

## DATA SHEET

# ARUBA CX 6200 SWITCH SERIES

## PRODUCT OVERVIEW

The Aruba CX 6200 Switch Series is a next-gen family of stackable access switches ideal for enterprise branch offices, campuses, and SMB networks. Created for game-changing operational efficiency with built-in analytics and automation, the CX 6200 switches provide an enterprise-class access layer solution that's simple and secure.

Built from the ground up with a combination of cutting-edge hardware, software and analytics and automation tools, the stackable CX 6200 switches are part of the Aruba CX switching portfolio. By combining a modern, fully programmable OS with the Aruba Network Analytics Engine, the CX 6200 brings industry leading monitoring and troubleshooting capabilities to the access layer.

A powerful Aruba Gen7 ASIC architecture delivers reliable performance and enterprise-class feature support with flexible programmability for tomorrow's applications. The CX 6200 is designed for simple deployment using the intuitive Aruba CX Mobile App that speeds install, configuration and stacking of up to 8 switches. The CX 6200 has built-in high speed uplinks and up to 740W of PoE to support IoT devices such as security cameras and the latest wireless APs.

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.

## PRODUCT DIFFERENTIATORS

### AOS-CX - a modern software system

The Aruba CX 6200 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.



## KEY FEATURES

- Enterprise-class connectivity with support for ACLs, robust QoS and common protocols such as static and Access OSPF routing
- Scalability with 8 member switch VSF stacking
- Convenient built-in 1/10GbE uplinks and up to 740W of Class 4 PoE
- Intelligent monitoring, visibility, and troubleshooting with Aruba Network Analytics Engine
- Simple, one touch deployment with the Aruba CX Mobile App
- Automated configuration and verification with Aruba NetEdit
- Secure and simple access for users and IoT with Aruba Dynamic Segmentation

This helps predict and avoid future problems due to scale, security, and performance bottlenecks. Easy access to all network state information allows unique visibility and analytics.



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 Central - unified single pane of glass 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.

#### **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 historical 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 design
- Automated large-scale configuration deployment without programming
- Network health and topology visibility with Aruba NAE integration

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

#### **Aruba CX Mobile App – unparalleled deployment convenience**

An easy-to-use mobile app simplifies connecting, stacking and managing Aruba CX 6200 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.

#### **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 rapid feature development and delivery. The Aruba CX 6200 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.

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.

### Mobility and IoT performance

The Aruba CX 6200 Switch Series uses a fully distributed architecture that utilizes the Gen7 Aruba 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 176 Gbps in non-blocking bandwidth and up to 130.9 Mpps for forwarding
- 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 SFP+ ports support speeds of 1GbE and 10GbE. Additional features include:

- Support for up to 8 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 1GbE and 10GbE transceivers

- 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

### Enterprise-class connectivity for all environments

Whether in the branch office or a small to large enterprise environment, you can choose from five fixed 1U models. Each switch includes four high-speed built-in uplinks that auto-negotiate from 1GbE to 10GbE to deliver non-blocking performance. Additional highlights:

- 1U models support 24 and 48 access ports of IEEE 802.3 (100M/1GbE) with four built-in 1GbE/10GbE uplink SFP+ ports
- PoE models support up to 740W IEEE 802.3at Class 4 Power over Ethernet for up to 30W per port as well as any IEEE 802.3af-compliant end device
- Always-on PoE supplies PoE power even during scheduled reboots and firmware upgrades
- Support for pre-standard PoE detects and provides power to pre-standard PoE devices
- Auto-MDIX provides automatic adjustments for straight-through or crossover cables on all 10/100/1000 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, dynamic IPv6 lockdown, and ND snooping
- Jumbo frames allow for high-performance backups and disaster-recovery systems; provides a maximum frame size of 9220 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 highly-available Layer 2 access deployment including:

- 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 32 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

### Quality of Service (QoS) features

To support congestion actions and traffic prioritization, the Aruba CX 6200 Series includes the following:

- Strict priority (SP) queuing and Deficit Weighted Round Robin (DWRR)
- Traffic prioritization (IEEE 802.1p) for real-time classification
- 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 6200 series offers the following:

