## Overview

## HPE Networking Instant On Switch 1930

## High-Performance, Smart-Managed Switches Designed with Small Businesses in Mind

Whether you own a cafe, a design firm or a tech startup, a reliable and secure network plays a critical role in the success of your business. And you need a network solution that gives you peace of mind, allowing you to focus on growing your business instead of managing problems with your network. HPE Networking Instant On makes it easy to keep network users happy, mobile and IoT devices connected, and your network secure.

The HPE Networking Instant On 1930 switches features advanced, smart-managed, fixed- configuration Gigabit switches designed for small businesses that are easy-to-deploy and affordable. They're made to handle today's bandwidth-heavy applications like voice and video conferencing, enabling consistent connectivity to enhance performance.

Using either the Instant On mobile app or the cloud-based web portal, you can quickly set up, monitor and manage the 1930 switch series from anywhere at any time. What's more, up to 30 W PoE power delivery is available out-of-the-box for your class 4 PoE devices, like access points, surveillance cameras and VoIP phones, all easily managed from the same platform.

Built-in security features protect your network from unauthorized access by allowing you to segment traffic and define access to each area of the network. And all of this is included in the price of the hardware – there are no hidden subscription or licensing fees.



#### HPE Networking Instant On 1930 Switches Family



## Overview

## **Key Features**

- Smart-managed layer 2+ Ethernet switch series ready to deploy in 8-, 24-and 48-port for non-PoE and Class 4 PoE models
- PoE to power APs and IoT devices like IP phones, surveillance cameras and door locks
- Two (2) dedicated 1G SFP fiber ports on 8-port models, and four (4) dedicated 1G/10G SFP+ fiber ports on 24-/48-port models to eliminate traffic bottlenecks across your network
- Security controls let you define access in each area of your network, keeping your business data safe
- Convenient mobile app and web- based GUI for set up, management and troubleshooting.

## Simplicity at Its Best

- Plug-and-play switches that work together with Instant On APs right out of the box
- Mobile app to easily setup, monitor and manage your network

## Security You Can Count On

- Protect your network from unauthorized access with 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 Instant On Differentiators

## **Easy Setup and Management**

The HPE Networking 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.

## Non-intrusive, Aesthetic Design

HPE Networking Instant On switches are designed to complement the sleek and clean look of the Instant On access points, and to blend discreetly into your site's environment. The 8-port models, as well as the 24- and 48-port non PoE models, are fan-less, making them ideal for quiet office deployments.

## **High Performance with Flexible Options**

The series consists of four (4) Class 4 PoE switches, and three (3) non-PoE switches including 8- 24- and 48-port Gigabit Ethernet switches. The two (2) dedicated 1G SFP fiber ports on 8-port models, and four (4) dedicated 1G/10G SFP+ fiber ports on 24-/48-port models, ensure high performance and eliminate traffic bottlenecks across the network. Customizable features include basic Layer 2 features like VLANs and link aggregation, as well as advanced features such as Layer 3 IPv4 static routing, ACLs, and Spanning Tree Protocols, and IPv6 Host mode.

## **Optimized User Experience**

The HPE Networking 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 cloud keys or VPN. You can also update firmware on your Instant On devices directly from the cloud whenever you want, from wherever you are.

## Site inventory

The site inventory feature on the Instant On mobile app shows you all switches and AP's on a single screen, allowing you to quickly identify non-functioning devices and troubleshoot accordingly.

## **Multi-Site Management**

The cloud-hosted web interface and mobile app make it easy to 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.

## **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.



## 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.

#### **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.

#### **Port Mirroring**

Enables traffic on a port or VLAN to be simultaneously sent to a network analyzer for monitoring.

#### **Event Logging and Alerts**

Provides detailed information for problem identification and resolution.

#### **Account Management**

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

#### **Schedule Configuration**

Global Schedule feature can be applied to time-based ACLs, port or interface shutdown, or PoE power delivery; up to 3 schedules can be configured. 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.).

## Quality of Service (QoS)

#### **Traffic Prioritization**

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

#### IEEE 802.1p/Q VLAN Tagging

Delivers data to devices based on the priority and type of traffic; supports IEEE 802.1Q.

#### Class of Service (CoS)

Sets the IEEE 802.1p/DSCP priority to queue mapping

(4 queues). Supports strict priority queuing (SP) or weighted round robin (WRR) queuing. SP and WRR queuing can be configured on individual switch ports.

#### **Advanced Classifier Based QoS**

Classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information.

## **Access Switching**

#### SFP/SFP+ Fiber Connectivity

Provides fiber connections for uplinks and other connections across longer distances than copper cabling can support. SFP ports are in addition to available copper Ethernet ports, providing a higher total number of available ports. Two (2) SFP 1G ports available on 8-port models and four (4) SFP+ 1G/10G ports on 24-/48 port models.



## Ethernet Alliance Certified Class 4 PoE (IEEE 802.3at)

Provides up to 30 W per port, which allows support of the class 4 PoE capable devices such as video IP phones, wireless access points, and advanced pan/tilt/zoom security cameras, as well as any 15.4 W IEEE 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.

## **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.

## Auto MDI/MDI-X

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

## **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.

## IEEE 802.1Q VLAN Support

Support for up to 256 VLANs with a VLAN ID range of 2-4093.

## IEEE 802.1X Access Control

Authentication of network users on a per port basis prior to permitting network access. Port authentication includes RADIUS assigned VLAN, dynamic VLAN creation, guest VLAN or into an unauthenticated VLAN.

## **Automatic Denial-of-Service Protection**

Monitors for malicious attacks and protects the network by blocking the attacks.

## Packet Storm Protection

Protects against unknown unicast, broadcast and multicast storms with user-defined thresholds.

## RADIUS

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

## Automatic VLAN Assignment — RADIUS Assigned VLANs

Automatically assigns users 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.

## Management VLAN ID

Provides secure management access to administrators in the specified VLAN.

## **Link Flap Prevention**

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



## Performance and Efficiency

## Energy Efficient Ethernet (EEE)

Compliant with IEEE 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 Savings Status**

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

## **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 8-port models, 24- and 48-port non-PoE models, making the switches ideal for office deployments.

# Switching Features

## IEEE 802.3x Flow Control

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

## Spanning Tree Protocol (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 on local web).

## **Loop Protection**

If the switch detects a loop, it disables the source port from forwarding data packets originating from the switch to avoid broadcast storms.

