aruba
Instant On

Aruba Instant On 1960 Switch Series

High performance, smart-managed stackable switches designed with small and growing businesses in mind

Perfect for training centers, healthcare facilities, tech start-ups

In today's digital-first environment, small businesses face many challenges to stay afloat and competitive. With tight budgets and limited technical expertise, they're struggling to keep up with the explosion of devices and bandwidth-heavy applications running on the network. To optimize both performance and investment, small businesses need cost-effective, next-gen networking solutions.

The Aruba Instant On 1960 Switch Series is an easy-to-use and affordable wired solution for networks supporting IT, mobile and cloud applications.

Aruba Instant On 1960 Switches are advanced, smart-managed, fixed configuration Gigabit stackable switches designed for small and growing businesses that are easy to deploy and affordable. These switches are designed to scale as business grows, making adding more employees, devices and applications simple. Aruba Instant On 1960 switches are made to handle today's bandwidth-heavy applications like voice and video conferencing, enabling consistent connectivity to improve user experience and application performance.

KEY FEATURES

Smart-managed layer 2+ Ethernet switch series ready to deploy in 24- and 48-port for non-PoE and PoE (supports Class 4 and Class 6 PoE) models

Up to 600W of PoE to power APs, IP Phones, surveillance cameras, door locks and other IoT devices

2 dedicated 10G SFP+ fiber and 2 10GBase-T uplink ports on 24-/48-port models for faster network speeds, and to eliminate traffic bottlenecks

12-port 10G aggregation switch with 4 SFP+ uplink ports that forms the foundation of a small business network

True Stacking allows for redundancy while making it simple to configure, manage, and troubleshoot multiple switches as a single entity

Luggage tag for easy cloud onboarding

Convenient mobile app and web-based GUI for set up, management and troubleshooting

Compact and fan-less 24-port non-PoE model for quiet deployment

HIGHLIGHTS

Simplicity at its best

Plug-and-play switches that work together with Instant On APs right out of the box

Cloud-Managed stacking to configure and manage multiple switches through the Instant On mobile app

Security you can count on

Protect your network from unauthorized access with Access Control List, IEEE 802.1x and VLANs

Automatic denial-of-service (DOS) monitors and protects the network against malicious attacks

We've got you covered

No extra licensing or subscription fees

Industry-leading limited lifetime warranty and support

The Aruba Instant On 1960 Switch Series includes five switches: two (2) 24-port and two (2) 48-port models in PoE and non-PoE configurations, and a 12 port 10-Gigabit aggregation switch. The access switches each have two (2) 10GBASE-T and two (2) 10G SFP+ uplink ports for high-bandwidth connectivity. The 1960 aggregation switch comes with twelve (12) 10GBase-T and four (4) SFP+ ports, providing 10G connectivity to servers, network storage devices and access switches alike. With PoE models, up to 30W PoE power delivery is available for Class 4 PoE devices like access points, surveillance cameras and VoIP phones, and up to 60W PoE power delivery is available for Class 6 PoE devices like pan-tilt zoom cameras and video-enabled IP-phones. The 24-port and 48-port PoE models come with a power budget of 370W and 600W respectively to support the latest IoT devices.

The 1960 switches provide stacking capabilities: up to (four) 4 switches (access and aggregation can be mixed and matched in a stack) can be stacked together and managed through one single management IP address, simplifying network operations. This means up to 288 ports, including 16 10G uplink ports, operate as one switch.

The 1960 switches support stacking through local and cloud-managed stacking modes. Local stacking provides True Stacking to easily configure, manage and troubleshoot physical switches as a single entity, while cloud-managed stacking provides ease-of-setup via the Instant On mobile app.

Using either the Instant On mobile app or the cloud-based web portal, you can quickly set up, monitor and manage the 1960 switch series from anywhere at any time.

THE INSTANT ON DIFFERENTIATORS

EASY SET UP AND MANAGEMENT

The Aruba Instant On mobile app allows you to set up, manage, and monitor Instant On switches and access points directly from your phone. Within the app, you get guided step-by-step instructions to install Instant On devices to get your network up and running quickly — no technical expertise required. And cloud-based access allows you to access the network from anywhere, at any time.

CLOUD-MANAGED STACKING

The Aruba Instant On mobile app and cloud-based web portal make cloud-managed stacking easy — just follow the recommendations to stack up to four (4) 1960 switches and manage as a single entity. The Instant On mobile app automatically detects members, making it easy to set up and manage the stack remotely, through a single dashboard and without the need to reboot.

LUGGAGE TAG

Each switch has a pull-out tag, known as a luggage tag, on the front panel of the switch. The tag includes a QR code that includes switch ID information (SKU number, SKU name, serial number, and MAC address) for easy switch onboarding through Instant On mobile app.

HIGH-PERFORMANCE WITH FLEXIBLE OPTIONS

The series consists of two (2) PoE switches, and two (2) non-PoE switches including 24- and 48-port Gigabit Ethernet switches

with two (2) dedicated 10G SFP+ ports and two (2) 10GBASE-T uplink ports on 24-/48- port models. The series also includes a 12-port 10Gbps aggregation switch with four (4) 10G SFP+ ports to meet the bandwidth requirements of small businesses.

