

### Overview

### Aruba 2930F Switch Series



### Models

Aruba 2930F 24G 4SFP+ Switch	JL253A
Aruba 2930F 48G 4SFP+ Switch	JL254A
Aruba 2930F 24G PoE+ 4SFP+ Switch	JL255A
Aruba 2930F 48G PoE+ 4SFP+ Switch	JL256A
Aruba 2930F 8G PoE+ 2SFP+ Switch	JL258A
Aruba 2930F 24G 4SFP Switch	JL259A
Aruba 2930F 48G 4SFP Switch	JL260A
Aruba 2930F 24G PoE+ 4SFP Switch	JL261A
Aruba 2930F 48G PoE+ 4SFP Switch	JL262A

### Key features

- Basic Layer 3 switch series with VSF stacking, RIP routing, Access OSPF, ACLs and robust QoS
- Advanced security and network management tools like Aruba ClearPass Policy Manager and Aruba Airwave
- Simple deployment with Zero Touch Provisioning and cloud-based Aruba Central support
- Convenient built-in 1GbE or 10GbE uplinks and up to 370W PoE+
- Ready for innovative SDN applications with OpenFlow support

### Product overview

The Aruba 2930F Switch Series is designed for customers creating digital workplaces optimized for mobile users with an integrated wired and wireless approach. These basic Layer 3 access switches are easy to deploy and manage with advanced security and network management tools like Aruba ClearPass Policy Manager and Aruba AirWave. With support from Aruba Central, you can quickly set up remote branch sites with little or no IT support. A powerful Aruba ProVision ASIC delivers performance and value with support of the latest SDN apps with future proof programmability for tomorrow's applications. Stacking with Virtual Switching Framework (VSF) provides simplicity and scalability. The 2930F supports built-in 1GbE or 10GbE uplinks,

## Overview

PoE+, Access OSPF routing, Tunnel node, robust QoS, RIP routing, and IPv6 with no software licensing required.

The Aruba 2930F Switch Series provides a convenient and cost-effective access switch solution that can be quickly set up with Zero Touch Provisioning. The robust basic Layer 3 feature set includes a limited lifetime warranty.

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## Features and benefits

### Software-defined networking

- **OpenFlow**  
supports OpenFlow 1.0 and 1.3 specifications to enable SDN by allowing separation of the data (packet forwarding) and control (routing decision) paths

### Unified Wired and Wireless

- **ClearPass Policy Manager support**  
unified wired and wireless policies using Aruba ClearPass Policy Manager
- **Switch auto-configuration**  
automatically configures switch for different settings such as VLAN, CoS, PoE max power, and PoE priority when an Aruba access point is detected.
- **User role**  
defines a set of switch-based policies in areas such as security, authentication, and QoS. A user role can be assigned to a group of users or devices, using switch-based local user role or download from ClearPass
- **Tunneled node**  
provides a secured tunnel to transport network traffic on a per-port or per-user-role basis to an Aruba Controller. In per-user-role Tunneled Node, users are authenticated with ClearPass Policy Manager which can direct the traffic to be tunneled to Aruba controller or switch locally
- **HTTP redirect function**  
supports HPE Intelligent Management Center (IMC) bring your own device (BYOD) solution
- **Static IP Visibility**  
provides a way for ClearPass to do accounting for clients with static IP address

### Quality of Service (QoS)

- **Traffic prioritization (IEEE 802.1p)**  
allows real-time traffic classification into eight priority levels mapped to eight queues
- **Layer 4 prioritization**  
enables prioritization based on TCP/UDP port numbers
- **Class of Service (CoS)**  
sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ
- **Rate limiting**  
sets per-port ingress enforced maximums and per-port, per-queue minimums
- **Large buffers:**  
Provide graceful congestion management

### Connectivity

- **Flexible 10 Gb/s Ethernet connectivity**  
Four fixed 10 Gigabit ports (SFP+) available
- **Auto-MDIX**  
provides automatic adjustments for straight-through or crossover cables on all 10/100 and 10/100/1000 ports
- **IEEE 802.3at Power over Ethernet (PoE+)**  
provides up to 30 W per port that allows support of the latest PoE+-capable devices such as IP phones, wireless access points, and security cameras, as well as any IEEE 802.3af-compliant end device; eliminates the cost of additional electrical

## Overview

cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments

- **Pre-standard PoE support**  
detects and provides power to pre-standard PoE devices
- **IPv6**
  - **IPv6 host**  
enables switches to be managed in an IPv6 network
  - **Dual stack (IPv4 and IPv6)**  
transitions from IPv4 to IPv6, supporting connectivity for both protocols
  - **MLD snooping**  
forwards IPv6 multicast traffic to the appropriate interface
  - **IPv6 ACL/QoS**  
supports ACL and QoS for IPv6 network traffic
  - **IPv6 routing**  
supports static and RIPng protocols
  - **Security**  
provides RA guard, DHCPv6 protection, dynamic IPv6 lockdown, and ND snooping

## Performance

- **Energy-efficient design**
  - **80 PLUS Silver Certified power supply**  
increases power efficiency and savings
  - **Energy-efficient Ethernet (EEE) support**  
reduces power consumption in accordance with IEEE 802.3az
- **HPE/Aruba ASIC architecture**  
is designed with the latest HPE/Aruba ASIC, providing very low latency, increased packet buffering, and adaptive power consumption
- **Selectable queue configurations**  
allows for increased performance by selecting the number of queues and associated memory buffering that best meet the requirements of the network applications

## Convergence

- **IP multicast routing**  
includes PIM Sparse and Dense modes to route IP multicast traffic (limited to 16 interfaces)
- **IP multicast snooping and data-driven IGMP**  
automatically prevent flooding of IP multicast traffic
- **LLDP-MED (Media Endpoint Discovery)**  
defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to configure automatically network devices such as IP phones
- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP)**  
facilitates easy mapping using network management applications with LLDP automated device discovery protocol
- **PoE and PoE+ allocations**  
support multiple methods (automatic, IEEE 802.3at dynamic, LLDP-MED fine grain, IEEE 802.3af device class, or user-specified) to allocate and manage PoE/PoE+ power for more efficient energy savings
- **Local MAC Authentication**  
assigns attributes such as VLAN and QoS using locally configured profile that can be a list of MAC prefixes

## Resiliency and high availability

- **Virtual Switching Framework (VSF)**  
creates one virtual resilient switch from up to four switches; servers or switches can be attached using standard LACP for automatic load balancing and high availability; simplify network operation by reduce the need for complex protocols like Spanning Tree Protocol (STP), Equal-Cost Multipath (ECMP), and VRRP

## Overview

- **Virtual Router Redundancy Protocol (VRRP)**  
allows groups of two routers to dynamically back each other up to create highly available routed environments for IPv4 and IPv6 networks (limited to 128 VRs)
- **IEEE 802.1s Multiple Spanning Tree**  
provides high link availability in multiple VLAN environments by allowing multiple spanning trees; provides legacy support for IEEE 802.1d and IEEE 802.1w
- **IEEE 802.3ad link-aggregation-control protocol (LACP) and port trunking**  
support up to 26 static, dynamic, or distributed trunks with each trunk having up to eight links (ports) per static trunk
- **SmartLink**  
provides easy-to-configure link redundancy of active and standby links

## Management

- **SNMPv1, v2, and v3**  
provide complete support of SNMP; provide full support of industry-standard Management Information Base (MIB) plus private extensions; SNMPv3 supports increased security using encryption
- **Zero-Touch Provisioning (ZTP)**  
simplifies installation of the switch infrastructure using the Aruba Activate-based or a DHCP-based process with AirWave Network Management
- **Aruba Central support**  
cloud based management platform offers simple, secure, and cost effective way to manage switches

## Manageability

- **Dual flash images**  
provides independent primary and secondary operating system files for backup while upgrading
- **Friendly port names**  
allow assignment of descriptive names to ports
- **Find-Fix-Inform**  
finds and fixes common network problems automatically, then informs administrator
- **Multiple configuration files**  
allow multiple configuration files to be stored to a flash image
- **Software updates**  
free downloads from the Web
- **RMON, XRMON, and sFlow**  
provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- **Troubleshooting**  
ingress and egress port monitoring enable network problem solving
- **Unidirectional link detection (UDLD)**  
monitors the link between two switches and blocks the ports on both ends of the link if the link goes down at any point between the two devices
- **IP service level agreements (SLA) for voice**  
monitor quality of voice traffic using the UDP jitter and UDP jitter for VoIP tests