## **BPDU Filtering**

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

## Jumbo Frame Support

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

## IGMP Snooping v1/v2

Improves network performance through multicast filtering, instead of flooding traffic on all ports.

## Link Aggregation

Groups together multiple ports up to 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. The 8-port models support 4 trunks, 24-port models support 8 trunks, and 48-port models support 16 trunks.

## LLDP/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.

## **Address Resolution Protocol (ARP)**

The ARP table displays all of the IP addresses that have been resolved to MAC addresses, either dynamically or through static entry configuration.

## Additional 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**

Enables automatic configuring of the initial settings such IP address, device information, and system time. VLAN wizard can be used for setting up initial VLAN IDs and port membership.

## 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 50 inbound IPv4 and MAC ACLs with up to 480 ACEs.

## IPv6 Host

Enables switches to be managed and deployed at the IPv6 network's edge.

## **Rate Limiting**

Sets and enforces per-port ingress traffic limits based on percentages or packets per second.

## **Protected Ports**

Ports in a port isolation group are restricted from forwarding Layer 2 traffic between ports in that group, providing data privacy and security.

## 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.

## **User Account Management**

Password strength checking and aging feature provides enhanced security to user account administration to the local web management interface.

Additionally, user account authentication can now be done via RADIUS to access the web-interface.'

## Secure Sockets Layer (SSL)

Encrypts all HTTP traffic, secures access to the local browser-based management of the switch.

## SNMPv1, v2c, and v3

Facilitates remote management with SNMP management station that discovers and monitors the switch.

## **Remote Monitoring (RMON)**

Provides advanced monitoring and reporting capabilities for statistics, history, alarms and events. RMON data is retrieved from the switch through a network management platform over SNMP.

## 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.



## **Standard Features**

## Warranty, Service and Support

HPE Networking 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.

# **Configuration Information**

SKU
JL680A
JL680A#AC3
JL681A
JL681A#B2B
JL681A#B2C
JL681A#AC3
JL001A#ACJ
JL682A
JEOOZA
JL682A#B2B
JL682A#B2C
JL682A#AC3
JL683B
JL683B#B2B
JL683B#B2B
JL683B#AC3
JL684B
JL684B#B2B



	Aruba Instant On 1930 24G Class4 PoE 4SFP/SFP+ 370W Switch PDU	JL684B#B2C
	C15 PDU Jumper Cord (ROW) Aruba Instant On 1930 24G Class4 PoE 4SFP/SFP+ 370W Switch No Loc	JL684B#AC3
	No Localized Power Cord Selected	5200 12/17 (00
1, 2, 3	Aruba Instant On 1930 48G 4SFP/SFP+ Switch	JL685B
_, _, _	• 48 RJ-45 autosensing 10/100/1000 ports	
	<ul> <li>4 SFP/SFP+ 1000/10000 Mbps ports (min=0 \ max=4 SFP/SFP+ Transceivers)</li> </ul>	
	• 1U - Height	
	Aruba Instant On 1930 48G 4SFP/SFP+ Switch PDU	JL685A#B2B
	C15 PDU Jumper Cord (NA/MX/TW/JP)	
	Aruba Instant On 1930 48G 4SFP/SFP+ Switch PDU	JL685A#B2C
	C15 PDU Jumper Cord (ROW)	
	Aruba Instant On 1930 48G 4SFP/SFP+ Switch No Loc	JL685A#AC3
	No Localized Power Cord Selected	
1, 2, 3	Aruba Instant On 1930 48G Class4 PoE 4SFP/SFP+ 370W Switch	JL686B
	• 48 RJ-45 autosensing 10/100/1000 Class 4 PoE ports	
	• 4 SFP/SFP+ 1000/10000 Mbps ports (min=0 \ max=4 SFP/SFP+ Transceivers)	
	• 1U - Height	
	Aruba Instant On 1930 48G Class4 PoE 4SFP/SFP+ 370W Switch PDU	JL686B#B2B
	C15 PDU Jumper Cord (NA/MX/TW/JP)	
	Aruba Instant On 1930 48G Class4 PoE 4SFP/SFP+ 370W Switch PDU	JL686B#B2C
	C15 PDU Jumper Cord (ROW)	
	Aruba Instant On 1930 48G Class4 PoE 4SFP/SFP+ 370W Switch No Loc	JL686B#AC3
	No Localized Power Cord Selected	
	Configuration Rules	
Rule #	Description	SKU
1	Localization (Wall Power Cord) required on orders without B2B or B2C (PDU Power Cord). (See HPN Localization Menu)	
2	The following Transceivers install into this switch:	
	Aruba Instant On 1G SFP LC SX 500m OM2 MMF Transceiver	R9D16A
	Aruba Instant On 1G SFP RJ45 T 100m Cat5e Transceiver	R9D17A
	Aruba 1G SFP LC LX 10km SMF Transceiver	J4859D
3	The following Transceivers install into this switch:	
	Aruba Instant On 10G SFP+ LC SR 300m OM3 MMF Transceiver	R9D18A
	Aruba 10G SFP+ LC SR 300m OM3 MMF Transceiver	J9150D
	Aruba 10G SFP+ LC LR 10km SMF Transceiver	J9151E
	Aruba Instant On 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	R9D19A
Neter	Aruba Instant On 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	R9D20A
Notes:	<ul> <li>Drop down under power supply should offer the following options and results:</li> <li>Switch/Router to PDU Power Cord - B2B in NA, Mexico, Taiwan, and Japan or B2C ROW.</li> </ul>	
	Switch/Router/Power Supply to Wall Power Cord - Localized Option	
	No Localized Power Cord Selected - AC3 Option.	
	– OCA Only Model Selection Form - HPE Aruba Networking > Instant On > Switches: 1930	
	Switch Series	



## **Configuration Information**

Transcei	ivers	
Remarks	Description	SKU
	SFP Transceivers	
	Aruba Instant On 1G SFP LC SX 500m OM2 MMF Transceiver	R9D16A
	Aruba Instant On 1G SFP RJ45 T 100m Cat5e Transceiver	R9D17A
	Aruba 1G SFP LC LX 10km SMF Transceiver	J4859D
	SFP+ Transceivers	
	Aruba Instant On 10G SFP+ LC SR 300m OM3 MMF Transceiver	R9D18A
	Aruba 10G SFP+ LC LR 10km SMF Transceiver	J9151E
	Aruba Instant On 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	R9D19A
	Aruba Instant On 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	R9D2OA