- Built-in programmable and easy-to-use REST API interface
- Simple day zero provisioning
- sFlow (RFC 3176) is 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
- IEEE 802.1AB Link Layer Discovery Protocol (LLDP) advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications
- Dual flash images provides independent primary and secondary operating system files for backup while upgrading
- Multiple configuration files 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 responders for Voice helps in monitoring quality of voice traffic using the UDP Jitter for VoIP tests



## Layer 2 Switching

The following layer 2 services are supported:

- VLAN support and tagging support IEEE 802.1Q (4094 VLAN IDs) and 2K VLANS simultaneously
- Jumbo packet support improves the performance of large data transfers; supports frame size of up to 9220 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:

- Loopback interface address defines an address in Open Shortest Path First (OSPF), improving diagnostic capability
- 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
- 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:

- Single-area Open shortest path first (OSPF) delivers faster convergence; uses link-state routing Interior Gateway Protocol (IGP), which supports 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
- Static IPv4 routing provides simple manually configured IPv4 routing
- IP performance optimization provides a set of tools to improve the performance of IPv4 networks; includes directed broadcasts, customization of TCP parameters, support of ICMP error packets, and extensive display capabilities
- Static IPv6 routing provides simple manually configured IPv6 routing
- Dual IP stack maintains separate stacks for IPv4 and IPv6 to ease the transition from an IPv4-only network to an IPv6-only network design

## Security

Each Aruba CX 6200 Switch comes with an integrated trusted platform module (TPM) for platform integrity. This ensures the boot process started from a trusted combination of 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
- 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 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
- Internet Group Management Protocol (IGMP) utilizes Any-Source Multicast (ASM) to manage IPv4 multicast networks; supports IGMPv1, v2, and v3

**Convergence**

- IP multicast snooping (data-driven IGMP) prevents flooding of IP multicast traffic
- 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			
	<b>Aruba 6200F 24G 4SFP+ Switch (JL724A)</b>	<b>Aruba 6200F 24G Class4 PoE 4SFP+ 370W Switch (JL725A)</b>	<b>Aruba 6200F 48G 4SFP+ Switch (JL726A)</b>
Description	24x ports 10/100/1000BASE-T Ports 4x 1/10G SFP ports 1x USB-C Console Port 1x OOBM 1x USB Type-A Host port 1x Bluetooth dongle to be used with Aruba CX Mobile App	24x ports 10/100/1000BASE-T Class 4 PoE Ports, supporting up to 30W per port 4x 1/10G SFP ports Supports PoE Standards IEEE 802.3af, 802.3at 1x USB-C Console Port 1x OOBM 1x USB Type-A Host port 1x Bluetooth dongle to be used with Aruba CX Mobile App	48x ports 10/100/1000BASE-T Ports 4x 1/10G SFP ports 1x USB-C Console Port 1x OOBM 1x USB Type-A Host port 1x Bluetooth dongle to be used with Aruba CX Mobile App
Power supplies	Fixed power supply (200W)	Fixed power supply (500W) Up to 370W of Class 4 PoE Power	Fixed power supply (200W)
Fans	Fixed fans	Fixed fans	Fixed fans
<b>Physical characteristics</b>			
Dimensions	(H) 4.39 cm x (W) 44.2 cm x (D) 32.7 cm (1.73" x 17.4" x 12.9")	(H) 4.39 cm x (W) 44.2 cm x (D) 32.7 cm (1.73" x 17.4" x 12.9")	(H) 4.39 cm x (W) 44.2 cm x (D) 32.7 cm (1.73" x 17.4" x 12.9")
Configuration Weight	4.36 kg (9.61 lbs)	4.90 kg (10.80 lbs)	4.45 kg (9.81 lbs)
<b>Additional Specifications</b>			
CPU	Quad Core ARM Cortex™ A72 @ 1.8 GHz	Quad Core ARM Cortex™ A72 @ 1.8 GHz	Quad Core ARM Cortex™ A72 @ 1.8 GHz
Memory and Flash	8 GB DDR4 16 GB eMMC	8 GB DDR4 16 GB eMMC	8 GB DDR4 16 GB eMMC
Packet Buffer	8 MB Packet Buffer Memory	8 MB Packet Buffer Memory	8 MB Packet Buffer Memory
<b>Performance</b>			
Model Switching Capacity	128 Gbps	128 Gbps	176 Gbps
Model Throughput Capacity	Up to 95.2 Mpps	Up to 95.2 Mpps	Up to 130.9Mpps
Average Latency (LIFO-64-bytes packets)	1 Gbps: 2.28 μSec 10 Gbps: 1.46 μSec	1 Gbps: 2.28 μSec 10 Gbps: 1.46 μSec	1 Gbps: 2.28 μSec 10 Gbps: 1.46 μSec
Stack Size	8 members	8 members	8 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
Switched Virtual Interfaces (dual stack)	128	128	128
IPv4 Host Table (ARP)	8,192	8,192	8,192
IPv6 Host Table (ND)	8,192	8,192	8,192