BETTER TOGETHER

Instant On automatically detects and applies highest (critical) PoE priority to Instant On Access Points for uninterrupted power delivery and wireless network access. Wired and wireless voice traffic is prioritized with high QoS priority end-to-end for optimal voice performance.

OPTIMIZED USER EXPERIENCE

The Aruba Instant On mobile app provides common workflows for Instant On switches and access points, making it easier to configure, monitor and manage your network remotely without the need for additional hardware like a cloud key. You can also update firmware on your Instant On devices directly from the cloud whenever you want, from wherever you are.

SITE INVENTORY AND TOPOLOGY VIEW

The site inventory view shows all Instant On switches and access points on a single interface, and the topology view provides an intuitive structure of all Instant On devices deployed on the network — allowing you to quickly identify non-functioning devices and troubleshoot accordingly. Network issues can be easily diagnosed with connectivity tests like Ping and Traceroute.

BUILT-IN SECURITY

Built-in security features protect your network from external threats by blocking malware attacks and keeping unauthorized users off the network. Network traffic can be filtered and access restricted based on MAC and IP address.

NO HIDDEN FEES

All features are included in the price of the hardware — there are no recurring subscription or licensing fees. Expert-level support and industry leading limited lifetime warranty are also included, along with chat support for the life of the product.

MULTI-SITE REMOTE MANAGEMENT

The cloud-hosted web interface and mobile app make it easy to remotely manage multiple sites, multiple networks, distributed deployments and multi-tenant deployments. Each site is logically separated and has its own configuration, statistics, guest portal, and admin read/write privileges. Instant On allows you to create three admin accounts per site, offering the option to lock accounts from accidental deletion or to allow your account to be managed by a trusted partner.

KEY FEATURES

MANAGEMENT

Cloud-based management for entire network
The cloud-hosted web interface and mobile app make it easy to manage networks with Instant On APs and Switches.

Simple local web GUI management
For management of individual switches, the intuitive Web GUI makes management simple, even for non-technical users. Supports up to five (5) HTTP and HTTP Secure (HTTPS) sessions.

True stacking
Simplifies administration of multiple devices through creation of a single logical managed unit with up to (4) four Aruba Instant On 1960 switches in a ring or chain topology, using affordable Cat 6A, long-distance fiber, or localized DAC cables. The switches in the stack can either be access or aggregator switches or a combination of both. The entire stack behaves as a single switch, regardless of whether the stack is in a closet or spread over multiple kilometers.

Hybrid stacking
Allows both access and aggregator switches to be connected in a single stack. Hybrid stacking helps in right-sizing the deployment by allowing a combination of aggregation and access switches to meet the needs of the deployment.

Cloud-managed stacking
Enables automatic configuration and formation of the stack based on recommendations from the cloud portal. Potential stack members and links are automatically detected, and with just a few taps, individual switches are converted into a stack. If a link or switch fails, the stack remedies the failure without the need to connect to the Internet.

Secure web-management sessions with HTTPS
Encrypts and otherwise protects management sessions through HTTP Secure (HTTPS), which prevents snooping of sensitive management information. Regardless of whether the switch is managed from the local Web GUI or the Cloud, data between the switch and the management interface is encrypted and secure.

Firmware update
Provides notification of the latest firmware with the ability to schedule update at a preferred time through Instant On mobile app and cloud-based web portal.

Default DHCP client mode
Allows the switch to be directly connected to a network, enabling plug-and-play operation. In the absence of a DHCP server on the network, the switch falls back to the static address 192.168.1.1.

Account management
Allows administrators to add, modify, delete and transfer management accounts and passwords for secure access to Instant On cloud management solution.

Locator LED
Allows users to set the locator LED on a specific switch to either turn on, blink, or turn off; simplifies troubleshooting by making it easy to locate a particular switch within a rack of similar switches. This feature can also be used to locate units in a stack.

SNMPv1, v2c, and v3
Facilitates remote management of the switch, as the device can be discovered and monitored from an SNMP management station.

KEY FEATURES

Simple Network Time Protocol (SNTP)
Allows automatic synchronization of the switch date and time for accurate tracking of system events and various schedules set by the administrator.

Management VLAN ID
Provides secure management access to the switch for administrators from within the specified VLAN.

QUALITY OF SERVICE (QoS)

Traffic prioritization
Provides time-sensitive packets (like VoIP and video) with priority over other traffic based on DSCP or 802.1p classification.

Class of Service (CoS)
Sets the 802.1p/DSCP priority to queue mapping (8 queues). Supports strict priority queuing (SP) or weighted round robin (WRR) queuing.

Access Control Lists (ACLs)

Enables network traffic filtering by creating an ACL, adds rules and matches criteria to an ACL, and applies the ACL to permit or deny on one or more interfaces or a VLAN. Supports for 100 inbound IPv4 and MAC ACLs with up to 960 ACEs on access switches and up to 1024 ACEs on aggregation switch.