	0 8G 2SFP Switch (JL680A)	
I/O Ports and Slots	8 RJ-45 autosensing 10/100/1000 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 1GbE ports	
Physical Characteristics	Dimensions	10(w) x 6.28(d) x 1.73(h) in (25.4 x 15.95 x 4.39 cm)
	W/-:	(1U height)
Due er er er el Menneme	Weight	2.55 lb (0.82 kg)
Processor and Memory	ARM Cortex-A9 @ 800 MHz, 512 MB SDRAM, 256 MB flash; packet buffer: 1.5 MB	
Packet Buffer	1.5 MB	
Performance	100 Mb latency	< 5.2 uSec
	1000 Mb latency	<3.0 uSec
	10000 Mb latency	n/a
	Throughput (Mpps)	14.88 Mpps
	Capacity	20 Gbps
	Routing table size (# of static	32
	entries)	
	MAC address table size (# of	8,000
	entries)	
	Reliability MTBF (years)	178
Environment	Operating temperature	32°F to 104°F (0°C to 40°C)
	Operating relative humidity	15% to 95% @ 104°F (40°C)
	Non-operating temperature	-40°F to 158°F (-40°C to 70°C)
	Non-operating relative humidity	15% to 95% @ 140°F (60°C)
	Altitude	Up to 10,000ft (3.048 Km)
	Acoustic <sup>1</sup>	Fanless
		°C semi-anechoic chamber with a loading of 100% traffic and
		secondarias with ICO 7770 Declared in accordance with ECMA
	· · · · · · · · · · · · · · · · · · ·	accordance with ISO 7779. Declared in accordance with ECMA- he Declared A-Weighted Sound Power Level (LWAd) and the
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Electrical Characteristics	109:2010. Values presented are t	he Declared A-Weighted Sound Power Level (LWAd) and the
Electrical Characteristics	109:2010. Values presented are t mean Bystander A-Weighted Sour	he Declared A-Weighted Sound Power Level (LWAd) and the d Pressure Level (LpAm)
Electrical Characteristics	109:2010. Values presented are t mean Bystander A-Weighted Sour Frequency	he Declared A-Weighted Sound Power Level (LWAd) and the d Pressure Level (LpAm) 50-60 Hz
Electrical Characteristics	109:2010. Values presented are t mean Bystander A-Weighted Sour Frequency AC voltage	he Declared A-Weighted Sound Power Level (LWAd) and the d Pressure Level (LpAm) 50-60 Hz 100-240V
Electrical Characteristics	109:2010. Values presented are t mean Bystander A-Weighted Sour Frequency AC voltage Current	he Declared A-Weighted Sound Power Level (LWAd) and the d Pressure Level (LpAm) 50-60 Hz 100-240V 0.2 A
Electrical Characteristics	109:2010. Values presented are t mean Bystander A-Weighted Sour Frequency AC voltage Current Maximum power rating	he Declared A-Weighted Sound Power Level (LWAd) and the Pressure Level (LpAm) 50-60 Hz 100-240V 0.2 A 11.0 W
Electrical Characteristics	109:2010. Values presented are t mean Bystander A-Weighted SourFrequencyAC voltageCurrentMaximum power ratingIdle power	Declared A-Weighted Sound Power Level (LWAd) and the         Pressure Level (LpAm)         50-60 Hz         100-240V         0.2 A         11.0 W         6.2 W
Electrical Characteristics Safety	109:2010. Values presented are t mean Bystander A-Weighted SourFrequencyAC voltageCurrentMaximum power ratingIdle powerPoE powerPower supply	he Declared A-Weighted Sound Power Level (LWAd) and the d Pressure Level (LpAm) 50-60 Hz 100-240V 0.2 A 11.0 W 6.2 W n/a External power adapter (included) 50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1
	109:2010. Values presented are t mean Bystander A-Weighted SourFrequencyAC voltageCurrentMaximum power ratingIdle powerPoE powerPower supplyUL 60950-1; IEC 60950-1;EN 609UL 62368-1 Ed. 2; IEC 62368-1 Ed.	beclared A-Weighted Sound Power Level (LWAd) and the         d Pressure Level (LpAm)         50-60 Hz         100-240V         0.2 A         11.0 W         6.2 W         n/a         External power adapter (included)         50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1         2; EN 62368-1:2014         8; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN
Safety Emissions	109:2010. Values presented are t mean Bystander A-Weighted SourFrequencyAC voltageCurrentMaximum power ratingIdle powerPoE powerPower supplyUL 60950-1; IEC 60950-1;EN 609UL 62368-1 Ed. 2; IEC 62368-1 Ed.VCCI-CISPR 32, Class A; CNS 1343	beclared A-Weighted Sound Power Level (LWAd) and the ressure Level (LpAm)         50-60 Hz         100-240V         0.2 A         11.0 W         6.2 W         n/a         External power adapter (included)         50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1         2; EN 62368-1:2014         8; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN
Safety Emissions	109:2010. Values presented are t mean Bystander A-Weighted SourFrequencyAC voltageCurrentMaximum power ratingIdle powerPoE powerPower supplyUL 60950-1; IEC 60950-1;EN 609 UL 62368-1 Ed. 2; IEC 62368-1 EdVCCI-CISPR 32, Class A; CNS 1343 55032: 2015 +AC:2016 / CISPR-3	be Declared A-Weighted Sound Power Level (LWAd) and the Sound Pressure Level (LpAm)          50-60 Hz         100-240V         0.2 A         11.0 W         6.2 W         n/a         External power adapter (included)         50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1         1.2; EN 62368-1:2014         8; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN 2, Class A
Safety Emissions	109:2010. Values presented are t mean Bystander A-Weighted SourFrequencyAC voltageCurrentMaximum power ratingIdle powerPoE powerPower supplyUL 60950-1; IEC 60950-1;EN 609UL 62368-1 Ed. 2; IEC 62368-1 Ed.VCCI-CISPR 32, Class A; CNS 134355032: 2015 +AC:2016 / CISPR-3Generic	<ul> <li>be Declared A-Weighted Sound Power Level (LWAd) and the declared A-Weighted A-Weight</li></ul>
Safety Emissions	109:2010. Values presented are t mean Bystander A-Weighted SourFrequencyAC voltageCurrentMaximum power ratingIdle powerPoE powerPower supplyUL 60950-1; IEC 60950-1;EN 609 UL 62368-1 Ed. 2; IEC 62368-1 Ed.VCCI-CISPR 32, Class A; CNS 1343 55032: 2015 +AC:2016 / CISPR-3GenericEN	Declared A-Weighted Sound Power Level (LWAd) and the           Pressure Level (LpAm)           50-60 Hz           100-240V           0.2 A           11.0 W           6.2 W           n/a           External power adapter (included)           50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1           2; EN 62368-1:2014           8; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN           2, Class A           CISPR 24 / CISPR 35           EN 55024:2010 / EN 55035:2017
Safety Emissions	109:2010. Values presented are t mean Bystander A-Weighted SourFrequencyAC voltageCurrentMaximum power ratingIdle powerPoE powerPower supplyUL 60950-1; IEC 60950-1;EN 609 UL 62368-1 Ed. 2; IEC 62368-1 Ed.VCCI-CISPR 32, Class A; CNS 1343 55032: 2015 +AC:2016 / CISPR-33GenericENESDRadiated	Declared A-Weighted Sound Power Level (LWAd) and the           Vressure Level (LpAm)           50-60 Hz           100-240V           0.2 A           11.0 W           6.2 W           n/a           External power adapter (included)           50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1           2; EN 62368-1:2014           8; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN           2, Class A           CISPR 24 / CISPR 35           EN 55024:2010 / EN 55035:2017           IEC 61000-4-2
Safety Emissions	109:2010. Values presented are t mean Bystander A-Weighted SourFrequencyAC voltageCurrentMaximum power ratingIdle powerPoE powerPower supplyUL 60950-1; IEC 60950-1;EN 609 UL 62368-1 Ed. 2; IEC 62368-1 Ed.VCCI-CISPR 32, Class A; CNS 1343 55032: 2015 +AC:2016 / CISPR-3GenericENESDRadiatedEFT/Burst	Image: Declared A-Weighted Sound Power Level (LWAd) and the sound Pressure Level (LpAm)           50-60 Hz           100-240V           0.2 A           11.0 W           6.2 W           n/a           External power adapter (included)           50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1           2. ; EN 62368-1:2014           8; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN           2, Class A           CISPR 24 / CISPR 35           EN 55024:2010 / EN 55035:2017           IEC 61000-4-2           IEC 61000-4-3           IEC 61000-4-4
Safety	109:2010. Values presented are t mean Bystander A-Weighted SourFrequencyAC voltageCurrentMaximum power ratingIdle powerPoE powerPower supplyUL 60950-1; IEC 60950-1;EN 609UL 62368-1 Ed. 2; IEC 62368-1 Ed.VCCI-CISPR 32, Class A; CNS 134355032: 2015 +AC:2016 / CISPR-3GenericENESDRadiatedEFT/BurstSurge	Declared A-Weighted Sound Power Level (LWAd) and the           d         Pressure Level (LpAm)           50-60 Hz         100-240V           0.2 A         11.0 W           6.2 W         n/a           External power adapter (included)         50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1           5.2; EN 62368-1:2014         8; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN 2; Class A           CISPR 24 / CISPR 35         EN 55024:2010 / EN 55035:2017           IEC 61000-4-2         IEC 61000-4-3           IEC 61000-4-5         IEC 61000-4-5
Safety Emissions	109:2010. Values presented are t mean Bystander A-Weighted SourFrequencyAC voltageCurrentMaximum power ratingIdle powerPoE powerPower supplyUL 60950-1; IEC 60950-1;EN 609 UL 62368-1 Ed. 2; IEC 62368-1 Ed.VCCI-CISPR 32, Class A; CNS 1343 55032: 2015 +AC:2016 / CISPR-3GenericENESDRadiatedEFT/Burst	Image: Declared A-Weighted Sound Power Level (LWAd) and the sound Pressure Level (LpAm)           50-60 Hz           100-240V           0.2 A           11.0 W           6.2 W           n/a           External power adapter (included)           50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1           2. ; EN 62368-1:2014           8; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN           2, Class A           CISPR 24 / CISPR 35           EN 55024:2010 / EN 55035:2017           IEC 61000-4-2           IEC 61000-4-3           IEC 61000-4-4