## Layer 2 switching

- **VLAN Support and Tagging**  
supports IEEE 802.1Q (4094 VLAN IDs) and 2K VLANs simultaneously
- **Jumbo packet support**  
improves the performance of large data transfers; supports frame size of up to 9220 bytes
- **IEEE 802.1v protocol VLANs**  
isolate select non-IPv4 protocols automatically into their own VLANs
- **Rapid Per-VLAN Spanning Tree (RPVST+)**  
allows each VLAN to build a separate spanning tree to improve link bandwidth usage; is compatible with PVST+

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- **GVRP and MVRP**  
allows automatic learning and dynamic assignment of VLANs
- **VxLAN**  
encapsulation (tunneling) protocol for overlay network that enables a more scalable virtual network deployment

## Layer 3 services

- **DHCP server**  
centralizes and reduces the cost of IPv4 address management

## Layer 3 routing

- **Static IP routing**  
provides manually configured routing; includes ECMP capability
- **256 static and 10,000 RIP routes**  
facilitate segregation of user data, without adding external hardware
- **Routing Information Protocol (RIP)**  
provides RIPv1, RIPv2, and RIPv3 routing
- **Access OSPF**  
provide OSPFv2 and OSPFv3 protocols for routing between access and the next layer on the LAN. Only one OSPF area and up to 8 interfaces are supported
- **Policy-based routing**  
uses a classifier to select traffic that can be forwarded based on policy set by the network administrator (limited to 16 next-hop routes)

## Security

- **Control Plane Policing set rate limit on control protocols to protect CPU overload from DOS attacks**
- **Multiple user authentication methods**
  - **IEEE 802.1X**  
uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards
  - **Web-based authentication**  
provides a browser-based environment, similar to IEEE 802.1X, to authenticate clients that do not support the IEEE 802.1X supplicant
  - **MAC-based authentication**  
authenticates the client with the RADIUS server based on the client's MAC address
- **Authentication flexibility**
  - **Multiple IEEE 802.1X users per port**  
provides authentication of multiple IEEE 802.1X users per port; prevents a user from "piggybacking" on another user's IEEE 802.1X authentication
  - **Concurrent IEEE 802.1X, Web, and MAC authentication schemes per port**  
switch port will accept up to 32 sessions of IEEE 802.1X, Web, and MAC authentications
- **Access control lists (ACLs)**  
provide IP Layer 3 filtering based on source/destination IP address/subnet and source/destination TCP/UDP port number
- **Source-port filtering**  
allows only specified ports to communicate with each other
- **RADIUS/TACACS+**  
eases switch management security administration by using a password authentication server
- **Secure shell**  
encrypts all transmitted data for secure remote CLI access over IP networks
- **Secure Sockets Layer (SSL)**  
encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- **Port security**

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- allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **MAC address lockout**  
prevents particular configured MAC addresses from connecting to the network
- **Secure FTP**  
allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **Switch management logon security**  
helps secure switch CLI logon by optionally requiring either RADIUS or TACACS+ authentication
- **Custom banner**  
displays security policy when users log in to the switch
- **STP BPDU port protection**  
blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- **DHCP protection**  
blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- **Dynamic ARP protection**  
blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- **STP root guard**  
protects the root bridge from malicious attacks or configuration mistakes
- **Identity-driven ACL**  
enables implementation of a highly granular and flexible access security policy and VLAN assignment specific to each authenticated network user
- **Per-port broadcast throttling**  
Configures broadcast control selectively on heavy traffic port uplinks
- **Private VLAN**  
provides network security by restricting peer-to-peer communication to prevent a variety of malicious attacks; typically a switch port can only communicate with other ports in the same community and/or an uplink port, regardless of VLAN ID or destination MAC address

## Monitor and diagnostics

- **Digital optical monitoring of SFP+ and 1000BASE-T transceivers**  
allows detailed monitoring of the transceiver settings and parameters

## Warranty and support

- **Limited Lifetime Warranty**  
see <http://www.hpe.com/networking/warrantysummary> for warranty and support information included with your product purchase.
- **Software releases**  
to find software for your product, refer to <http://www.hpe.com/networking/support>; for details on the software releases available with your product purchase, refer to <http://www.hpe.com/networking/warrantysummary>

## Configuration

### Build To Order:

BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or Rack-Shippable solution.

Aruba 2930F 24G 4SFP+ Switch <ul style="list-style-type: none"> <li>• 24 RJ-45 autosensing 10/100/1000 ports</li> <li>• 4 SFP/SFP+ 1G/10G ports</li> <li>• min=0 \\ max=4 SFP/SFP+ Transceivers</li> <li>• 1U - Height</li> </ul>	JL253A See Configuration <b>NOTE: 1, 2, 3</b>
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	JL253A#B2B
PDU Cable ROW <ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (ROW)</li> </ul>	JL253A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"> <li>• HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)</li> </ul>	JL253A#B2E
Aruba 2930F 48G 4SFP+ Switch <ul style="list-style-type: none"> <li>• 48 RJ-45 autosensing 10/100/1000 ports</li> <li>• 4 SFP/SFP+ 1G/10G ports</li> <li>• min=0 \\ max=4 SFP/SFP+ Transceivers</li> <li>• 1U - Height</li> </ul>	JL254A See Configuration <b>NOTE: 1, 2, 3</b>
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	JL254A#B2B
PDU Cable ROW <ul style="list-style-type: none"> <li>• C15 PDU Jumper Cord (ROW)</li> </ul>	JL254A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"> <li>• HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)</li> </ul>	JL254A#B2E
Aruba 2930F 24G PoE+ 4SFP+ Switch <ul style="list-style-type: none"> <li>• 24 RJ-45 PoE+ autosensing 10/100/1000 ports</li> <li>• 4 SFP/SFP+ 1G/10G ports</li> <li>• min=0 \\ max=4 SFP/SFP+ Transceivers</li> <li>• 1U - Height</li> </ul>	JL255A See Configuration <b>NOTE: 1, 2, 3</b>

## Configuration

PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"><li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li></ul>	JL255A#B2B
PDU Cable ROW <ul style="list-style-type: none"><li>C15 PDU Jumper Cord (ROW)</li></ul>	JL255A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"><li>HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)</li></ul>	JL255A#B2E
Aruba 2930F 48G PoE+ 4SFP+ Switch <ul style="list-style-type: none"><li>48 RJ-45 PoE+ autosensing 10/100/1000 ports</li><li>4 SFP/SFP+ 1G/10G ports</li><li>min=0 \\ max=4 SFP/SFP+ Transceivers</li><li>1U - Height</li></ul>	JL256A See Configuration <b>NOTE: 1, 2, 3</b>
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"><li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li></ul>	JL256A#B2B
PDU Cable ROW <ul style="list-style-type: none"><li>C15 PDU Jumper Cord (ROW)</li></ul>	JL256A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"><li>HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)</li></ul>	JL256A#B2E
Aruba 2930F 8G PoE+ 2SFP+ Switch <ul style="list-style-type: none"><li>8 RJ-45 PoE+ autosensing 10/100/1000 ports</li><li>2 SFP/SFP+ 1G/10G ports</li><li>min=0 \\ max=2 SFP/SFP+ Transceivers</li><li>1U - Height</li></ul>	JL258A See Configuration <b>NOTE: 1, 2, 3</b>
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"><li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li></ul>	JL258A#B2B
PDU Cable ROW <ul style="list-style-type: none"><li>C15 PDU Jumper Cord (ROW)</li></ul>	JL258A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"><li>HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)</li></ul>	JL258A#B2E



## Configuration

### Aruba 2930F 24G 4SFP Switch

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 SFP 1G ports
- min=0 \\ max=4 SFP Transceivers
- 1U - Height

JL259A  
See Configuration  
**NOTE: 1, 3**

### PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

JL259A#B2B

### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JL259A#B2C

### High Volt Switch to Wall Power Cord

- HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)