Global Trust Mode
Enables the user to define the type of trust to apply to traffic received on port or LAG interface, with 802.1p, DSCP or 802.1p-DSCP being the configurable options.

Traffic shaping
Allows smoothing out temporary traffic bursts over time and sets the limit on how much traffic can leave a port, given that the switch can limit the transmission rate of egress frames on a per-port basis.

CONNECTIVITY

Auto MDI/MDI-X
Adjusts automatically for straight-through or crossover cables on all 10/100/1000 ports.

Auto-negotiating capability
Supports half/full-duplex auto-negotiating capability on every port doubles the throughput of every port.

10G fiber and copper connectivity
Provides high speed connectivity with dedicated two (2) 10G SFP+ fiber ports and two (2) 10GBase-T ports on 24- and

48-port models, where fiber connections are used for uplinks and other connections across longer distances and copper ports are a cost-effective solution that uses readily available Cat6 cables. 10G fiber and copper ports are in addition to 1G copper ethernet ports, providing a higher total number of available ports.

Aggregation capability
12-port 10-Gigabit aggregator model with 12 10GBase-T and 4 four (4) SFP+ ports providing 10G connectivity, ideal for servers and network storage devices while offering uplink connectivity to access switches.

Ethernet Alliance PoE Class 6 and Class 4 certification
Provides dedicated ports with up to 60 W per port, which allows support of Class 6 PoE or 802.3bt capable devices such as digital signage, sensors and other IoT devices. Models also support Class 4 PoE or 802.3at capable devices, which provide up to 30 W per port for devices such as video IP phones, wireless access points, and advanced pan/tilt/zoom security cameras, as well as any 15.4 W 802.3af compliant end device; mitigates the cost of additional electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments.

Brand	Standard	Class	Min. power at the PSE port	Max. power con-sumed at the PD port	Wire usage	EA Certified Logo
PoE 1	IEEE 802.3 af	0-3	15.4W	13W	2 pair only	
	IEEE 802.3 at	4	30W	25.5W		
PoE 2	IEEE 802.3 bt	1-3	15.4W	13W	2 pair or 4 pair	
		4	30W	25.5W		
		5	45W	40W	4 pair only	
		6	60W	51W		

Auto-PoE power configuration
The switch automatically assigns the required power to a port for a PD device based on Link Layer Discovery Protocol (LLDP).

PoE power allocation
Support multiple methods (LLDP-MED automatic, class of PoE, or usage-based) to allocate PoE power for more efficient energy savings.

PoE Scheduling
Allows user to configure a specific day/time of the week (e.g., business hours) for Instant On switches to supply power to connected devices (e.g., surveillance cameras, access points etc.).

KEY FEATURES

SWITCHING

Flow control
Provides a flow-throttling mechanism propagated through the network to prevent packet loss at a congested node.

Link Flap prevention
Minimizes the network disruption by automatically detecting and disabling ports that experience link flap events.

Spanning Tree Protocol (STP)
Supports 802.1D STP, 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and 802.1s Multiple Spanning Tree Protocol (MSTP supported on local web only).

BPDU filtering
Drops BPDU packets when STP is enabled globally but disabled on a specific port.

Loop protection
Allows loop detection in the network for switches that do not run spanning tree, or on which STP feature is disabled.

IGMP v1, v2, v3 /MLDv1, v2 snooping
IGMP/MLD snooping allows the switch to forward IPv4 or IPv6 multicast traffic intelligently. With IGMP snooping enabled, the switch forwards traffic only to ports that request the multicast traffic. This prevents the switch from broadcasting traffic to all ports and possibly affecting network performance (MLD snooping/IPv6 supported on local web only).

Link aggregation
Groups together multiple ports up to 16 trunks with a maximum of eight (8) ports per trunk automatically using Link Aggregation Control Protocol (LACP), or manually, to form a high-bandwidth connection to the network backbone that helps prevent traffic bottlenecks.

Link Layer Discovery Protocol (LLDP)
Advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications.

LLDP-MED (Media Endpoint Discovery)
Defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN for automatic configuration of network devices such as IP phones.

VLAN support
Offers some of the benefits of both bridging and routing. VLANs partition the network into logical segments, which provide better administration, security, and multicast traffic management.

Auto voice VLAN
Automatically recognizes IP phones and assigns voice traffic to dedicated VLAN for voice traffic.

Port mirroring
Enables traffic on a port or VLAN to be simultaneously sent to a network analyzer for troubleshooting in case of issues.

Auto recovery
Allows ports to be placed in a suspended state when defined error conditions are met. Features supported by Auto Recovery are BPDU Guard, Storm Control, Port Security, Loop Protection and Link Flap Prevention.

NETWORK SECURITY

TPM-based security
Includes a Trusted Platform Module (TPM) for secure hardware-based generation and storage of cryptographic keys used for secure connection to the Instant On cloud portal.

RADIUS
The switch supports RADIUS authentication with primary and backup server configuration.

Automatic VLAN assignment — RADIUS assigned VLANs
Assigns users automatically to the appropriate VLAN based on their identity and location.