	Harmonics	IEC 61000-3-2, EN 61000-3-2
	Flicker	IEC 61000-3-3, EN 61000-3-3
Device Management	Aruba Instant On Cloud; Web bro	wser; SNMP Manager
Mounting	Supports table-top mounting	
	Supports wall-mounting with por	5
	Supports under-table mounting u	using base surface mounting holes
Transceivers		
		500m OM2 MMF Transceiver (R9D16A )
	Aruba 1G SFP LC LX 10km SMF	100m Cat5e Transceiver (R9D17A)
	Aluba Insiani On 16 SFF RJ45 1	
Aruba Instant On 193	0 8G Class4 PoE 2SFP 124W	Switch (JL681A)
I/O Ports and Slots	8 RJ-45 autosensing 10/100/1000 Class 4 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3 u	
	Type 100BASE- TX, IEEE 802.3a full; 1000BASE-T: full only	ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or
	2 SFP 1GbE ports	
Physical Characteristics	Dimensions	10(w) x 6.28(d) x 1.73(h) in
		(25.4 x 15.95 x 4.39 cm)
		(1U height)
<b>D</b> 114	Weight	7.21 lb (1.16 kg)
Processor and Memory Packet Buffer	1.5 MB	2 MB SDRAM, 256 MB flash; packet buffer: 1.5 MB
Performance		< 5.2 uSec
Performance	100 Mb latency 1000 Mb latency	< 3.2 usec
	1000 Mb latency	n/a
	Throughput (Mpps)	14.88 Mpps
	Capacity	20 Gbps
	Routing table size (# of static	32
	entries)	
	MAC address table size (# of	8,000
	entries)	0,000
	Reliability MTBF (years)	95
Environment	Operating temperature	32°F to 104°F (0°C to 40°C)
	Operating relative humidity	15% to 95% @ 104°F (40°C)
	Non-operating temperature	-40°F to 158°F (-40°C to 70°C)
	Non-operating relative humidit	
	Altitude	Up to 10,000ft (3.048 Km)
	<b>Acoustic</b> <sup>1</sup>	Fanless
	Notes: <sup>1</sup> Acoustics measured in	23°C semi-anechoic chamber with a loading of 100% traffic and
	50% PoE on all ports. Measured i	n accordance with ISO 7779. Declared in accordance with ECMA-
	109:2010. Values presented are	e the Declared A-Weighted Sound Power Level (LWAd) and the
	mean Bystander A-Weighted So	
Electrical Characteristics	Frequency	50-60 Hz
	AC voltage	100 - 127 / 200 - 240 VAC
	Current	0.8 A/1.6 A
	Maximum power rating	150.2 W
	Idle power	11.7 W
	PoE power	124 W Class 4 PoE
	Power supply	Internal power supply
Safety		0950-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1