JL259A#B2E

### Aruba 2930F 48G 4SFP Switch

- 48 RJ-45 autosensing 10/100/1000 ports
- 4 SFP 1G ports
- min=0 \\ max=4 SFP Transceivers
- 1U - Height

JL260A  
See Configuration  
**NOTE: 1, 3**

### PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

JL260A#B2B

### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JL260A#B2C

### High Volt Switch to Wall Power Cord

- HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)

JL260A#B2E

### Aruba 2930F 24G PoE+ 4SFP Switch

- 24 RJ-45 PoE+ autosensing 10/100/1000 ports
- 4 SFP 1G ports
- min=0 \\ max=4 SFP Transceivers
- 1U - Height

JL261A  
See Configuration  
**NOTE: 1, 3**

### PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

JL261A#B2B

## Configuration

PDU Cable ROW	JL261A#B2C
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	
High Volt Switch to Wall Power Cord	JL261A#B2E
<ul style="list-style-type: none"> <li>HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)</li> </ul>	
Aruba 2930F 48G PoE+ 4SFP Switch	JL262A
<ul style="list-style-type: none"> <li>48 RJ-45 PoE+ autosensing 10/100/1000 ports</li> <li>4 SFP 1G ports</li> <li>min=0 \\ max=4 SFP Transceivers</li> <li>1U - Height</li> </ul>	See Configuration <b>NOTE: 1, 3</b>
PDU Cable NA/MEX/TW/JP	JL262A#B2B
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li> </ul>	
PDU Cable ROW	JL262A#B2C
<ul style="list-style-type: none"> <li>C15 PDU Jumper Cord (ROW)</li> </ul>	
High Volt Switch to Wall Power Cord	JL262A#B2E
<ul style="list-style-type: none"> <li>HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)</li> </ul>	

### Configuration Rules:

**NOTE 1** The following Transceivers install into this Switch (For the 1000/10000 SFP+ Ports):

HPE X121 1G SFP LC LH Transceiver	J4860C
HPE X121 1G SFP LC LX Transceiver	J4859C
HPE X121 1G SFP LC SX Transceiver	J4858C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HPE X111 100M SFP LC FX Transceiver	J9054C

**NOTE 2** The following Transceivers install into this Switch:

HPE X132 10G SFP+ LC ER Transceiver	J9153A
HPE X132 10G SFP+ LC SR Transceiver	J9150A
HPE X132 10G SFP+ LC LR Transceiver	J9151A
HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B

**NOTE 3** Localization required on orders without #B2B, #B2C or #B2E options.

## Rack Level Integration CTO Models

## Configuration

### Aruba 2930F 24G 4SFP+ Switch

- 24 RJ-45 autosensing 10/100/1000 ports
- 4 SFP/SFP+ 1G/10G ports
- min=0 \\ max=4 SFP/SFP+ Transceivers
- 1U - Height

JL253A

See Configuration

**NOTE: 1, 2, 3, 4, 5**

### PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

JL253A#B2B

### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JL253A#B2C

### High Volt Switch to Wall Power Cord

- HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)

JL253A#B2E

### Aruba 2930F 48G 4SFP+ Switch

- 48 RJ-45 autosensing 10/100/1000 ports
- 4 SFP/SFP+ 1G/10G ports
- min=0 \\ max=4 SFP/SFP+ Transceivers
- 1U - Height

JL254A

See Configuration

**NOTE: 1, 2, 3, 4, 5**

### PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

JL254A#B2B

### PDU Cable ROW

- C15 PDU Jumper Cord (ROW)

JL254A#B2C

### High Volt Switch to Wall Power Cord

- HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)

JL254A#B2E

### Aruba 2930F 24G PoE+ 4SFP+ Switch

- 24 RJ-45 PoE+ autosensing 10/100/1000 ports
- 4 SFP/SFP+ 1G/10G ports
- min=0 \\ max=4 SFP/SFP+ Transceivers
- 1U - Height

JL255A

See Configuration

**NOTE: 1, 2, 3, 4, 5**

### PDU Cable NA/MEX/TW/JP

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

JL255A#B2B

## Configuration

PDU Cable ROW <ul style="list-style-type: none"><li>C15 PDU Jumper Cord (ROW)</li></ul>	JL255A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"><li>HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)</li></ul>	JL255A#B2E
Aruba 2930F 48G PoE+ 4SFP+ Switch <ul style="list-style-type: none"><li>48 RJ-45 PoE+ autosensing 10/100/1000 ports</li><li>4 SFP/SFP+ 1G/10G ports</li><li>min=0 \\ max=4 SFP/SFP+ Transceivers</li><li>1U - Height</li></ul>	JL256A See Configuration <b>NOTE: 1, 2, 3, 4, 5</b>
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"><li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li></ul>	JL256A#B2B
PDU Cable ROW <ul style="list-style-type: none"><li>C15 PDU Jumper Cord (ROW)</li></ul>	JL256A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"><li>HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)</li></ul>	JL256A#B2E
Aruba 2930F 24G 4SFP Switch <ul style="list-style-type: none"><li>24 RJ-45 autosensing 10/100/1000 ports</li><li>4 SFP 1G ports</li><li>min=0 \\ max=4 SFP Transceivers</li><li>1U - Height</li></ul>	JL259A See Configuration <b>NOTE: 1, 3, 4, 5</b>
PDU Cable NA/MEX/TW/JP <ul style="list-style-type: none"><li>C15 PDU Jumper Cord (NA/MEX/TW/JP)</li></ul>	JL259A#B2B
PDU Cable ROW <ul style="list-style-type: none"><li>C15 PDU Jumper Cord (ROW)</li></ul>	JL259A#B2C
High Volt Switch to Wall Power Cord <ul style="list-style-type: none"><li>HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)</li></ul>	JL259A#B2E
Aruba 2930F 48G 4SFP Switch <ul style="list-style-type: none"><li>48 RJ-45 autosensing 10/100/1000 ports</li></ul>	JL260A See Configuration

## Configuration

- 4 SFP 1G ports
- min=0 \\ max=4 SFP Transceivers
- 1U - Height

**NOTE: 1, 3, 4, 5**

PDU Cable NA/MEX/TW/JP

JL260A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW

JL260A#B2C

- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord

JL260A#B2E

- HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)

Aruba 2930F 24G PoE+ 4SFP Switch

JL261A

- 24 RJ-45 PoE+ autosensing 10/100/1000 ports
- 4 SFP 1G ports
- min=0 \\ max=4 SFP Transceivers
- 1U - Height

See Configuration

**NOTE: 1, 3, 4, 5**

PDU Cable NA/MEX/TW/JP

JL261A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW

JL261A#B2C

- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord

JL261A#B2E

- HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)

Aruba 2930F 48G PoE+ 4SFP Switch

JL262A

- 48 RJ-45 PoE+ autosensing 10/100/1000 ports
- 4 SFP 1G ports
- min=0 \\ max=4 SFP Transceivers
- 1U - Height

See Configuration

**NOTE: 1, 3, 4, 5**

PDU Cable NA/MEX/TW/JP

JL262A#B2B

- C15 PDU Jumper Cord (NA/MEX/TW/JP)

PDU Cable ROW

JL262A#B2C

## Configuration

- C15 PDU Jumper Cord (ROW)

High Volt Switch to Wall Power Cord

JL262A#B2E

- HPE 2.3M C13 to NEMA L6-20P Power Cord(J9936A)

### Configuration Rules:

#### NOTE 1 The following Transceivers install into this Switch:

HPE X121 1G SFP LC LH Transceiver	J4860C
HPE X121 1G SFP LC LX Transceiver	J4859C
HPE X121 1G SFP LC SX Transceiver	J4858C
HP X122 1G SFP LC BX-D Transceiver	J9142B
HP X122 1G SFP LC BX-U Transceiver	J9143B
HPE X111 100M SFP LC FX Transceiver	J9054C

#### NOTE 2 The following Transceivers install into this Switch:

HPE X132 10G SFP+ LC ER Transceiver	J9153A
HPE X132 10G SFP+ LC SR Transceiver	J9150A
HPE X132 10G SFP+ LC LR Transceiver	J9151A
HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B

NOTE 3 If this switch is factory installed in HPE Racks, Then the J9583A#0D1 is required.  
CLIC Only - Allow the J9583AZ in all regions.