**SPECIFICATIONS (CONTINUED)**

	Aruba 6200F 24G 4SFP+ Switch (JL724A)	Aruba 6200F 24G Class4 PoE 4SFP+ 370W Switch (JL725A)	Aruba 6200F 48G 4SFP+ Switch (JL726A)
<b>Performance (continued)</b>			
IPv4 Unicast Routes	2,048	2,048	2,048
IPv6 Unicast Routes	1,024	1,024	1,024
MAC Table Capacity	16,000	16,000	16,000
IGMP Groups	1,024	1,024	1,024
MLD Groups	1,024	1,024	1,024
IPv4/IPv6/MAC ACL Entries (ingress)	5,120/1,280/5,120	5,120/1,280/5,120	5,120/1,280/5,120
IPv4/IPv6/MAC ACL Entries (egress)	2,048/512/2,048	2,048/512/2,048	2,048/512/2,048
<b>Environment</b>			
Operating Temperature	32°F to 113°F (0°C to 45°C) up to 5,000 ft derate -1°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°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°C for every 1,000 ft from 5,000 ft to 10,000 ft.
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 (3.048 km) Max	10,000 feet (3.048 km) Max	10,000 feet (3.048 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, $L_{WAd}$ = 4.9 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 32.5 dB	Sound Power, $L_{WAd}$ = 5.0 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 32.8 dB	Sound Power, $L_{WAd}$ = 4.9 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 33.0 dB
Primary Airflow	Front and side to back	Front and side to back	Front and side to back
<b>Electrical Characteristics</b>			
Frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
AC Voltage	100V-120V/200V-240V	100V-127V/200V-240V	100V-120V/200V-240V
Current	2.5A/1.4A	7.5A/3.5A	2.5A/1.4A
80plus.org Certification	80 PLUS Silver	-	80 PLUS Silver
Power Consumption (230 VAC)	Hibernation (0 rpm fan): 7W Idle: 49W 100% Traffic Rate: 59W	Hibernation (0 rpm fan): 9W Idle: 54W 100% Traffic Rate: 65W	Hibernation (0 rpm fan): 7W Idle: 55W 100% Traffic Rate: 68W



