<br>Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only) | EN 60825-1:2007 / IEC 60825-1:2007 Class 1<br>Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only) | EN 60825-1:2007 / IEC 60825-1:2007 Class 1<br>Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only) |

| SPECIFICATIONS (CONTINUED) | | | |
|---|---|---|---|
| | **Aruba 6300F 24-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL666A)** | **Aruba 6300F 48-port 1GbE and 4-port SFP56 Switch (JL667A)** | **Aruba 6300F 24-port 1GbE and 4-port SFP56 Switch (JL668A)** |
| **Immunity** | | | |
| Generic | CISPR 24 / CISPR 35 | CISPR 24 / CISPR 35 | CISPR 24 / CISPR 35 |
| EN | EN 55024:2010 / EN 55035:2017 | EN 55024:2010 / EN 55035:2017 | EN 55024:2010 / EN 55035:2017 |
| ESD | IEC 61000-4-2 | IEC 61000-4-2 | IEC 61000-4-2 |
| Radiated | IEC 61000-4-3 | IEC 61000-4-3 | IEC 61000-4-3 |
| EFT/Burst | IEC 61000-4-4 | IEC 61000-4-4 | IEC 61000-4-4 |
| Surge | IEC 61000-4-5 | IEC 61000-4-5 | IEC 61000-4-5 |
| Conducted | IEC 61000-4-6 | IEC 61000-4-6 | IEC 61000-4-6 |
| Power frequency magnetic field | IEC 61000-4-8 | IEC 61000-4-8 | IEC 61000-4-8 |
| Voltage dips and interruptions | IEC 61000-4-11 | IEC 61000-4-11 | IEC 61000-4-11 |
| Harmonics | IEC 61000-3-2, EN 61000-3-2 | IEC 61000-3-2, EN 61000-3-2 | IEC 61000-3-2, EN 61000-3-2 |
| Flicker | IEC 61000-3-3, EN 61000-3-3 | IEC 61000-3-3, EN 61000-3-3 | IEC 61000-3-3, EN 61000-3-3 |
| **Mounting and Enclosure** | | | |
| | Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. Horizontal surface mounting only. 2-post rack kit included. | Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. Horizontal surface mounting only. 2-post rack kit included. | Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. Horizontal surface mounting only. 2-post rack kit included. |

[1] Short period is defined as a period which is not more than 96 consecutive hours or 360 hours total or 15 occurrences in a 1 year period.

## STANDARDS AND PROTOCOLS

- ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
- CPU DoS Protection
- Bootstrap Router (BSR) Mechanism for PIM, PIM WG
- draft-ietf-savi-mix
- IEEE 802.1AB-2005
- IEEE 802.1ak-2007
- IEEE 802.1AX-2008 Link Aggregation
- IEEE 802.1D MAC Bridges
- IEEE 802.1p Priority
- IEEE 802.1Q VLANs
- IEEE 802.1s Multiple Spanning Trees
- IEEE 802.1t-2001
- IEEE 802.1v VLAN classification by Protocol and Port
- IEEE 802.1w Rapid Reconfiguration of Spanning Tree
- IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.3ae 10-Gigabit Ethernet
- IEEE 802.3af Power over Ethernet
- IEEE 802.3at Power over Ethernet
- IEEE 802.3bt Power over Ethernet
- IEEE 802.3x Flow Control
- IEEE 802.3z 1000BASE-X
- RFC 1122 Requirements for Internet Hosts - Communications Layers
- 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 1542 BOOTP Extensions
- RFC 1583 OSPF Version 2
- 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 1812 Requirements for IP Version 4 Router
- RFC 1918 Address Allocation for Private Internet
- RFC 1997 BGP Communities Attribute
- RFC 1998 An Application of the BGP Community Attribute in Multi-home Routing
- RFC 2131 DHCP
- RFC 2132 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 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 2579 (SMIv2 Text Conventions)
- RFC 2580 (SMIv2 Conformance)
- 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 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)
- RFC 2934 Protocol Independent Multicast MIB for IPv4
- RFC 3019 MLDv1 MIB
- RFC 3046 DHCP Relay Agent Information Option
- RFC 3056 Connection of IPv6 Domains via IPv4 Clouds
- RFC 3065 Autonomous System Confederation for BGP
- RFC 3068 An Anycast prefix for 6to4 Relay Route
- RFC 3137 OSPF Stub Router Advertisment sFlow
- 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 3575 IANA Considerations for RADIUS
- 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
- 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 4675 RADIUS VLAN & Priority
- RFC 4724 Graceful Restart Mechanism for BGP
- 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 5424 Syslog Protocol
- RFC 5492 Capabilities Advertisement with BGP-4
- 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 5905 Network Time Protocol Version 4: Protocol and Algorithms Specification
- RFC 6620 FCFS SAVI
- RFC 6987 OSPF Stub Router Advertisement
- RFC 7047 The Open vSwitch Database Management Protocol
- 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
- RFC 951 BOOTP
- RFC 1027 Proxy ARP
- SNMPv1/v2c/v3
- RFC 4861 IPv6 Neighbor Discovery
- RFC 4862 IPv6 Stateless Address Auto-configuration
- ITU-T Rec G.8032/Y.1344 Mar. 2010
- RFC 1757 Remote Network Monitoring Management Information Base
- 2.5G/5GBASE-T (IEEE 802.3bz-2016), 2.5G/5G NBASE-T
- 10GBASE-T (IEEE 802.3an-2006)
- 25-Gigabit Ethernet (IEEE 802.3by-2016, 802.3cc-2017)
- 50-Gigabit Ethernet (IEEE 802.3cd-2018)
- RFC 3101 OSPF Not-so-stubby-area option
- RFC 4750 OSPFv2 MIB partial support no SetMIB