NOTE 4 Localization required on orders without #B2B, #B2C, #B2E options.

NOTE 5 If this Switch Chassis is selected for Rack Level Integration, Then the Switch Chassis needs to integrate (with #0D1) to the HPE Rack.

Remarks: Drop down under power supply should offer the following options and results:  
Switch/Router/Power Supply to PDU Power Cord - #B2B in North America, Mexico, Taiwan, and Japan or #B2C ROW. (Watson Default B2B or B2C for Rack Level CTO)  
Switch/Router/Power Supply to Wall Power Cord - Localized Option (Watson Default for BTO and Box Level CTO)

Enter the following menu selections as integrated to the CTO Model X server above if order is factory built.

## Transceivers

### SFP Transceivers

HPE X121 1G SFP LC LH Transceiver	J4860C
HPE X121 1G SFP LC LX Transceiver	J4859C

## Configuration

HPE X121 1G SFP LC SX Transceiver	J4858C
HP X122 1G SFP LC BX-U Transceiver	J9143B
HPE X121 1G SFP RJ45 T Transceiver	J8177C
HPE X111 100M SFP LC FX Transceiver	J9054C

## SFP+ Transceivers

HPE X132 10G SFP+ LC ER Transceiver	J9153A
HPE X132 10G SFP+ LC SR Transceiver	J9150A
HPE X132 10G SFP+ LC LR Transceiver	J9151A
HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B

## Cables

### Console Cables

(std 0 // max 99) User Selection (min 0 // max 99) per switch

Aruba X2C2 RJ45 to DB9 Console Cable	JL448A
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### Multi-Mode Cables

(std 0 // max 99) User Selection (min 0 // max 99) per switch

HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
HPE LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A

## Configuration

HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A

## Switch Enclosure Options

### Rack Mount Kit

(std 0 // max 1) User Selection (min 0 // max 1) per switch

HPE X410 1U Universal 4-post Rackmount Kit	J9583A See Configuration <b>NOTE: 1</b>
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### Configuration Rules:

**NOTE 1** If this Mounting Kit is order with #0D1 then it integrates to the HPE Universal Rack. (not the switch)

**NOTE 2** This Rack Mount Kit is not compatible with JL258A

### Accessories

Aruba 2930F 8-port Cable Guard	JL311A
Aruba 2930F 8-port Power Shelf	JL312A



## Technical Specifications

### Aruba 2930F 24G 4SFP+ Switch (JL253A)

<b>I/O ports and slots</b>	24 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 4 SFP+ 1/10GbE ports; PHY-less
<b>Additional ports and slots</b>	1 dual-personality (RJ-45 or USB micro-B) serial console port
<b>Physical characteristics</b>	<b>Dimensions</b> 17.42(w) x 7.88(d) x 1.73(h) in (44.25 x 20.02 x 4.39 cm) (1U height) <b>Weight</b> 5.31 lb (2.41 kg)
<b>Memory and processor</b>	Dual Core ARM Coretex A9 @ 1016 MHz, 1 GB DDR3 SDRAM; Packet buffer size: 12.38 MB 4.5MB Ingress/7.875MB Egress, 4 GB eMMC
<b>Performance</b>	<b>1000 Mb Latency</b> < 3.8 $\mu$ s (64-byte packets) <b>10 Gbps Latency</b> < 1.6 $\mu$ s (64-byte packets) <b>Throughput</b> up to 95.2 Mpps <b>Switching capacity</b> 128 Gbps <b>Routing table size</b> 10000 entries (IPv4), 5000 entries (IPv6) <b>MAC address table size</b> 32768 entries
<b>Environment</b>	<b>Operating temperature</b> 32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet <b>Operating relative humidity</b> 15% to 95% @ 104°F (40°C), noncondensing <b>Nonoperating/Storage temperature</b> -40°F to 158°F (-40°C to 70°C); up to 15000 Feet <b>Nonoperating/Storage temperature</b> 15% to 95% @ 149°F (65°C), noncondensing <b>Acoustic</b> Power: 49.7 dB, Pressure: 37.1 dB <b>Airflow direction</b> Side-to-side
<b>Electrical characteristics</b>	<b>Maximum heat dissipation</b> 100 BTU/hr (105.5 kJ/hr) <b>Voltage</b> 100 - 127 / 200 - 240 VAC, rated <b>Current</b> 0.6/0.4 A <b>Maximum power rating</b> 29.3 W <b>Idle power</b> 19.5 W <b>Frequency</b> 50/60 Hz <b>Notes</b> Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated..
<b>Safety</b>	UL 60950-1, 2nd Edition; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; IEC 60950-1:2005 +A1:2009 +A2:2013; CSA 22.2 No. 60950-1-07 2nd; EN 60825-1:2007 / IEC 60825-1:2007 Class 1
<b>Emissions</b>	EN 55022:2010/CISPR 22 Class A; FCC CFR 47 Part 15 Class A; VCCI Class A; ICES-003 Class A; CNS 13438
<b>Immunity</b>	<b>Generic</b> EN 55024:2010/CISPR 24

## Technical Specifications

	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	IEC/EN 61000-3-2
	<b>Flicker</b>	IEC/EN 61000-3-3
<b>Management</b>	Aruba AirWave Network Management; IMC – Intelligent Management Center; Command-line interface; Web browser; Configuration menu; SNMP manager; Telnet; RMON1; FTP; Out-of-band management (serial RS-232C or micro USB)	
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.	

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**Aruba 2930F 48G 4SFP+ Switch (JL254A)**

<b>I/O ports and slots</b>	48 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 4 SFP+ 1/10GbE ports; PHY-less	
<b>Additional ports and slots</b>	1 dual-personality (RJ-45 or USB micro-B) serial console port	
<b>Physical characteristics</b>	<b>Dimensions</b>	17.42(w) x 9.7(d) x 1.73(h) in (44.25 x 24.63 x 4.39 cm) (1U height)
	<b>Weight</b>	6.83 lb (3.10 kg)
<b>Memory and processor</b>	Dual Core ARM Coretex @ 1016 MHz, 1 GB DDR3 SDRAM; Packet buffer size: 12.38 MB 4.5MB Ingress/7.875MB Egress, 4 GB eMMC	
<b>Performance</b>	<b>1000 Mb Latency</b>	< 3.8 $\mu$ s (64-byte packets)
	<b>10 Gbps Latency</b>	< 1.6 $\mu$ s (64-byte packets)
	<b>Throughput</b>	up to 112.0 Mpps
	<b>Switching capacity</b>	176 Gbps
	<b>Routing table size</b>	10000 entries (IPv4), 5000 entries (IPv6)
	<b>MAC address table size</b>	32768 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing
	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C); up to 15000 Feet
	<b>Nonoperating/Storage temperature</b>	15% to 95% @ 149°F (65°C), noncondensing
	<b>Acoustic</b>	Power: 54.1 dB, Pressure: 40.2 dB
	<b>Airflow direction</b>	Side-to-side
<b>Electrical characteristics</b>	<b>Maximum heat dissipation</b>	159 BTU/hr (167.74 kJ/hr)
	<b>Voltage</b>	100 - 127 / 200 - 240 VAC, rated

## Technical Specifications

	<b>Current</b>	0.9/0.6 A
	<b>Maximum power rating</b>	46.6 W
	<b>Idle power</b>	32.7 W
	<b>Frequency</b>	50/60 Hz
	<b>Notes</b>	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated..
<b>Safety</b>		UL 60950-1, 2nd Edition; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; IEC 60950-1:2005 +A1:2009 +A2:2013; CSA 22.2 No. 60950-1-07 2nd; EN 60825-1:2007 / IEC 60825-1:2007 Class 1
<b>Emissions</b>		EN 55022:2010/CISPR 22 Class A; FCC CFR 47 Part 15 Class A; VCCI Class A; ICES-003 Class A; CNS 13438
<b>Immunity</b>	<b>Generic</b>	EN 55024:2010/CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	IEC/EN 61000-3-2
	<b>Flicker</b>	IEC/EN 61000-3-3
<b>Management</b>		Aruba AirWave Network Management; IMC – Intelligent Management Center; Command-line interface; Web browser; Configuration menu; SNMP manager; Telnet; RMON1; FTP; Out-of-band management (serial RS-232C or micro USB)
<b>Services</b>		Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.