Emissions	VCCI-CISPR 32, Class A; CNS 1343 55032: 2015 +AC:2016 / CISPR-3	8; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN 2. Class A
Immunity	Generic	CISPR 24 / CISPR 35
	EN	EN 55024:2010 / EN 55035:2017
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3
	EFT/Burst	IEC 61000-4-4
	Surge	IEC 61000-4-5
	Conducted	IEC 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	IEC 61000-4-11
	Harmonics	IEC 61000-3-2, EN 61000-3-2
	Flicker	IEC 61000-3-3, EN 61000-3-3
Device Management	Aruba Instant On Cloud; Web brows	ser; SNMP Manager
Mounting	Mounts in an ElAstandard 19 in. telco rack or equipment cabinet. 2-post rack kit included Supports table-top mounting	
	Supports rackmounting	
	Supports wall-mounting with ports	
	Supports under-table mounting usi	
<b>-</b> ·	Supports under-table mounting usi	ng base surface mounting holes
Transceivers		
		Om OM2 MMF Transceiver (R9D16A)
	Aruba 1G SFP LC LX 10km SMF Tr	
	Aruba Instant On 1G SFP RJ45 T 100m Cat5e Transceiver (R9D17A)	

Aruba Instant On 193	0 24G 4SFP/SFP+ Switch (JL68	32A)
I/O Ports and Slots	5	00 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full;
Physical Characteristics	Dimensions	17.42(w) x 8.72(d) x 1.73(h) in (44.25 x 22.15 x 4.39 cm) (1U height)
	Weight	5.32 lb (2.41 kg)
Processor and Memory	ARM Cortex-A9 @ 800 MHz, 512	MB SDRAM, 256 MB flash; packet buffer: 1.5 MB
Packet Buffer	1.5 MB	
Performance	100 Mb latency	< 4.7 uSec
	1000 Mb latency	<2.4 uSec
	10000 Mb latency	<1.3 uSec
	Throughput (Mpps)	95.23 Mpps
	Capacity	128 Gbps
	Routing table size (# of static entries)	32
	MAC address table size (# of entries)	16,000
	Reliability MTBF (years)	158

Environment	Operating temperature	32°F to 104°F (0°C to 40°C)
	Operating relative humidity	15% to 95% @ 104°F (40°C)
	Non-operating temperature	-40°F to 158°F (-40°C to 70°C)
	Non-operating relative humidity	15% to 95% @ 140°F (60°C)
	Altitude	Up to 10,000ft (3.048 Km)
	Acoustic <sup>1</sup>	Fanless
		°C semi-anechoic chamber with a loading of 100% traffic and
		ccordance with ISO 7779. Declared in accordance with ECMA-
		e Declared A-Weighted Sound Power Level (LWAd) and the
	mean Bystander A-Weighted Sound	
Electrical Characteristics	Frequency	50-60 Hz
	AC voltage	100-240V
	Current	0.5 A /0.3 A
	Maximum power rating	22.6 W
	Idle power	9.3 W
	PoE power	n/a
	Power supply	Internal power supply
Safety		50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1
-	UL 62368-1 Ed. 2; IEC 62368-1 Ed.	2; EN 62368-1:2014
Emissions	VCCI-CISPR 32, Class A; CNS 13438	; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN
	55032: 2015 +AC:2016 / CISPR-32	
Immunity	Generic	CISPR 24 / CISPR 35
	EN	EN 55024:2010 / EN 55035:2017
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3
	EFT/Burst	IEC 61000-4-4
	Surge	IEC 61000-4-5
	Conducted	IEC 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	IEC 61000-4-11
	Harmonics	IEC 61000-3-2, EN 61000-3-2
	Flicker	IEC 61000-3-3, EN 61000-3-3
Device Management	Aruba Instant On Cloud; Web browse	er; SNMP Manager
Mounting	Mounts in an ElAstandard 19 in. telc	o rack or equipment cabinet. 2-post rack kit included
	Supports table-top mounting	
	Supports rackmounting	
	Supports wall-mounting with ports fa	
	Supports under-table mounting usin	
		prevent possible impact to longterm reliability, product should
	not be mounted	
Transceivers		
		)m OM2 MMF Transceiver (R9D16A)
	Aruba 1G SFP LC LX 10km SMF Tra	
	Aruba Instant On 1G SFP RJ45 T 10	
		300m OM3 MMF Transceiver (R9D18A)
	Aruba 10G SFP+ LC LR 10km SMF	
	Aruba Instant On 10G SFP+ to SFP+	
	Aruba Instant On 10G SFP+ to SFP+	- SM DAC (RYD20A)