**SPECIFICATIONS (CONTINUED)**

	<b>Aruba 6200F 24G 4SFP+ Switch (JL724A)</b>	<b>Aruba 6200F 24G Class4 PoE 4SFP+ 370W Switch (JL725A)</b>	<b>Aruba 6200F 48G 4SFP+ Switch (JL726A)</b>
<b>Safety</b>			
	<p>Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013 EN 62368-1:2014 +A11:2017</p> <p>US: UL 60950-1 2nd Ed.</p> <p>Canada: CAN/CSA-C22.2 No. 60950-1-07</p> <p>Worldwide: IEC 60950-1:2005 w/all known National Deviations IEC 62368-1:2014 2nd Ed.</p> <p>Taiwan: CNS-14336-1</p>	<p>Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013 EN 62368-1:2014 +A11:2017</p> <p>US: UL 60950-1 2nd Ed.</p> <p>Canada: CAN/CSA-C22.2 No. 60950-1-07</p> <p>Worldwide: IEC 60950-1:2005 w/all known National Deviations IEC 62368-1:2014 2nd Ed.</p> <p>Taiwan: CNS-14336-1</p>	<p>Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013 EN 62368-1:2014 +A11:2017</p> <p>US: UL 60950-1 2nd Ed.</p> <p>Canada: CAN/CSA-C22.2 No. 60950-1-07</p> <p>Worldwide: IEC 60950-1:2005 w/all known National Deviations IEC 62368-1:2014 2nd Ed.</p> <p>Taiwan: CNS-14336-1</p>
<b>Emissions</b>			
	<p>Europe: EN 55032:2015 +AC:2016, Class A EN 55024:2010 EN 55035:2017 EN 61000-3-2:2014 EN 61000-3-3:2013</p> <p>US: FCC 47 CFR part 15B, Class A</p> <p>Canada: ICES-003 Class A</p> <p>Worldwide: VCCI Class A CISPR 32 Ed 2.0: 2015 + COR1: 2016, Class A CISPR 24:2010 CISPR 35:2016</p>	<p>Europe: EN 55032:2015 +AC:2016, Class A EN 55024:2010 EN 55035:2017 EN 61000-3-2:2014 EN 61000-3-3:2013</p> <p>US: FCC 47 CFR part 15B, Class A</p> <p>Canada: ICES-003 Class A</p> <p>Worldwide: VCCI Class A CISPR 32 Ed 2.0: 2015 + COR1: 2016, Class A CISPR 24:2010 CISPR 35:2016</p>	<p>Europe: EN 55032:2015 +AC:2016, Class A EN 55024:2010 EN 55035:2017 EN 61000-3-2:2014 EN 61000-3-3:2013</p> <p>US: FCC 47 CFR part 15B, Class A</p> <p>Canada: ICES-003 Class A</p> <p>Worldwide: VCCI Class A CISPR 32 Ed 2.0: 2015 + COR1: 2016, Class A CISPR 24:2010 CISPR 35:2016</p>
<b>Lasers</b>			
	<p>EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only)</p>	<p>EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only)</p>	<p>EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only)</p>



**SPECIFICATIONS (CONTINUED)**

	Aruba 6200F 24G 4SFP+ Switch (JL724A)	Aruba 6200F 24G Class4 PoE 4SFP+ 370W Switch (JL725A)	Aruba 6200F 48G 4SFP+ Switch (JL726A)
<b>Immunity</b>			
Generic	CISPR 35	CISPR 35	CISPR 35
EN	EN 55035:2017	EN 55035:2017	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
<b>Mounting and Enclosure</b>			
	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 (CONTINUED)		
	<b>Aruba 6200F 48G Class4 PoE 4SFP+ 370W Switch (JL727A)</b>	<b>Aruba 6200F 48G Class4 PoE 4SFP+ 740W Switch (JL728A)</b>
Description	48x ports 10/100/1000BASE-T Class 4 PoE Ports, supporting up to 30W per port  4x 1/10G SFP ports  Supports PoE Standards IEEE 802.3af, 802.3at  1x USB-C Console Port 1x OOBM 1x USB Type-A Host port 1x Bluetooth dongle to be used with Aruba CX Mobile App	48x ports 10/100/1000BASE-T Class 4 PoE Ports, supporting up to 30W per port  4x 1/10G SFP ports  Supports PoE Standards IEEE 802.3af, 802.3at  1x USB-C Console Port 1x OOBM 1x USB Type-A Host port 1x Bluetooth dongle to be used with Aruba CX Mobile App
Power supplies	Fixed power supply (500W) Up to 370W of Class 4 PoE Power	Fixed power supply (950W) Up to 740W of Class 4 PoE Power
Fans	Fixed fans	Fixed fans
<b>Physical characteristics</b>		
Dimensions	(H) 4.39 cm x (W) 44.2 cm x (D) 32.7 cm (1.73" x 17.4" x 12.9")	(H) 4.39 cm x (W) 44.2 cm x (D) 32.7 cm (1.73" x 17.4" x 12.9")
Configuration Weight	5.05 kg (11.13 lbs)	5.10 kg (11.24 lbs)
<b>Additional Specifications</b>		
CPU	Quad Core ARM Cortex™ A72 @ 1.8 GHz	Quad Core ARM Cortex™ A72 @ 1.8 GHz
Memory and Flash	8 GB DDR4 16 GB eMMC	8 GB DDR4 16 GB eMMC
Packet Buffer	8 MB Packet Buffer Memory	8 MB Packet Buffer Memory
<b>Performance</b>		
Model Switching Capacity	176 Gbps	176 Gbps
Model Throughput Capacity	Up to 130.9Mpps	Up to 130.9Mpps
Average Latency (LIFO-64-bytes packets)	1 Gbps: 2.28 μSec 10 Gbps: 1.46 μSec	1 Gbps: 2.28 μSec 10 Gbps: 1.46 μSec
Stack Size	8 members	8 members
Max. Stacking Distance	Up to 10 kms with long range transceivers	Up to 10 kms with long range transceivers
Switched Virtual Interfaces (dual stack)	128	128
IPv4 Host Table (ARP)	8,192	8,192
IPv6 Host Table (ND)	8,192	8,192