### Aruba 2930F 24G PoE+ 4SFP+ Switch (JL255A)

<b>I/O ports and slots</b>		24 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 SFP+ 1/10GbE ports; PHY-less
<b>Additional ports and slots</b>		1 dual-personality (RJ-45 or USB micro-B) serial console port
<b>Physical characteristics</b>	<b>Dimensions</b>	17.42(w) x 11.98(d) x 1.73(h) in (44.25 x 30.42 x 4.39 cm) (1U height)
	<b>Weight</b>	8.6 lb (3.9 kg)
<b>Memory and processor</b>		Dual Core ARM Coretex @ 1016 MHz, 1 GB DDR3 SDRAM; Packet buffer size: 12.38 GB 4.5MB Ingress/7.875MB Egress, 4 GB eMMC
<b>Performance</b>	<b>1000 Mb Latency</b>	< 3.8 $\mu$ s (64-byte packets)
	<b>10 Gbps Latency</b>	< 1.6 $\mu$ s (64-byte packets)
	<b>Throughput</b>	up to 95.2 Mpps

## Technical Specifications

	<b>Switching capacity</b>	128 Gbps
	<b>Routing table size</b>	10000 entries (IPv4), 5000 entries (IPv6)
	<b>MAC address table size</b>	32768 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing
	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C); up to 15000 Feet
	<b>Nonoperating/Storage temperature</b>	15% to 95% @ 149°F (65°C), noncondensing
	<b>Acoustic</b>	Power: 54.1 dB, Pressure: 40.2 dB
	<b>Airflow direction</b>	Side-to-side
<b>Electrical characteristics</b>	<b>80plus.org Certification</b>	Silver
	<b>Maximum heat dissipation</b>	1518 BTU/hr (1601.49 kJ/hr)
	<b>Voltage</b>	100 - 127 / 200 - 240 VAC, rated
	<b>Current</b>	4.9/2.4 A
	<b>Maximum power rating</b>	445 W
	<b>Idle power</b>	36.8 W
	<b>PoE power</b>	370 W PoE+
	<b>Frequency</b>	50/60 Hz
	<b>Notes</b>	<p>Idle power is the actual power consumption of the device with no ports connected..</p> <p>Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated..</p>
<b>Safety</b>		UL 60950-1 2nd Edition; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; IEC 60950-1:2005 +A1:2009 +A2:2013; CSA 22.2 No. 60950-1-07 2nd; EN 60825-1:2007 / IEC 60825-1:2007 Class 1
<b>Emissions</b>		EN 55022:2010/CISPR 22 Class A; FCC CFR 47 Part 15 Class A; VCCI Class A; ICES-003 Class A; CNS 13438
<b>Immunity</b>	<b>Generic</b>	EN 55024:2010/CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	IEC/EN 61000-3-2
	<b>Flicker</b>	IEC/EN 61000-3-3
<b>Management</b>		Aruba AirWave Network Management; IMC – Intelligent Management Center; Command-line interface; Web browser; Configuration menu; SNMP manager; Telnet; RMON1; FTP; Out-of-band

## Technical Specifications

	management (serial RS-232C or micro USB)
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.
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<b>Aruba 2930F 48G PoE+ 4SFP+ Switch (JL256A)</b>	
<b>I/O ports and slots</b>	48 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 SFP+ 1/10GbE ports; PHY-less
<b>Additional ports and slots</b>	1 dual-personality (RJ-45 or USB micro-B) serial console port
<b>Physical characteristics</b>	<b>Dimensions</b> 17.42(w) x 11.98(d) x 1.73(h) in (44.25 x 30.42 x 4.39 cm) (1U height) <b>Weight</b> 9.83 lb (4.46 kg)
<b>Memory and processor</b>	Dual Core ARM Coretex @ 1016 MHz, 1 GB DDR3 SDRAM; Packet buffer size: 12.38 MB 4.5MB Ingress/7.875MB Egress, 4 GB eMMC
<b>Performance</b>	<b>1000 Mb Latency</b> < 3.8 $\mu$ s (64-byte packets) <b>10 Gbps Latency</b> < 1.6 $\mu$ s (64-byte packets) <b>Throughput</b> up to 112.0 Mpps <b>Switching capacity</b> 176 Gbps <b>Routing table size</b> 10000 entries (IPv4), 5000 entries (IPv6) <b>MAC address table size</b> 32768 entries
<b>Environment</b>	<b>Operating temperature</b> 32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet <b>Operating relative humidity</b> 15% to 95% @ 104°F (40°C), noncondensing <b>Nonoperating/Storage temperature</b> -40°F to 158°F (-40°C to 70°C); up to 15000 Feet <b>Nonoperating/Storage temperature</b> 15% to 95% @ 149°F (65°C), noncondensing <b>Acoustic</b> Power: 55.7 dB, Pressure: 41.7 dB <b>Airflow direction</b> Side-to-side
<b>Electrical characteristics</b>	<b>80plus.org Certification</b> Silver <b>Maximum heat dissipation</b> 1566 BTU/hr (1652.13 kJ/hr) <b>Voltage</b> 100 - 127 / 200 - 240 VAC, rated <b>Current</b> 5.1/2.5 A <b>Maximum power rating</b> 459 W <b>Idle power</b> 48.6 W <b>PoE power</b> 370 W PoE+ <b>Frequency</b> 50/60 Hz
	<b>Notes</b> Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated..
<b>Safety</b>	UL 60950-1 2nd Edition; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; IEC

## Technical Specifications

	60950-1:2005 +A1:2009 +A2:2013; CSA 22.2 No. 60950-1-07 2nd; EN 60825-1:2007 / IEC 60825-1:2007 Class 1																				
<b>Emissions</b>	EN 55022:2010/CISPR 22 Class A; FCC CFR 47 Part 15 Class A; VCCI Class A; ICES-003 Class A; CNS 13438																				
<b>Immunity</b>	<table> <tr> <td><b>Generic</b></td> <td>EN 55024:2010/CISPR 24</td> </tr> <tr> <td><b>ESD</b></td> <td>IEC 61000-4-2</td> </tr> <tr> <td><b>Radiated</b></td> <td>IEC 61000-4-3</td> </tr> <tr> <td><b>EFT/Burst</b></td> <td>IEC 61000-4-4</td> </tr> <tr> <td><b>Surge</b></td> <td>IEC 61000-4-5</td> </tr> <tr> <td><b>Conducted</b></td> <td>IEC 61000-4-6</td> </tr> <tr> <td><b>Power frequency magnetic field</b></td> <td>IEC 61000-4-8</td> </tr> <tr> <td><b>Voltage dips and interruptions</b></td> <td>IEC 61000-4-11</td> </tr> <tr> <td><b>Harmonics</b></td> <td>IEC/EN 61000-3-2</td> </tr> <tr> <td><b>Flicker</b></td> <td>IEC/EN 61000-3-3</td> </tr> </table>	<b>Generic</b>	EN 55024:2010/CISPR 24	<b>ESD</b>	IEC 61000-4-2	<b>Radiated</b>	IEC 61000-4-3	<b>EFT/Burst</b>	IEC 61000-4-4	<b>Surge</b>	IEC 61000-4-5	<b>Conducted</b>	IEC 61000-4-6	<b>Power frequency magnetic field</b>	IEC 61000-4-8	<b>Voltage dips and interruptions</b>	IEC 61000-4-11	<b>Harmonics</b>	IEC/EN 61000-3-2	<b>Flicker</b>	IEC/EN 61000-3-3
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<b>Voltage dips and interruptions</b>	IEC 61000-4-11																				
<b>Harmonics</b>	IEC/EN 61000-3-2																				
<b>Flicker</b>	IEC/EN 61000-3-3																				
<b>Management</b>	Aruba AirWave Network Management; IMC – Intelligent Management Center; Command-line interface; Web browser; Configuration menu; SNMP manager; Telnet; RMON1; FTP; Out-of-band management (serial RS-232C or micro USB)																				
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.																				