RADIUS accounting
A robust set of attributes and statistics are available for collecting information from the switch.

Port access control
Authentication of network users on a per port basis prior to permitting network access. Port authentication includes RADIUS assigned VLAN or dynamic VLAN creation.

Port security
Limits the number of MAC addresses that can be learned on a port. If the configured limit is reached, any other addresses beyond that limit are not learned, and the frames are discarded. It helps secure the network by preventing unknown devices from forwarding packets into the network.

KEY FEATURES

DHCP snooping and IP Source Guard
DHCP snooping provides network security by filtering DHCP messages between untrusted hosts and DHCP servers. IP Source guard utilizes the DHCP snooping database to deny network access from untrusted sources (IP Source Guard supported on local web only).

ARP attack prevention
ARP attack protection intercepts, logs, and discards ARP packets with invalid IP-to-MAC address bindings, protecting the network from common man-in-the-middle attacks.

Automatic denial-of-service protection
Manages high-volume traffic and prevents denial-of-service (DoS) attacks against the network.

Global Storm Control
Protects against conditions where incoming packets flood the LAN, causing network performance degradation for unicast traffic with an unknown destination, and for broadcast and multicast traffic.

PERFORMANCE AND EFFICIENCY

Energy Efficient Ethernet (EEE)
Compliant with 802.3az standard requirements to save energy during periods of low data activity.

Auto-port shut down
The switch saves power by automatically shutting down power to inactive ports. Power is restored on a port upon link detection.

Energy-efficient cooling
Includes variable speed fans operating only at the speed necessary to maintain operating temperature to reduce excess noise and power consumption.

Fan-less operation
Fan-less design for 24-port non-PoE model, making the switches ideal for silent operations or usage.

ROUTING FEATURES

Static IPv4 routing
Supports IPv4 static routing for up to 32 static routes and 8 VLAN routing interfaces on the access switch models and up to 512 static routes and 32 VLAN routing interfaces on aggregation model. Manual or DHCP IP address assignments can be configured to an individual port or VLAN.

Address Resolution Protocol (ARP) Table
The ARP table displays all the IP addresses that have been resolved to MAC addresses, either dynamically or through static entry configuration.

DHCP relay
Enables packets to be forwarded between a DHCP client and server that reside different subnets.

FEATURES ACCESSED THROUGH LOCAL WEB-MANAGEMENT INTERFACE

Top event dashboard
Provides notifications for critical events and a quick access to the latest log events.

Quick start-up and VLAN Wizard
Includes a quick start-up and VLAN wizard which enable automatic configuring of the initial settings such IP address, device information and system time. VLAN wizard might be used for setting up initial VLAN IDs and port membership.

Fully IPv6 capable
- IPv6 host: Enables switches to be managed and deployed at the IPv6 network's edge
- IPv6 routing: Supports up to 32 IPv6 static routes on access models and up to 512 static routes on the aggregator model
- MLD snooping: Forwards IPv6 multicast traffic to the appropriate interface, preventing traffic flooding
- IPv6 ACL/QoS: Supports ACL and QoS for IPv6 network traffic
- IPv6 DHCP relay
- Configuration of IPv6 features on local web GUI only

DHCP server (IPv4, IPv6)
Centralizes control and automatic assignment of IP addresses to attached hosts. In addition to IP address allocation, it also provides information such as the address of the DNS server, default router, WINS server, and domain name (IPv6 support available on local web only).

Ingress rate limiting
Sets and enforces per-port ingress traffic limits based on percentages or packets per second. If limits are exceeded the switch may disable the port or send a SNMP trap to a management station.

DNS client
Provides a method for which host names can be mapped to IP addresses. When configured on a switch, a host name can be substituted for the IP address when executing commands from the web interface.

KEY FEATURES

Jumbo frame support
Supports up to 9216 bytes frame size to improve the performance of large data transfers.

Protected Ports
Protected Ports, also known as port isolation, provides isolation between interfaces (Ethernet ports and LAGs) that share the same broadcast domain (VLAN). Protected ports can send traffic only to unprotected ports.

Energy savings status
The switch provides estimated cumulative energy savings due to green Ethernet features being enabled.

User account management
Password strength checking and aging feature provides enhanced security to user account administration on the local web management interface. Password management further enhances the security so that only authorized access to the switch's web interface.

Secure Sockets Layer (SSL)
Encrypts all HTTP traffic, secures access to the local browser-based management of the switch.

SCP and TFTP file transfer
Provides different mechanisms for secure file transfer through SCP (Secure Copy Protocol) or TFTP.

Dual image support
Provide independent primary and secondary software images for backup while upgrading.

DIAGNOSTICS

Event logs
Provides detailed information for problem identification and resolution.

Session logging
Displays the active users connected to the switch such as client IP address, duration of the individual session.

Remote syslog
Provides support for a single syslog server allowing the user to redirect and store events to a remote syslog server (supported on local web only).

Remote monitoring (RMON)
Provides advanced monitoring and reporting capabilities for RMON group statistics, history, alarms and events. RMON data can be viewed from the local web interface or retrieved from the switch through a network management platform over SNMP (supported on local web only).