Aruba Instant On 1930	24G Class4 PoE 4SFP/SFP+ 1	95W Switch (JL683B)
I/O Ports and Slots		00 Class 4 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or
	4 SFP+ 1/10GbE ports	
Physical Characteristics	Dimensions	17.42(w) x 10.42(d) x 1.73(h) in
		(44.25 x 26.47 x 4.39 cm) (1U height)
	Weight	7.69lb (3.49kg)
Processor and Memory		MB SDRAM, 256 MB flash; packet buffer: 1.5 MB
Packet Buffer	1.5 MB	
Performance	100 Mb latency	< 4.7 uSec
	1000 Mb latency	<2.4 uSec
	10000 Mb latency	<1.3 uSec
	Throughput (Mpps)	95.23 Mpps
	Capacity	128 Gbps
	Routing table size (# of static	32
	entries)	52
	MAC address table size (# of	16,000
	entries)	10,000
	Reliability MTBF (years)	76
Environment	Operating temperature	32°F to 104°F (0°C to 40°C)
Livioninem	Operating relative humidity	15% to 95% @ 104°F (40°C)
	Non-operating temperature	-40°F to 158°F (-40°C to 70°C)
	Non-operating relative humidity	
	Altitude	Up to 10,000ft (3.048 Km)
	Acoustic <sup>1</sup>	LWAd = 3.9 Bel
	ACOUSTIC	LpAm (Bystander) = 25 dB
	Notes: <sup>1</sup> Acoustics mossured in 2	3°C semi-anechoic chamber with a loading of 100% traffic and
		accordance with ISO 7779. Declared in accordance with ECMA-
		the Declared A-Weighted Sound Power Level (LWAd) and the
	mean Bystander A-Weighted Sour	
Electrical Characteristics	Frequency	50-60 Hz
	AC voltage	100 - 127 / 200 - 240 VAC
	Current	2.8 A/1.4 A
	Maximum power rating	248.7W
	Idle power	19.7W
	PoE power	195 W Class 4 PoE
	Power supply	Internal power supply
Safety		250-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1
Salely	UL 62368-1 Ed. 2; IEC 62368-1 E	
Emissions		38; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN
	55032: 2015 +AC:2016 / CISPR-3	
Immunity	Generic	CISPR 24 / CISPR 35
······································	EN	EN 55024:2010 / EN 55035:2017
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3
	EFT/Burst	IEC 61000-4-4
	Surge	IEC 61000-4-5
	Conducted	IEC 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8



## **Technical Specifications**

	Voltage dips and interruptions	IEC 61000-4-11
	Harmonics	IEC 61000-3-2, EN 61000-3-2
	Flicker	IEC 61000-3-3, EN 61000-3-3
Device Management	Aruba Instant On Cloud; Web brows	er; SNMP Manager
Mounting	Mounts in an ElAstandard 19 in. telco rack or equipment cabinet. 2-post rack kit included Supports table-top mounting Supports rackmounting	
Transceivers	Supports wall-mounting with ports f Supports under-table mounting usir	
	Aruba 1G SFP LC LX 10km SMF Tra Aruba Instant On 1G SFP RJ45 T 10	00m Cat5e Transceiver (R9D17A) 300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) + 1m DAC (R9D19A)

Aruba Instant On 1930	0 24G Class4 PoE 4SFP/SFP+ 3	70W Switch (JL684B)
I/O Ports and Slots	Type 100BASE- TX, IEEE 802.3ab full; 1000BASE-T: full only	0 Class 4 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or
	4 SFP+ 1/10GbE ports	
Physical Characteristics	Dimensions	17.42(w) x 10.42(d) x 1.73(h) in (44.25 x 26.47 x 4.39 cm) (1U height)
	Weight	8.23 lb (3.73 kg)
Processor and Memory	ARM Cortex-A9 @ 800 MHz, 512 N	4B SDRAM, 256 MB flash; packet buffer: 1.5 MB
Memory And Flash	512 MB SDRAM 256 MB flash	
Packet Buffer	1.5 MB	
Performance	100 Mb latency	< 4.7 uSec
	1000 Mb latency	<2.4 uSec
	10000 Mb latency	<1.3 uSec
	Throughput (Mpps)	95.23 Mpps
	Capacity	128 Gbps
	Routing table size (# of static entries)	32
	MAC address table size (# of entries)	16,000
	Reliability MTBF (years)	71
Environment	Operating temperature	32°F to 104°F (0°C to 40°C)
	Operating relative humidity	15% to 95% @ 104°F (40°C)
	Non-operating temperature	-40°F to 158°F (-40°C to 70°C)
	Non-operating relative humidity	15% to 95% @ 140°F (60°C)
	Altitude	Up to 10,000ft (3.048 Km)
	Acoustic <sup>1</sup>	LWAd = 4.0 Bel LpAm (Bystander) = 24 dB
	50% PoE on all ports. Measured in a	°C semi-anechoic chamber with a loading of 100% traffic and accordance with ISO 7779. Declared in accordance with ECMA- he Declared A-Weighted Sound Power Level (LWAd) and the

mean Bystander A-Weighted Sound Pressure Level (LpAm)