### Aruba 2930F 8G PoE+ 2SFP+ Switch (JL258A)

<b>I/O ports and slots</b>	8 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 SFP+ 1/10GbE ports; PHY-less												
<b>Additional ports and slots</b>	1 dual-personality (RJ-45 or USB micro-B) serial console port												
<b>Physical characteristics</b>	<table> <tr> <td><b>Dimensions</b></td> <td>10(w) x 10(d) x 1.73(h) in (25.4 x 25.4 x 4.39 cm) (1U height)</td> </tr> <tr> <td><b>Weight</b></td> <td>4.41 lb (2.0 kg)</td> </tr> </table>	<b>Dimensions</b>	10(w) x 10(d) x 1.73(h) in (25.4 x 25.4 x 4.39 cm) (1U height)	<b>Weight</b>	4.41 lb (2.0 kg)								
<b>Dimensions</b>	10(w) x 10(d) x 1.73(h) in (25.4 x 25.4 x 4.39 cm) (1U height)												
<b>Weight</b>	4.41 lb (2.0 kg)												
<b>Memory and processor</b>	Dual Core ARM Coretex A9 @ 1016 MHz, 1 GB DDR3 SDRAM; Packet buffer size: 12.38 MB 4.5MB Ingress/7.785 Egress, 4 GB eMMC												
<b>Performance</b>	<table> <tr> <td><b>1000 Mb Latency</b></td> <td>&lt; 3.8 <math>\mu</math>s (64-byte packets)</td> </tr> <tr> <td><b>10 Gbps Latency</b></td> <td>&lt; 1.6 <math>\mu</math>s (64-byte packets)</td> </tr> <tr> <td><b>Throughput</b></td> <td>up to 41.7 Mpps</td> </tr> <tr> <td><b>Switching capacity</b></td> <td>56 Gbps</td> </tr> <tr> <td><b>Routing table size</b></td> <td>10000 entries (IPv4), 5000 entries (IPv6)</td> </tr> <tr> <td><b>MAC address table size</b></td> <td>32768 entries</td> </tr> </table>	<b>1000 Mb Latency</b>	< 3.8 $\mu$ s (64-byte packets)	<b>10 Gbps Latency</b>	< 1.6 $\mu$ s (64-byte packets)	<b>Throughput</b>	up to 41.7 Mpps	<b>Switching capacity</b>	56 Gbps	<b>Routing table size</b>	10000 entries (IPv4), 5000 entries (IPv6)	<b>MAC address table size</b>	32768 entries
<b>1000 Mb Latency</b>	< 3.8 $\mu$ s (64-byte packets)												
<b>10 Gbps Latency</b>	< 1.6 $\mu$ s (64-byte packets)												
<b>Throughput</b>	up to 41.7 Mpps												
<b>Switching capacity</b>	56 Gbps												
<b>Routing table size</b>	10000 entries (IPv4), 5000 entries (IPv6)												
<b>MAC address table size</b>	32768 entries												
<b>Environment</b>	<table> <tr> <td><b>Operating temperature</b></td> <td>32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet</td> </tr> <tr> <td><b>Operating relative humidity</b></td> <td>15% to 95% @ 104°F (40°C), noncondensing</td> </tr> <tr> <td><b>Nonoperating/Storage temperature</b></td> <td>-40°F to 158°F (-40°C to 70°C); up to 15000 Feet</td> </tr> <tr> <td><b>Nonoperating/Storage temperature</b></td> <td>15% to 95% @ 149°F (65°C), noncondensing</td> </tr> </table>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C); up to 15000 Feet	<b>Nonoperating/Storage temperature</b>	15% to 95% @ 149°F (65°C), noncondensing				
<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet												
<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing												
<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C); up to 15000 Feet												
<b>Nonoperating/Storage temperature</b>	15% to 95% @ 149°F (65°C), noncondensing												

## Technical Specifications

	<b>Acoustic</b>	Power: 0 dB, Pressure: 0 dB Fanless
<b>Electrical characteristics</b>	<b>Description</b>	Power supply meets DoE VI certification.
	<b>Maximum heat dissipation</b>	529 BTU/hr (558.09 kJ/hr)
	<b>Voltage</b>	90 - 264 VAC, rated
	<b>Current</b>	2.6 A
	<b>Maximum power rating</b>	155 W
	<b>PoE power</b>	125 W PoE+
	<b>Frequency</b>	50/60 Hz
		<b>Notes</b>
<b>Safety</b>	UL 60950-1 2nd Edition; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; IEC 60950-1:2005 +A1:2009 +A2:2013; CSA 22.2 No. 60950-1-07 2nd; EN 60825-1:2007 / IEC 60825-1:2007 Class 1	
<b>Emissions</b>	EN 55022:2010/CISPR 22 Class A; FCC CFR 47 Part 15 Class A; VCCI Class A; ICES-003 Class A; CNS 13438	
<b>Immunity</b>	<b>Generic</b>	EN 55024:2010/CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	IEC/EN 61000-3-2
	<b>Flicker</b>	IEC/EN 61000-3-3
<b>Management</b>	Aruba AirWave Network Management; IMC – Intelligent Management Center; Command-line interface; Web browser; Configuration menu; SNMP manager; Telnet; RMON1; FTP; Out-of-band management (serial RS-232C or micro USB)	
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.	

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### Aruba 2930F 24G 4SFP Switch (JL259A)

<b>I/O ports and slots</b>	24 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	
	4 SFP	
<b>Additional ports and slots</b>	1 dual-personality (RJ-45 or USB micro-B) serial console port	
<b>Physical characteristics</b>	<b>Dimensions</b>	17.42(w) x 7.88(d) x 1.73(h) in (44.25 x 20.02 x 4.39 cm) (1U height)
	<b>Weight</b>	5.31 lb (2.41 kg)

## Technical Specifications

<b>Memory and processor</b>	Dual Core ARM Coretex A9 @ 1016 MHz, 1 GB DDR3 SDRAM; Packet buffer size: 12.38 MB 4.5MB Ingress/7.785 Egress, 4 GB eMMC	
<b>Performance</b>	<b>1000 Mb Latency</b>	< 3.8 $\mu$ s (64-byte packets)
	<b>Throughput</b>	up to 41.7 Mpps
	<b>Switching capacity</b>	56 Gbps
	<b>Routing table size</b>	10000 entries (IPv4), 5000 entries (IPv6)
	<b>MAC address table size</b>	32768 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing
	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C); up to 15000 Feet
	<b>Nonoperating/Storage temperature</b>	15% to 95% @ 149°F (65°C), noncondensing
	<b>Acoustic</b>	Power: 49.7 dB, Pressure: 37.1 dB
	<b>Airflow direction</b>	Side-to-side
<b>Electrical characteristics</b>	<b>Maximum heat dissipation</b>	100 BTU/hr (105.5 kJ/hr)
	<b>Voltage</b>	100 - 127 / 200 - 240 VAC, rated
	<b>Current</b>	0.6/0.4 A
	<b>Maximum power rating</b>	29.3 W
	<b>Idle power</b>	19.5 W
	<b>Frequency</b>	50/60 Hz
	<b>Notes</b>	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
<b>Safety</b>	UL 60950-1 2nd Edition; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; IEC 60950-1:2005 +A1:2009 +A2:2013; CSA 22.2 No. 60950-1-07 2nd; EN 60825-1:2007 / IEC 60825-1:2007 Class 1	
<b>Emissions</b>	EN 55022:2010/CISPR 22 Class A; FCC CFR 47 Part 15 Class A; VCCI Class A; ICES-003 Class A; CNS 13438	
<b>Immunity</b>	<b>Generic</b>	EN 55024:2010/CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency magnetic field</b>	IEC 61000-4-8
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11
	<b>Harmonics</b>	IEC/EN 61000-3-2