Cable diagnostic tool
Provides the mechanism to detect and report potential cabling issues, such as cable opens or cable shorts on copper links, in addition to providing distance to the fault and total length of cable (supported on local web only).

Ping IPv4/IPv6
The switch supports both ICMP for sending ping requests to IPv4 addresses and ICMPv6 for sending ping requests to IPv6 addresses (IPv6 supported on local web only).

Traceroute IPv4/IPv6
Provides information about the route a packet takes from the switch to a specific IPv4 or IPv6 address as well as the amount of time it takes for the packet to reach its destination (IPv6 supported on local web only).

Support file
Includes summary information for the switch including the current switch configuration, statistics and buffered log messages (supported on local web only).

MAC address table
Also known as the bridge table or the forwarding database, this table enables the switch to forward traffic through the appropriate port and supports up to 16K MAC address entries.

WARRANTY, SERVICE AND SUPPORT

Aruba Instant On Limited Lifetime Support provides 24X7 phone support for the first 90 days and chat support for the entire warranty period. Community support is included for the life of the product.

Refer to the Hewlett Packard Enterprise website at hpe.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

TECHNICAL SPECIFICATIONS

	Aruba Instant On 1960 12XGT 4SFP+ Switch (JL805A)	Aruba Instant On 1960 24G 2XGT 2SFP+ Switch (JL806A)	Aruba Instant On 1960 24G 20p Class4 4p Class6 PoE 2XGT 2SFP+ 370W Switch (JL807A)	Aruba Instant On 1960 48G 2XGT 2SFP+ Switch (JL808A)	Aruba Instant On 1960 48G 40p Class4 8p Class6 PoE 2XGT 2SFP+ 600W Switch (JL809A)
Specifications					
I/O ports and slots	12 RJ-45 autosensing 100/1000/10GBASE-T ports (IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.an 10GBASE-T); Duplex: 100BASE-TX: half or full; 1000BASE-T: full only 10GBASE-T: full only 4 SFP+ 10GbE ports	24 RJ-45 autosensing 10/100/1000 Mbps ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 SFP+ 10GbE ports 2 10GBASE-T ports	24 RJ-45 autosensing 10/100/1000 Mbps ports including 4 CL4 and 20 CL6 PoE ports IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at Class 4, IEEE 802.3bt Class 6); Duplex: 10BASE-T/100BASE TX: half or full; 1000BASE-T: full only 2 SFP+ 10GbE ports 2 10GBASE-T ports	48 RJ-45 autosensing 10/100/1000 Mbps ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 SFP+ 10GbE ports 2 10GBASE-T ports	48 RJ-45 autosensing 10/100/1000 Mbps ports including 8 CL4 and 40 CL6 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at Class 4, IEEE 802.3bt Class 6); Duplex: 10BASE-T/100BASE TX: half or full; 1000BASE-T: full only 2 SFP+ 10GbE ports 2 10GBASE-T ports
Physical Characteristics					
Dimensions	350.5(d) x 442.5(w) x 43.95(h) mm	350.5(d) x 442.5(w) x 43.95(h) mm	350.5(d) x 442.5(w) x 43.95(h) mm	350.5(d) x 442.5(w) x 43.95(h) mm	402.75(d) x 442.5(w) x 43.95(h) mm
Weight	9.6 lb (4.3 kg)	8.7 lb (3.9 kg)	10.4 lb (4.7 kg)	9.8 lb (4.4 kg)	10.8 lb (4.9 kg)
CPU	Single Core ARMv7 Cortex-A9 @2Ghz	Single-Core ARM v7 Cortex-A9 @800MHz	Single-Core ARM v7 Cortex-A9 @800MHz	Single-Core ARM v7 Cortex-A9 @800MHz	Single-Core ARM v7 Cortex-A9 @800MHz
Performance					
100 Mb Latency	< 7.4 uSec	< 4.4 uSec	< 4.4 uSec	< 4.4 uSec	< 4.4 uSec
1000 Mb Latency	< 4.2 uSec	< 2.2 uSec	< 2.2 uSec	< 2.2 uSec	< 2.2 uSec
10000 Mb Latency	< 1.1 uSec	< 1.1 uSec	< 1.1 uSec	< 1.1 uSec	< 1.1 uSec
Throughput (Mpps)	238 Mpps	95 Mpps	95 Mpps	131 Mpps	131 Mpps
Capacity	320 Gbps	128 Gbps	128 Gbps	176 Gbps	176 Gbps
Routing Table size (# of static entries)	512 IPv4/IPv6	32 IPv4/IPv6	32 IPv4/IPv6	32 IPv4/IPv6	32 IPv4/IPv6
MAC Address table size (# of entries)	16,000 entries	16,000 entries	16,000 entries	16,000 entries	16,000 entries
Reliability MTBF (years)	88.8	123.0	65.3	109.4	68.0
Environment					
Operating temperature	0-40°C, 0-10,000 ft	0-40°C, 0-10,000 ft	0-40°C, 0-10,000 ft	0-40°C, 0-10,000 ft	0-40°C, 0-10,000 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	15% to 95% @ 104°F (40°C) non-condensing	15% to 95% @ 104°F (40°C) non-condensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C) up to 15000 ft	-40°F to 158°F (-40°C to 70°C) up to 15000 ft	-40°F to 158°F (-40°C to 70°C) up to 15000 ft	-40°F to 158°F (-40°C to 70°C) up to 15000 ft	-40°F to 158°F (-40°C to 70°C) up to 15000 ft
Nonoperating/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	15% to 90% @ 149°F (65°C) non-condensing
Altitude	up to 10,000 ft (3 km)	up to 10,000 ft (3 km)	up to 10,000 ft (3 km)	up to 10,000 ft (3 km)	up to 10,000 ft (3 km)
Acoustic- ECMA-109:2010 Declaration LWAd[Bels] Measured at 23°C					
Idle	4.1	2.7	3.5	3	3.5
100% Traffic	4.1	2.7	–	3	–
100% Traffic / 0% PoE	–	–	3.5	–	3.5
100% Traffic / 50% PoE	–	–	3.6	–	3.7
100% Traffic / 100% PoE	–	–	5.8	–	6.3