SPECIFICATIONS (CONTINUED)		
	Aruba 6200F 48G Class4 PoE 4SFP+ 370W Switch (JL727A)	Aruba 6200F 48G Class4 PoE 4SFP+ 740W Switch (JL728A)
<b>Performance (continued)</b>		
IPv4 Unicast Routes	2,048	2,048
IPv6 Unicast Routes	1,024	1,024
MAC Table Capacity	16,000	16,000
IGMP Groups	1,024	1,024
MLD Groups	1,024	1,024
IPv4/IPv6/MAC ACL Entries (ingress)	5,120/1,280/5,120	5,120/1,280/5,120
IPv4/IPv6/MAC ACL Entries (egress)	2,048/512/2,048	2,048/512/2,048
<b>Environment</b>		
Operating Temperature	32°F to 113°F (0°C to 45°C) up to 5,000 ft derate -1°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°C for every 1,000 ft from 5,000 ft to 10,000 ft.
Operating Relative Humidity	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
Non-Operating Storage Relative Humidity	15% to 90% @ 149°F (65°C) non-condensing	15% to 90% @ 149°F (65°C) non-condensing
Max Operating Altitude	10,000 feet (3.048 km) Max	10,000 feet (3.048 km) Max
Max Non-Operating Altitude	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) = 32.7 dB	Sound Power, $L_{WAd}$ = 5.3 Bel Sound Pressure, $L_{pAm}$ (Bystander) = 37.1 dB
Primary Airflow	Front and side to back	Front and side to back
<b>Electrical Characteristics</b>		
Frequency	50Hz/60Hz	50Hz/60Hz
AC Voltage	100V-127V/200V-240V	100V-120V/200V-240V
Current	7.5A/3.5A	11A/6A
80plus.org Certification	-	80 PLUS Gold
Power Consumption (230 VAC)	Hibernation (0 rpm fan): 10W Idle: 60W 100% Traffic Rate: 76W	Hibernation (0 rpm fan): 12W Idle: 62W 100% Traffic Rate: 76W



SPECIFICATIONS (CONTINUED)		
	<b>Aruba 6200F 48G Class4 PoE 4SFP+ 370W Switch (JL727A)</b>	<b>Aruba 6200F 48G Class4 PoE 4SFP+ 740W Switch (JL728A)</b>
<b>Safety</b>		
	<p>Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013 EN 62368-1:2014 +A11:2017</p> <p>US: UL 60950-1 2nd Ed.</p> <p>Canada: CAN/CSA-C22.2 No. 60950-1-07</p> <p>Worldwide: IEC 60950-1:2005 w/all known National Deviations IEC 62368-1:2014 2nd Ed.</p> <p>Taiwan: CNS-14336-1</p>	<p>Europe: EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013 EN 62368-1:2014 +A11:2017</p> <p>US: UL 60950-1 2nd Ed.</p> <p>Canada: CAN/CSA-C22.2 No. 60950-1-07</p> <p>Worldwide: IEC 60950-1:2005 w/all known National Deviations IEC 62368-1:2014 2nd Ed.</p> <p>Taiwan: CNS-14336-1</p>
<b>Emissions</b>		
	<p>Europe: EN 55032:2015 +AC:2016, Class A EN 55024:2010 EN 55035:2017 EN 61000-3-2:2014 EN 61000-3-3:2013</p> <p>US: FCC 47 CFR part 15B, Class A</p> <p>Canada: ICES-003 Class A</p> <p>Worldwide: VCCI Class A CISPR 32 Ed 2.0: 2015 + COR1: 2016, Class A CISPR 24:2010 CISPR 35:2016</p>	<p>Europe: EN 55032:2015 +AC:2016, Class A EN 55024:2010 EN 55035:2017 EN 61000-3-2:2014 EN 61000-3-3:2013</p> <p>US: FCC 47 CFR part 15B, Class A</p> <p>Canada: ICES-003 Class A</p> <p>Worldwide: VCCI Class A CISPR 32 Ed 2.0: 2015 + COR1: 2016, Class A CISPR 24:2010 CISPR 35:2016</p>
<b>Lasers</b>		
	<p>EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only)</p>	<p>EN 60825-1:2007 / IEC 60825-1:2007 Class 1 Class 1 Laser Products / Laser Klasse 1 (Applicable for accessories - Optical Transceivers only)</p>