Electrical Characteristics	Frequency	50-60 Hz
	AC voltage	100 - 127 / 200 - 240 VAC
	Current	4.9 A/2.4 A
	Maximum power rating	440.4W
	Idle power	20.3W
	PoE power	370 W Class 4 PoE
	Power supply	Internal power supply
Safety		50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1
<b>,</b>	UL 62368-1 Ed. 2; IEC 62368-1 Ed	
Emissions		3; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN
	55032: 2015 +AC:2016 / CISPR-32	2, Class A
mmunity	Generic	CISPR 24 / CISPR 35
	EN	EN 55024:2010 / EN 55035:2017
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3
	EFT/Burst	IEC 61000-4-4
	Surge	IEC 61000-4-5
	Conducted	IEC 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	IEC 61000-4-11
	Harmonics	IEC 61000-3-2, EN 61000-3-2
	Flicker	IEC 61000-3-3, EN 61000-3-3
Device Management	Aruba Instant On Cloud; Web brows	
Mounting		co rack or equipment cabinet. 2-post rack kit included
	Supports table-top mounting	
	Supports rackmounting	
	Supports wall-mounting with ports f	acing either up or down
	Supports under-table mounting usir	ng the brackets provided
Transceivers		
		Om OM2 MMF Transceiver (R9D16A)
	Aruba 1G SFP LC LX 10km SMF Tr	
	Aruba Instant On 1C SED D I/ E T 1(	00m Cat5e Transceiver (R9D17A)
		, ,
	Aruba Instant On 10G SFP+ LC SR	300m OM3 MMF Transceiver (R9D18A)
		300m OM3 MMF Transceiver (R9D18A)
	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E)
	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF 0 48G 4SFP/SFP+ Switch (JL68	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A)
Aruba Instant On 1930 I/O Ports and Slots	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF 0 48G 4SFP/SFP+ Switch (JL68 48 RJ-45 autosensing 10/100/100	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type
	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 2	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A)
	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF 0 48G 4SFP/SFP+ Switch (JL68 48 RJ-45 autosensing 10/100/100	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type
	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 3 1000BASE-T: full only	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type
I/O Ports and Slots	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 3 1000BASE-T: full only 4 SFP+ 1/10GbE ports	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full;
I/O Ports and Slots	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 3 1000BASE-T: full only	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 17.42(w) x 11.12(d) x 1.73(h) in
I/O Ports and Slots	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 3 1000BASE-T: full only 4 SFP+ 1/10GbE ports	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 17.42(w) x 11.12(d) x 1.73(h) in (44.25 x 28.24 x 4.39 cm)
/O Ports and Slots	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 3 1000BASE- T: full only 4 SFP+ 1/10GbE ports <b>Dimensions</b>	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 17.42(w) x 11.12(d) x 1.73(h) in (44.25 x 28.24 x 4.39 cm) (1U height)
/O Ports and Slots Physical Characteristics	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 3 1000BASE-T: full only 4 SFP+ 1/10GbE ports <b>Dimensions</b> Weight	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 17.42(w) x 11.12(d) x 1.73(h) in (44.25 x 28.24 x 4.39 cm)
/O Ports and Slots Physical Characteristics CPU	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 1 1000BASE-T: full only 4 SFP+ 1/10GbE ports <b>Dimensions</b> <b>Weight</b> ARM Cortex-A9 @ 800 MHz	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 17.42(w) x 11.12(d) x 1.73(h) in (44.25 x 28.24 x 4.39 cm) (1U height)
I/O Ports and Slots Physical Characteristics CPU	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 1 1000BASE-T: full only 4 SFP+ 1/10GbE ports <b>Dimensions</b> <b>Weight</b> ARM Cortex-A9 @ 800 MHz 512 MB SDRAM	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 17.42(w) x 11.12(d) x 1.73(h) in (44.25 x 28.24 x 4.39 cm) (1U height)
I/O Ports and Slots Physical Characteristics CPU Memory And Flash	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 1 1000BASE-T: full only 4 SFP+ 1/10GbE ports <b>Dimensions</b> <b>Weight</b> ARM Cortex-A9 @ 800 MHz 512 MB SDRAM 256 MB flash	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 17.42(w) x 11.12(d) x 1.73(h) in (44.25 x 28.24 x 4.39 cm) (1U height)
I/O Ports and Slots Physical Characteristics CPU Memory And Flash Packet Buffer	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 1 1000BASE-T: full only 4 SFP+ 1/10GbE ports <b>Dimensions</b> <b>Weight</b> ARM Cortex-A9 @ 800 MHz 512 MB SDRAM 256 MB flash 1.5 MB	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 17.42(w) × 11.12(d) × 1.73(h) in (44.25 × 28.24 × 4.39 cm) (1U height) 6.91 lb (3.13 kg)
I/O Ports and Slots Physical Characteristics CPU Memory And Flash Packet Buffer	Aruba Instant On 10G SFP+ LC SR 3 Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 3 1000BASE- T: full only 4 SFP+ 1/10GbE ports <b>Dimensions</b> <b>Weight</b> ARM Cortex-A9 @ 800 MHz 512 MB SDRAM 256 MB flash 1.5 MB <b>100 Mb latency</b>	300m OM3 MMF Transceiver (R9D18A)         Transceiver (J9151E)         5A)         0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full;         17.42(w) x 11.12(d) x 1.73(h) in         (44.25 x 28.24 x 4.39 cm)         (1U height)         6.91 lb (3.13 kg)         < 4.5 uSec
	Aruba Instant On 10G SFP+ LC SR Aruba 10G SFP+ LC LR 10km SMF <b>0 48G 4SFP/SFP+ Switch (JL68</b> 48 RJ-45 autosensing 10/100/100 100BASE- TX, IEEE 802.3ab Type 1 1000BASE-T: full only 4 SFP+ 1/10GbE ports <b>Dimensions</b> <b>Weight</b> ARM Cortex-A9 @ 800 MHz 512 MB SDRAM 256 MB flash 1.5 MB	300m OM3 MMF Transceiver (R9D18A) Transceiver (J9151E) 5A) 0 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 17.42(w) × 11.12(d) × 1.73(h) in (44.25 × 28.24 × 4.39 cm) (1U height) 6.91 lb (3.13 kg)



	Capacity	176 Gbps	
	Routing table size (# of static	32	
	entries)		
	MAC address table size (# of	16,000	
	entries)	10,000	
	Reliability MTBF (years)	114	
Environment	Operating temperature	32°F to 104°F (0°C to 40°C)	
	Operating relative humidity	15% to 95% @ 104°F (40°C)	
	Non-operating temperature	-40°F to 158°F (-40°C to 70°C)	
	Non-operating relative humidity	15% to 95% @ 140°F (60°C)	
	Altitude	Up to 10,000ft (3.048 Km)	
	Acoustic <sup>1</sup>	Fanless	
		°C semi-anechoic chamber with a loading of 100% traffic and	
		ccordance with ISO 7779. Declared in accordance with ECMA-	
	· · · · · · · · · · · · · · · · · · ·	ne Declared A-Weighted Sound Power Level (LWAd) and the	
	mean Bystander A-Weighted Sound		
Electrical Characteristics	Frequency	50-60 Hz	
	AC voltage	100 - 127 / 200 - 240 VAC	
	Current	.8 A/.5 A	
	Maximum power rating	36.9 W	
	Idle power	16.8 W	
	PoE power	n/a	
	Power supply	Internal power supply	
Safety		50-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1	
	UL 62368-1 Ed. 2; IEC 62368-1 Ed		
Emissions		3; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN	
· ·.	55032: 2015 +AC:2016 / CISPR-32		
Immunity	Generic	CISPR 24 / CISPR 35	
	EN	EN 55024:2010 / EN 55035:2017	
	ESD	IEC 61000-4-2	
	Radiated	IEC 61000-4-3	
	EFT/Burst	IEC 61000-4-4	
	Surge	IEC 61000-4-5	
	Conducted	IEC 61000-4-6	
	Power frequency magnetic field	IEC 61000-4-8	
	Voltage dips and interruptions	IEC 61000-4-11	
	Harmonics	IEC 61000-3-2, EN 61000-3-2	
	Flicker	IEC 61000-3-3, EN 61000-3-3	
Device Management	Aruba Instant On Cloud; Web browser; SNMP Manager		
Mounting	Mounts in an ElAstandard 19 in. teld	co rack or equipment cabinet. 2-post rack kit included	
-	Supports table-top mounting		
	Supports rackmounting		
	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 longterm reliability, product should		
	not be mounted upside-down		
Transceivers	Aruba Instant On 1G SFP LC SX 500m OM2 MMF Transceiver (R9D16A )		
	Aruba 1G SFP LC LX 10km SMF Transceiver (J4859D)		
	Aruba Instant On 1G SFP RJ45 T 100m Cat5e Transceiver (R9D17A)		
	Aruba Instant On 10G SFP+ LC SR 300m OM3 MMF Transceiver (R9D18A)		
	Aruba 10G SFP+ LC LR 10km SMF	Transceiver (J9151E)	