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Electrical Characteristics					
Frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
AC voltage	100-127VAC / 200-240VAC	100-127VAC / 200-240VAC	100-127VAC / 200-240VAC	100-127VAC / 200-240VAC	100-127VAC / 200-240VAC
Current	1.3A/0.4A	0.6A/0.2A	5.0A/0.4A	1.1A/0.4A	7.9A/0.5A
Maximum power rating	100-127V: 130W 200-220V: 160W	100-127V: 60W 200-220V: 80W	100-127V: 500W 200-220V: 480W	100-127V: 110W 200-220V: 120W	100-127V: 790W 200-220V: 760W
Idle power	100-127V: 60W 200-220V: 80W	100-127V: 30W 200-220V: 40W	100-127V: 40W 200-220V: 80W	100-127V: 60W 200-220V: 80W	100-127V: 60W 200-220V: 100W
PoE power	–	–	Total 370 W PoE Power (Up to 240 W of Class 6 or 370 W of Class 4 PoE)	–	Total 600 W PoE Power (Up to 480 W of Class 6 or 600 W of Class 4 PoE)
Power Supply	Internal power supply	Internal power supply	Internal power supply	Internal power supply	Internal power supply
Safety					
	EN/IEC 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013	EN/IEC 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013	EN/IEC 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013	EN/IEC 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013	EN/IEC 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013
	EN/IEC 62368-1, 2nd. & 3rd. Ed.	EN/IEC 62368-1, 2nd. & 3rd. Ed.	EN/IEC 62368-1, 2nd. & 3rd. Ed.	EN/IEC 62368-1, 2nd. & 3rd. Ed.	EN/IEC 62368-1, 2nd. & 3rd. Ed.
	UL 62368-1, 2nd. & 3rd. Ed.	UL 62368-1, 2nd. & 3rd. Ed.	UL 62368-1, 2nd. & 3rd. Ed.	UL 62368-1, 2nd. & 3rd. Ed.	UL 62368-1, 2nd. & 3rd. Ed.
	CAN/CSA C22.2 No. 62368-1, 2nd. & 3rd. Ed.	CAN/CSA C22.2 No. 62368-1, 2nd. & 3rd. Ed.	CAN/CSA C22.2 No. 62368-1, 2nd. & 3rd. Ed.	CAN/CSA C22.2 No. 62368-1, 2nd. & 3rd. Ed.	CAN/CSA C22.2 No. 62368-1, 2nd. & 3rd. Ed.
	EN/IEC 60825-1:2014 Class 1	EN/IEC 60825-1:2014 Class 2	EN/IEC 60825-1:2014 Class 3	EN/IEC 60825-1:2014 Class 4	EN/IEC 60825-1:2014 Class 5
Emissions					
	EN 55032:2015/CISPR 32, Class A	EN 55032:2015/CISPR 32, Class A	EN 55032:2015/CISPR 32, Class A	EN 55032:2015/CISPR 32, Class A	EN 55032:2015/CISPR 32, Class A
	FCC CFR 47 Part 15: 2018 Class A	FCC CFR 47 Part 15: 2018 Class A	FCC CFR 47 Part 15: 2018 Class A	FCC CFR 47 Part 15: 2018 Class A	FCC CFR 47 Part 15: 2018 Class A
	ICES-003 Class A	ICES-003 Class A	ICES-003 Class A	ICES-003 Class A	ICES-003 Class A
	VCCI Class A	VCCI Class A	VCCI Class A	VCCI Class A	VCCI Class A
	CNS 13438 Class A	CNS 13438 Class A	CNS 13438 Class A	CNS 13438 Class A	CNS 13438 Class A
	KN 32 Class A	KN 32 Class A	KN 32 Class A	KN 32 Class A	KN 32 Class A
	AS/NZS CISPR 32 Class A	AS/NZS CISPR 32 Class A	AS/NZS CISPR 32 Class A	AS/NZS CISPR 32 Class A	AS/NZS CISPR 32 Class A
Immunity					
Generic	EN 55035, CISPR 35, KN35	EN 55035, CISPR 35, KN35	EN 55035, CISPR 35, KN35	EN 55035, CISPR 35, KN35	EN 55035, CISPR 35, KN35
EN	EN 55035, CISPR 35	EN 55035, CISPR 35	EN 55035, CISPR 35	EN 55035, CISPR 35	EN 55035, CISPR 35
ESD	EN/IEC 61000-4-2	EN/IEC 61000-4-2	EN/IEC 61000-4-2	EN/IEC 61000-4-2	EN/IEC 61000-4-2
Radiated	EN/IEC 61000-4-3	EN/IEC 61000-4-3	EN/IEC 61000-4-3	EN/IEC 61000-4-3	EN/IEC 61000-4-3
EFT/Burst	EN/IEC 61000-4-4	EN/IEC 61000-4-4	EN/IEC 61000-4-4	EN/IEC 61000-4-4	EN/IEC 61000-4-4
Surge	EN/IEC 61000-4-5	EN/IEC 61000-4-5	EN/IEC 61000-4-5	EN/IEC 61000-4-5	EN/IEC 61000-4-5
Conducted	EN/IEC 61000-4-6	EN/IEC 61000-4-6	EN/IEC 61000-4-6	EN/IEC 61000-4-6	EN/IEC 61000-4-6
Power frequency magnetic field	EN/IEC 61000-4-8	EN/IEC 61000-4-8	EN/IEC 61000-4-8	EN/IEC 61000-4-8	EN/IEC 61000-4-8
Voltage dips and interruptions	EN/IEC 61000-4-11	EN/IEC 61000-4-11	EN/IEC 61000-4-11	EN/IEC 61000-4-11	EN/IEC 61000-4-11
Harmonics	EN/IEC 61000-3-2	EN/IEC 61000-3-2	EN/IEC 61000-3-2	EN/IEC 61000-3-2	EN/IEC 61000-3-2
Flicker	EN /IEC 61000-3-3	EN /IEC 61000-3-3	EN /IEC 61000-3-3	EN /IEC 61000-3-3	EN /IEC 61000-3-3