## Technical Specifications

	<b>Flicker</b>	IEC/EN 61000-3-3
<b>Management</b>	Aruba AirWave Network Management; IMC – Intelligent Management Center; Command-line interface; Web browser; Configuration menu; SNMP manager; Telnet; RMON1; FTP; Out-of-band management (serial RS-232C or micro USB)	
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.	
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<b>Aruba 2930F 48G 4SFP Switch (JL260A)</b>		
<b>I/O ports and slots</b>	48 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 4 SFP	
<b>Additional ports and slots</b>	1 dual-personality (RJ-45 or USB micro-B) serial console port	
<b>Physical characteristics</b>	<b>Dimensions</b>	17.42(w) x 9.7(d) x 1.73(h) in (44.25 x 24.63 x 4.39 cm) (1U height)
	<b>Weight</b>	6.83 lb (3.10 kg)
<b>Memory and processor</b>	Dual Core ARM Coretex @ 1016 MHz, 1 GB DDR3 SDRAM; Packet buffer size: 12.38 MB 4.5MB Ingress/7.875MB Egress, 4 GB eMMC	
<b>Performance</b>	<b>1000 Mb Latency</b>	< 3.8 $\mu$ s (64-byte packets)
	<b>Throughput</b>	up to 77.4 Mpps
	<b>Switching capacity</b>	104 Gbps
	<b>Routing table size</b>	10000 entries (IPv4), 5000 entries (IPv6)
	<b>MAC address table size</b>	32768 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing
	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C); up to 15000 Feet
	<b>Nonoperating/Storage temperature</b>	15% to 95% @ 149°F (65°C), noncondensing
	<b>Acoustic</b>	Power: 54.1 dB, Pressure: 40.2 dB
	<b>Airflow direction</b>	Side-to-side
<b>Electrical characteristics</b>	<b>Maximum heat dissipation</b>	159 BTU/hr (167.74 kJ/hr)
	<b>Voltage</b>	100 - 127 / 200 - 240 VAC, rated
	<b>Current</b>	0.9/0.6 A
	<b>Maximum power rating</b>	46.6 W
	<b>Idle power</b>	32.7 W
	<b>Frequency</b>	50/60 Hz
	<b>Notes</b>	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
<b>Safety</b>	UL 60950-1, 2nd Edition; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; IEC 60950-1:2005 +A1:2009 +A2:2013; CSA 22.2 No. 60950-1-07 2nd; EN 60825-1:2007 / IEC	

## Technical Specifications

	60825-1:2007 Class 1																				
<b>Emissions</b>	EN 55022:2010/CISPR 22 Class A; FCC CFR 47 Part 15 Class A; VCCI Class A; ICES-003 Class A; CNS 13438																				
<b>Immunity</b>	<table> <tr> <td><b>Generic</b></td> <td>EN 55024:2010/CISPR 24</td> </tr> <tr> <td><b>ESD</b></td> <td>IEC 61000-4-2:</td> </tr> <tr> <td><b>Radiated</b></td> <td>IEC 61000-4-3</td> </tr> <tr> <td><b>EFT/Burst</b></td> <td>IEC 61000-4-4</td> </tr> <tr> <td><b>Surge</b></td> <td>IEC 61000-4-5</td> </tr> <tr> <td><b>Conducted</b></td> <td>IEC 61000-4-6</td> </tr> <tr> <td><b>Power frequency magnetic field</b></td> <td>IEC 61000-4-8</td> </tr> <tr> <td><b>Voltage dips and interruptions</b></td> <td>IEC 61000-4-11</td> </tr> <tr> <td><b>Harmonics</b></td> <td>IEC/EN 61000-3-2</td> </tr> <tr> <td><b>Flicker</b></td> <td>IEC/EN 61000-3-3</td> </tr> </table>	<b>Generic</b>	EN 55024:2010/CISPR 24	<b>ESD</b>	IEC 61000-4-2:	<b>Radiated</b>	IEC 61000-4-3	<b>EFT/Burst</b>	IEC 61000-4-4	<b>Surge</b>	IEC 61000-4-5	<b>Conducted</b>	IEC 61000-4-6	<b>Power frequency magnetic field</b>	IEC 61000-4-8	<b>Voltage dips and interruptions</b>	IEC 61000-4-11	<b>Harmonics</b>	IEC/EN 61000-3-2	<b>Flicker</b>	IEC/EN 61000-3-3
<b>Generic</b>	EN 55024:2010/CISPR 24																				
<b>ESD</b>	IEC 61000-4-2:																				
<b>Radiated</b>	IEC 61000-4-3																				
<b>EFT/Burst</b>	IEC 61000-4-4																				
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<b>Power frequency magnetic field</b>	IEC 61000-4-8																				
<b>Voltage dips and interruptions</b>	IEC 61000-4-11																				
<b>Harmonics</b>	IEC/EN 61000-3-2																				
<b>Flicker</b>	IEC/EN 61000-3-3																				
<b>Management</b>	Aruba AirWave Network Management; IMC – Intelligent Management Center; Command-line interface; Web browser; Configuration menu; SNMP manager; Telnet; RMON1; FTP; Out-of-band management (serial RS-232C or micro USB)																				
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.																				

### Aruba 2930F 24G PoE+ 4SFP Switch (JL261A)

<b>I/O ports and slots</b>	24 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 SFP										
<b>Additional ports and slots</b>	1 dual-personality (RJ-45 or USB micro-B) serial console port										
<b>Physical characteristics</b>	<table> <tr> <td><b>Dimensions</b></td> <td>17.42(w) x 11.98(d) x 1.73(h) in (44.25 x 30.42 x 4.39 cm) (1U height)</td> </tr> <tr> <td><b>Weight</b></td> <td>8.6 lb (3.9 kg)</td> </tr> </table>	<b>Dimensions</b>	17.42(w) x 11.98(d) x 1.73(h) in (44.25 x 30.42 x 4.39 cm) (1U height)	<b>Weight</b>	8.6 lb (3.9 kg)						
<b>Dimensions</b>	17.42(w) x 11.98(d) x 1.73(h) in (44.25 x 30.42 x 4.39 cm) (1U height)										
<b>Weight</b>	8.6 lb (3.9 kg)										
<b>Memory and processor</b>	Dual Core ARM Cortex A9 @ 1016 MHz, 1 GB DDR3 SDRAM; Packet buffer size: 12.38 MB 4.5MB Ingress/7.785 Egress, 4 GB eMMC										
<b>Performance</b>	<table> <tr> <td><b>1000 Mb Latency</b></td> <td>&lt; 3.8 <math>\mu</math>s (64-byte packets)</td> </tr> <tr> <td><b>Throughput</b></td> <td>up to 41.7 Mpps</td> </tr> <tr> <td><b>Switching capacity</b></td> <td>56 Gbps</td> </tr> <tr> <td><b>Routing table size</b></td> <td>10000 entries (IPv4), 5000 entries (IPv6)</td> </tr> <tr> <td><b>MAC address table size</b></td> <td>32768 entries</td> </tr> </table>	<b>1000 Mb Latency</b>	< 3.8 $\mu$ s (64-byte packets)	<b>Throughput</b>	up to 41.7 Mpps	<b>Switching capacity</b>	56 Gbps	<b>Routing table size</b>	10000 entries (IPv4), 5000 entries (IPv6)	<b>MAC address table size</b>	32768 entries
<b>1000 Mb Latency</b>	< 3.8 $\mu$ s (64-byte packets)										
<b>Throughput</b>	up to 41.7 Mpps										
<b>Switching capacity</b>	56 Gbps										
<b>Routing table size</b>	10000 entries (IPv4), 5000 entries (IPv6)										
<b>MAC address table size</b>	32768 entries										
<b>Environment</b>	<table> <tr> <td><b>Operating temperature</b></td> <td>32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet</td> </tr> <tr> <td><b>Operating relative humidity</b></td> <td>15% to 95% @ 104°F (40°C), noncondensing</td> </tr> <tr> <td><b>Nonoperating/Storage temperature</b></td> <td>-40°F to 158°F (-40°C to 70°C); up to 15000 Feet</td> </tr> <tr> <td><b>Nonoperating/Storage temperature</b></td> <td>15% to 95% @ 149°F (65°C)</td> </tr> </table>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C); up to 15000 Feet	<b>Nonoperating/Storage temperature</b>	15% to 95% @ 149°F (65°C)		
<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet										
<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing										
<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C); up to 15000 Feet										
<b>Nonoperating/Storage temperature</b>	15% to 95% @ 149°F (65°C)										