SPECIFICATIONS (CONTINUED)		
	Aruba 6200F 48G Class4 PoE 4SFP+ 370W Switch (JL727A)	Aruba 6200F 48G Class4 PoE 4SFP+ 740W Switch (JL728A)
<b>Immunity</b>		
Generic	CISPR 35	CISPR 35
EN	EN 55035:2017	EN 55035:2017
ESD	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4	IEC 61000-4-4
Surge	IEC 61000-4-5	IEC 61000-4-5
Conducted	IEC 61000-4-6	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8	IEC 61000-4-8
Voltage dips and interruptions	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
Flicker	IEC 61000-3-3, EN 61000-3-3	IEC 61000-3-3, EN 61000-3-3
<b>Mounting and Enclosure</b>		
	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.



## STANDARDS AND PROTOCOLS

- ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
- CPU DoS Protection
- VPNdraft-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 802.3x 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 1519 CIDR
- RFC 1542 BOOTP Extensions
- RFC 1583 OSPF Version 2
- RFC 1591 Domain Name System Structure and Delegation
- RFC 1812 Requirements for IP Version 4 Router
- RFC 1918 Address Allocation for Private Internet
- RFC 2236 IGMP
- RFC 2328 OSPF Version 2
- RFC 2375 IPv6 Multicast Address Assignments
- RFC 2401 Security Architecture for the Internet Protocol
- RFC 2402 IP Authentication Header
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 2464 Transmission of IPv6 over Ethernet Networks
- RFC 2576 (Coexistence between SNMP V1, V2, V3)
- RFC 2579 (SMIPv2 Text Conventions)
- RFC 2580 (SMIPv2 Conformance)
- RFC 2710 Multicast Listener Discovery (MLD) for IPv6
- RFC 2711 IPv6 Router Alert Option
- 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 3056 Connection of IPv6 Domains via IPv4 Clouds
- RFC 3137 OSPF Stub Router Advertisement 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 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6
- 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 4291 IP Version 6 Addressing Architecture
- RFC 4292 IP Forwarding Table MIB
- RFC 4293 Management Information Base for the Internet Protocol (IP)
- RFC 4419 Key Exchange for SSH
- RFC 4443 ICMPv6
- RFC 4541 IGMP & MLD Snooping Switch
- RFC 4552 Authentication/Confidentiality for OSPFv3
- RFC 4675 RADIUS VLAN & Priority
- RFC 4861 IPv6 Neighbor Discovery
- RFC 4862 IPv6 Stateless Address Auto-configuration
- RFC 4940 IANA Considerations for OSPF
- 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 5519 Multicast Group Membership Discovery MIB (MLDv2 only)
- RFC 5722 Handling of Overlapping IPv6 Fragments





- 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 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
- RFC 3101 OSPF Not-so-stubby-area option
- RFC 4750 OSPFv2 MIB partial support no SetMIB

## ARUBA CX 6200 SWITCHES AND ACCESSORIES

### Switch Models

- Aruba 6200F 24G 4SFP+ Switch (JL724A)
- Aruba 6200F 24G Class4 PoE 4SFP+ 370W Switch (JL725A)
- Aruba 6200F 48G 4SFP+ Switch (JL726A)
- Aruba 6200F 48G Class4 PoE 4SFP+ 370W Switch (JL727A)
- Aruba 6200F 48G Class4 PoE 4SFP+ 740W Switch (JL728A)

### Cables

- Aruba 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281D)
- Aruba 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283D)

### Transceivers

- 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)

### 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)