TECHNICAL SPECIFICATIONS

	Aruba Instant On 1960 12XGT 4SFP+ Switch (JL805A)	Aruba Instant On 1960 24G 2XGT 2SFP+ Switch (JL806A)	Aruba Instant On 1960 24G 20p Class4 4p Class6 PoE 2XGT 2SFP+ 370W Switch (JL807A)	Aruba Instant On 1960 48G 2XGT 2SFP+ Switch (JL808A)	Aruba Instant On 1960 48G 40p Class4 8p Class6 PoE 2XGT 2SFP+ 600W Switch (JL809A)
Device Management					
	Aruba Instant On Cloud; Web browser; SNMP Manager	Aruba Instant On Cloud; Web browser; SNMP Manager	Aruba Instant On Cloud; Web browser; SNMP Manager	Aruba Instant On Cloud; Web browser; SNMP Manager	Aruba Instant On Cloud; Web browser; SNMP Manager
Mounting					
Mounting Positions and Supported Racking	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. 2-post rack kit included Supports table-top mounting Supports rack-mounting Supports wall-mounting with ports facing either up or down Supports under-table mounting using the brackets provided	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. 2-post rack kit included Supports table-top mounting Supports rack-mounting Supports wall-mounting with ports facing either up or down Supports under-table mounting using the brackets provided Must be mounted top surface up. To prevent possible impact to long-term reliability, product should not be mounted upside-down	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. 2-post rack kit included Supports table-top mounting Supports rack-mounting Supports wall-mounting with ports facing either up or down Supports under-table mounting using the brackets provided	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. 2-post rack kit included Supports table-top mounting Supports rack-mounting Supports wall-mounting with ports facing either up or down Supports under-table mounting using the brackets provided	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet. 2-post rack kit included Supports table-top mounting Supports rack-mounting Supports wall-mounting with ports facing either up or down Supports under-table mounting using the brackets provided
Transceivers					
	Aruba 1G SFP LC SX 500m MMF Transceiver (J4858D)				
	Aruba 1G SFP LC LX 10km SMF Transceiver (J4859D)				
	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+ to SFP+ 1m DAC (J9281D)				
	Aruba 10G SFP+ to SFP+ 3m DAC (J9283D)				

STANDARDS AND PROTOCOLS
(APPLIES TO ALL PRODUCTS IN SERIES)

IEEE Standards Support	
IEEE 802.3i	10BASE-T
IEEE 802.3u	100BASE-TX
IEEE 802.3ab	1000BASE-T
IEEE 802.3z	1000BASE-X
IEEE 802.3ae	10GBASE-T
IEEE 802.2af	PoE (PoE models only)
IEEE 802.2at	PoE+ (PoE models only)
IEEE 802.2bt	PoE++ (PoE models only)
IEEE 802.3x	Flow control
IEEE 802.1p	Priority
IEEE 802.1Q	VLANs
IEEE 802.3ad	Link Aggregation Control Protocol (LACP)
IEEE 802.1X	Port Access Authentication
IEEE 802.3az	Energy-Efficient Ethernet (EEE)
IEEE 802.1D	Spanning Tree Protocol
IEEE 802.1W	Rapid Spanning Tree Protocol
IEEE 802.1S	Multiple Spanning Tree Protocol
IEEE 802.1AB	Link Layer Discovery Protocol
IEEE 802.1t	IEEE 802.1D maintenance
IEEE 802.3ac	Frame extension for VLAN tags