## ARUBA CX 6300 SWITCHES AND ACCESSORIES

### Switch Models
- Aruba 6300M 24-port SFP+ and 4-port SFP56 Switch (JL658A)
- Aruba 6300M 48-port HPE Smart Rate 1/2.5/5GbE Class 6 PoE and 4-port SFP56 Switch (JL659A)
- Aruba 6300M 24-port HPE Smart Rate 1/2.5/5GbE Class 6 PoE and 4-port SFP56 Switch (JL660A)
- Aruba 6300M 48-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL661A)
- Aruba 6300M 24-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL662A)
- Aruba 6300M 48-port 1GbE and 4-port SFP56 Switch (JL663A)
- Aruba 6300M 24-port 1GbE and 4-port SFP56 Switch (JL664A)
- Aruba 6300F 48-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL665A)

- Aruba 6300F 24-port 1GbE Class 4 PoE and 4-port SFP56 Switch (JL666A)
- Aruba 6300F 48-port 1GbE and 4-port SFP56 Switch (JL667A)
- Aruba 6300F 24-port 1GbE and 4-port SFP56 Switch (JL668A)

## Power Supplies
- Aruba X371 12VDC 250W 100-240VAC Power Supply (JL085A)
- Aruba X372 54VDC 680W 100-240VAC Power Supply (JL086A)
- Aruba X372 54VDC 1050W 110-240VAC Power Supply (JL087A)
- Aruba X372 54VDC 1600W 110-240VAC Power Supply (JL670A)

## Fan Tray
- Aruba 6300M Fan Tray (JL669A)

## Mounting Kit
- HPE X410 1U Universal 4-post Rack Mount Kit (J9583A)

## Cables
- Aruba 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281D)
- Aruba 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283D)
- Aruba 25G SFP28 to SFP28 0.65m Direct Attach Copper Cable (JL487A)
- Aruba 25G SFP28 to SFP28 3m Direct Attach Copper Cable (JL488A)
- Aruba 25G SFP28 to SFP28 5m Direct Attach Copper Cable (JL489A)
- Aruba 50G SFP56 to SFP56 0.65m DAC Cable (R0M46A)
- Aruba 50G SFP56 to SFP56 3m DAC Cable (R0M47A)

## Transceivers
- Aruba 100M SFP LC FX 2km MMF XCVR (J9054D)[2]
- Aruba 1G SFP LC SX 500m MMF Transceiver (J4858D)
- Aruba 1G SFP LC LX 10km SMF Transceiver (J4859D)
- Aruba 1G SFP LC LH 70km SMF Transceiver (J4860D)
- Aruba 1G SFP RJ45 T 100m Cat5e Transceiver (J8177D)
- Aruba 10G SFP+ LC SR 300m MMF Transceiver (J9150D)
- Aruba 10G SFP+ LC LR 10km SMF Transceiver (J9151E)
- Aruba 10G SFP+ LC ER 40km SMF Transceiver (J9153D)
- Aruba 10GBASE-T SFP+ RJ-45 30m Cat6A Transceiver (JL563A)
- Aruba 25G SFP28 LC SR 100m MMF Transceiver (JL484A)
- Aruba 25G SFP28 LC eSR 400m MMF Transceiver (JL485A)
- Aruba 25G SFP28 LC LR 10km SMF Transceiver (JL486A)

## Software
- Aruba CX Mobile App https://www.arubanetworks.com/products/networking/switches/cx-mobileapp/
- Aruba NetEdit Single Node: 1 year (JL639AAE)
- Aruba NetEdit Single Node: 3 years (JL640AAE)

[2] Supported only on 10G SFP. Enabled on 50G SFP ports by future software release

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