Aruba Instant On 1930	48G Class4 PoE 4SFP/SFP+ 37	70W Switch (JL686B)		
I/O Ports and Slots	48 RJ-45 autosensing 10/100/1000 Class 4 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 8 Type 100BASE- TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: h full; 1000BASE-T: full only			
	4 SFP+ 1/10GbE ports			
Physical Characteristics	Dimensions	17.42(w) x 12.7(d) x 1.73(h) in (44.25 x 32.26 x 4.39 cm) (1U height)		
	Weight	10.12 lb (4.59 kg)		
CPU	ARM Cortex-A9 @ 800 MHz			
Memory And Flash	512 MB SDRAM 256 MB flash			
Packet Buffer	1.5 MB			
Performance	100 Mb latency	< 4.5 uSec		
	1000 Mb latency	<2.2 uSec		
	10000 Mb latency	<1.2 uSec		
	Throughput (Mpps)	130.95 Mpps		
	Capacity	176 Gbps		
	Routing table size (# of static entries)	32		
	MAC address table size (# of	16,000		
	entries)	10,000		
	Reliability MTBF (years)	114		
Environment	Operating temperature	32°F to 104°F (0°C to 40°C)		
	Operating relative humidity	15% to 95% @ 104°F (40°C)		
	Non-operating temperature	-40°F to 158°F (-40°C to 70°C)		
	Non-operating relative humidity	15% to 95% @ 140°F (60°C)		
	Altitude	Up to 10,000ft (3.048 Km)		
	Acoustic <sup>1</sup>	LWAd = 3.7 Bel		
	Acoustic	LpAm (Bystander) = 29 dB		
	<b>Notes:</b> <sup>1</sup> Acoustics measured in 23	°C semi-anechoic chamber with a loading of 100% traffic and		
	50% PoE on all ports. Measured in accordance with ISO 7779. Declared in accordance with ECMA-			
	109:2010. Values presented are the Declared A-Weighted Sound Power Level (LWAd) and the			
	mean Bystander A-Weighted Sound			
Electrical Characteristics	Frequency	50-60 Hz		
	AC voltage	100 - 127 / 200 - 240 VAC		
	Current	5.2 A/2.6 A		
	Maximum power rating	465.6W		
	Idle power	38.3W		
	PoE power	370 W Class 4 PoE		
	Power supply	Internal power supply		
Safety	UL 60950-1; IEC 60950-1;EN 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1 UL 62368-1 Ed. 2; IEC 62368-1 Ed. 2; EN 62368-1:2014			
Emissions	VCCI-CISPR 32, Class A; CNS 13438; ICES-003 Issue 6 Class A; FCC CFR 47 Part 15, Class A; EN 55032: 2015 +AC:2016 / CISPR-32, Class A			

Immunity	Generic	CISPR 24 / CISPR 35	
	EN	EN 55024:2010 / EN 55035:2017	
	ESD	IEC 61000-4-2	
	Radiated	IEC 61000-4-3	
	EFT/Burst	IEC 61000-4-4	
	Surge	IEC 61000-4-5	
	Conducted	IEC 61000-4-6	
	Power frequency magnetic field	IEC 61000-4-8	
	Voltage dips and interruptions	IEC 61000-4-11	
	Harmonics	IEC 61000-3-2, EN 61000-3-2	
	Flicker	IEC 61000-3-3, EN 61000-3-3	
Device Management	Aruba Instant On Cloud; Web browser; SNMP Manager		
Mounting	Mounts in an ElAstandard 19 in. telco rack or equipment cabinet. 2-post rack kit included		
	Supports table-top mounting		
	Supports rackmounting		
	Supports wall-mounting with ports facing either up or down		
Transceivers	Supports under-table mounting using the brackets provided		
Iransceivers			
	Aruba Instant On 1G SFP LC SX 500m OM2 MMF Transceiver (R9D16A ) Aruba 1G SFP LC LX 10km SMF Transceiver (J4859D)		
	Aruba Instant On 1G SFP RJ45 T 100m Cat5e Transceiver (R9D17A)		
	Aruba Instant On 10G SFP+ LC SR 300m OM3 MMF Transceiver (R9D18A)		
	Aruba 10G SFP+ LC LR 10km SMF Transceiver (J9151E)		

## Standards and Protocols (applies to all products in series)

- IEEE 802.3 10BASE-T
- IEEE 802.3u 100BASE-TX
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3z 1000BASE-X
- IEEE 802.2af PoE 1 (PoE models only)
- IEEE 802.3at PoE 1 (PoE models only)
- IEEE 802.3x Flow control
- IEEE 802.1Q VLANS
- IEEE 802.1p Priority
- IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.1X Port Access Authentication
- IEEE 802.3az Energy Efficient Ethernet
- 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
- Denial of service protection
- CPU DoS protection

## Summary of Changes

Date	Version History	Action	Description of Change
04-Dec-2023	Version 7	Changed	Series name was updated.
03-Oct-2022	Version 6	Changed	Standard Features, Configuration Information and Technical Specifications sections were updated.
01-Aug-2022	Version 5	Changed	Configuration Information and Technical Specifications sections were updated.
04-Apr-2022	Version 4	Changed	Configuration Information and Technical Specifications sections were updated.
07-Feb-2022	Version 3	Changed	Configuration Information and Technical Specifications sections were updated.
15-Jun-2020	Version 2	Changed	Configuration Information section was updated.
01-Jun-2020	Version 1	New	New QuickSpecs

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