IETF Standards Support

RFC 768	RFC 919	RFC 1533	RFC 5424	RFC 4252
RFC 783	RFC 922	RFC 1541	RFC3411	RFC 4253
RFC 791	RFC 950	RFC 1624	RFC3412	RFC 4254
RFC 792	RFC 1042	RFC 1700	RFC3413	RFC 4716
RFC 793	RFC 1071	RFC1867	RFC3414	RFC 4419
RFC 813	RFC 1123	RFC 2030	RFC3415	RFC 2869
RFC 879	RFC 1141	RFC2616	RFC2576	RFC 3580
RFC 896	RFC 1155	RFC 2131	RFC 4330	RFC 2474
RFC 826	RFC 1157	RFC 2132	RFC 3268	RFC 4541
RFC 894	RFC 1350	RFC 3164	RFC 4251	

IETF Standards Management Support

RFC 1213	RFC 1757	RFC 2865	RFC 2863	RFC 2576
RFC 1215	RFC 1907	RFC 2866	RFC 4022	RFC 2579
RFC 1286	RFC 2011	RFC 2869	RFC 4113	RFC 2580
RFC 1442	RFC 2012	RFC 2665	RFC 1212	RFC 3410
RFC 1451	RFC 2013	RFC 2666	RFC 1901	RFC 3417
RFC 1493	RFC 2233	RFC 2674	RFC 1908	RFC 2620
RFC 1573	RFC 2578	RFC 2737	RFC 2271	
RFC 1643	RFC 2618	RFC 2819	RFC 2295	

IETF Standard SNMP Traps Supported

RFC 1157	RFC 1493	RFC 1215	RFC 3416	RFC 3418

IETF IPv6 Support

RFC 1981	RFC 2732	RFC 4193	RFC 4786	RFC 5722
RFC 2460	RFC 3484	RFC 4213	RFC 4861	RFC 5942
RFC 2464	RFC 3587	RFC 4291	RFC 4862	RFC 5952
RFC 2465	RFC 3879	RFC 4292	RFC 4943	RFC 6177
RFC 2466	RFC 4001	RFC 4293	RFC 5095	RFC 3736
RFC 2526	RFC 4007	RFC 4294	RFC 5220	RFC 2365
RFC 2710	RFC 4113	RFC 4443	RFC 5221	
RFC 2711	RFC 4147	RFC 4773	RFC 5350	

ORDERING INFORMATION

Aruba Instant On 1960 Switch Series

Part Number	Description	Ports	Uplink Ports	Class 4 PoE Power Budget	Class 6 PoE	Class 4 PoE
JL805A	Aruba Instant On 1960 12XGT 4SFP+ Switch	12 x 10G	4 x SFP+	–	–	–
JL806A	Aruba Instant On 1960 24G 2XGT 2SFP+ Switch	24 x 1G	2 x SFP+ 2 x 10GBASE-T	–	–	–
JL807A	Aruba Instant On 1960 24G 20p Class4 4p Class6 PoE 2XGT 2SFP+ 370W Switch	24 x 1G	2 x SFP+ 2 x 10GBASE-T	370 W	4 x CL6 ports	20 x CL4 ports
JL808A	Aruba Instant On 1960 48G 2XGT 2SFP+ Switch	48 x 1G	2 x SFP+ 2 x 10GBASE-T	–	–	–
JL809A	Aruba Instant On 1960 48G 40p Class4 8p Class6 PoE 2XGT 2SFP+ 600W Switch	48 x 1G	2 x SFP+ 2 x 10GBASE-T	600 W	8 x CL6 ports	40 x CL4 ports

3 and 5 year support options

- JL805A: 3 Year Next Business Day (NBD) Exchange (H31LBE)

- JL805A: 5 Year Next Business Day (NBD) Exchange (H31LCE)

- JL806A: 3 Year Next Business Day (NBD) Exchange (H31LDE)

- JL806A: 5 Year Next Business Day (NBD) Exchange (H31LFE)

- JL807A: 3 Year Next Business Day (NBD) Exchange (H31LGE)

- JL807A: 5 Year Next Business Day (NBD) Exchange (H31LHE)

- JL808A: 3 Year Next Business Day (NBD) Exchange (H31LJE)

- JL808A: 5 Year Next Business Day (NBD) Exchange (H31LKE)

- JL809A: 3 Year Next Business Day (NBD) Exchange (H31LLE)

- JL809A: 5 Year Next Business Day (NBD) Exchange (H31LME)

(Go to Support Services Central to locate Foundation Care SKUs for switches.)

aruba Instant **on**