## Technical Specifications

	<b>Acoustic</b>	Power: 54.1 dB, Pressure: 40.6 dB	
	<b>Airflow direction</b>	Side-to-side	
<b>Electrical characteristics</b>	<b>80plus.org Certification</b>	Silver	
	<b>Maximum heat dissipation</b>	1518 BTU/hr (1601.49 kJ/hr)	
	<b>Voltage</b>	100 - 127 / 200 - 240 VAC, rated	
	<b>Current</b>	4.9/2.4 A	
	<b>Maximum power rating</b>	445 W	
	<b>Idle power</b>	36.8 W	
	<b>PoE power</b>	370 W PoE+	
	<b>Frequency</b>	50/60 Hz	
		<b>Notes</b>	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
	<b>Safety</b>	UL 60950-1 2nd Edition; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; IEC 60950-1:2005 +A1:2009 +A2:2013; CSA 22.2 No. 60950-1-07 2nd; EN 60825-1:2007 / IEC 60825-1:2007 Class 1	
<b>Emissions</b>	EN 55022:2010/CISPR 22 Class A; FCC CFR 47 Part 15 Class A; VCCI Class A; ICES-003 Class A; CNS 13438		
<b>Immunity</b>	<b>Generic</b>	EN 55024:2010/CISPR 24	
	<b>ESD</b>	IEC 61000-4-2:	
	<b>Radiated</b>	IEC 61000-4-3	
	<b>EFT/Burst</b>	IEC 61000-4-4	
	<b>Surge</b>	IEC 61000-4-5	
	<b>Conducted</b>	IEC 61000-4-6	
	<b>Power frequency magnetic field</b>	IEC 61000-4-8	
	<b>Voltage dips and interruptions</b>	IEC 61000-4-11	
	<b>Harmonics</b>	IEC/EN 61000-3-2	
	<b>Flicker</b>	IEC/EN 61000-3-3	
<b>Management</b>	Aruba AirWave Network Management; IMC – Intelligent Management Center; Command-line interface; Web browser; Configuration menu; SNMP manager; Telnet; RMON1; FTP; Out-of-band management (serial RS-232C or micro USB)		
<b>Services</b>	Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.		

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### Aruba 2930F 48G PoE+ 4SFP Switch (JL262A)

<b>I/O ports and slots</b>	48 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 SFP
<b>Additional ports and slots</b>	1 dual-personality (RJ-45 or USB micro-B) serial console port

## Technical Specifications

<b>Physical characteristics</b>	<b>Dimensions</b>	17.42(w) x 11.98(d) x 1.73(h) in (44.25 x 30.42 x 4.39 cm) (1U height)
	<b>Weight</b>	9.83 lb (4.46 kg)
<b>Memory and processor</b>	Dual Core ARM Coretex @ 1016 MHz, 1 GB DDR3 SDRAM; Packet buffer size: 12.38 MB 4.5MB Ingress/7.875MB Egress, 4 GB eMMC	
<b>Performance</b>	<b>1000 Mb Latency</b>	< 3.8 $\mu$ s (64-byte packets)
	<b>Throughput</b>	up to 77.4 Mpps
	<b>Switching capacity</b>	104 Gbps
	<b>Routing table size</b>	10000 entries (IPv4), 5000 entries (IPv6)
	<b>MAC address table size</b>	32768 entries
<b>Environment</b>	<b>Operating temperature</b>	32°F to 113°F (0°C to 45°C); up to 5000 Feet, - 0C to 40C (32F to 104F) up to 10000 Feet
	<b>Operating relative humidity</b>	15% to 95% @ 104°F (40°C), noncondensing
	<b>Nonoperating/Storage temperature</b>	-40°F to 158°F (-40°C to 70°C); up to 15000 Feet
	<b>Nonoperating/Storage temperature</b>	15% to 95% @ 149°F (65°C)
	<b>Acoustic</b>	Power: 55.7 dB, Pressure: 41.7 dB
	<b>Airflow direction</b>	Side-to-side
	<b>Electrical characteristics</b>	<b>80plus.org Certification</b>
<b>Maximum heat dissipation</b>		1566 BTU/hr (1652.13 kJ/hr)
<b>Voltage</b>		100 - 127 / 200 - 240 VAC, rated
<b>Current</b>		5.1/2.5 A
<b>Maximum power rating</b>		459 W
<b>Idle power</b>		48.6 W
<b>PoE power</b>		370 W PoE+
<b>Frequency</b>		50/60 Hz
<b>Notes</b>		Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
<b>Safety</b>		UL 60950-1 2nd Edition; EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011+A2:2013; IEC 60950-1:2005 +A1:2009 +A2:2013; CSA 22.2 No. 60950-1-07 2nd; EN 60825-1:2007 / IEC 60825-1:2007 Class 1
<b>Emissions</b>	EN 55022:2010/CISPR 22 Class A; FCC CFR 47 Part 15 Class A; VCCI Class A; ICES-003 Class A; CNS 13438	
<b>Immunity</b>	<b>Generic</b>	EN 55024:2010/CISPR 24
	<b>ESD</b>	IEC 61000-4-2
	<b>Radiated</b>	IEC 61000-4-3
	<b>EFT/Burst</b>	IEC 61000-4-4
	<b>Surge</b>	IEC 61000-4-5
	<b>Conducted</b>	IEC 61000-4-6
	<b>Power frequency</b>	IEC 61000-4-8

## Technical Specifications

### magnetic field

**Voltage dips and interruptions** IEC 61000-4-11

**Harmonics** IEC/EN 61000-3-2

**Flicker** IEC/EN 61000-3-3

### Management

Aruba AirWave Network Management; IMC – Intelligent Management Center; Command-line interface; Web browser; Configuration menu; SNMP manager; Telnet; RMON1; FTP; Out-of-band management (serial RS-232C or micro USB)

### Services

Refer to the Hewlett Packard Enterprise website at <http://www.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.

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

### Denial of service protection

CPU DoS Protection

### Device Management

RFC 1155 Structure and Mgmt Information (SMIv1)  
 RFC 1157 SNMPv1/v2c  
 RFC 1591 DNS (client)  
 RFC 1901 (Community based SNMPv2)  
 RFC 1901-1907 SNMPv2c, SMIv2 and Revised MIB-II  
 RFC 1908 (SNMP v1/2 Coexistence)  
 RFC 2576 (Coexistence between SNMP V1, V2, V3)  
 RFC 2578-2580 SMIv2  
 RFC 2579 (SMIv2 Text Conventions)  
 RFC 2580 (SMIv2 Conformance)  
 RFC 2819 (RMON groups Alarm, Event, History and Statistics only)  
 RFC 3416 (SNMP Protocol Operations v2)  
 RFC 3417 (SNMP Transport Mappings)  
 HTML and telnet management  
 HTTP, SSHv1, and Telnet  
 Multiple Configuration Files  
 Multiple Software Images  
 SNMP v3 and RMON RFC support  
 SSHv1/SSHv2 Secure Shell  
 TACACS/TACACS+  
 Web UI

### General Protocols

IEEE 802.1AX-2008 Link Aggregation  
 IEEE 802.1D MAC Bridges  
 IEEE 802.1p Priority  
 IEEE 802.1Q VLANs  
 IEEE 802.1s Multiple Spanning Trees  
 IEEE 802.1v VLAN classification by Protocol and Port  
 IEEE 802.1w Rapid Reconfiguration of Spanning Tree  
 IEEE 802.3ab 1000BASE-T  
 IEEE 802.3ad Link Aggregation Control Protocol (LACP)  
 IEEE 802.3af Power over Ethernet  
 IEEE 802.3at PoE+  
 IEEE 802.3az Energy Efficient Ethernet

## Technical Specifications

IEEE 802.3x Flow Control  
RFC 768 UDP  
RFC 783 TFTP Protocol (revision 2)  
RFC 792 ICMP  
RFC 793 TCP  
RFC 826 ARP  
RFC 854 TELNET  
RFC 868 Time Protocol  
RFC 951 BOOTP  
RFC 1058 RIPv1  
RFC 1256 ICMP Router Discovery Protocol (IRDP)  
RFC 1350 TFTP Protocol (revision 2)  
RFC 1519 CIDR  
RFC 1542 BOOTP Extensions  
RFC 1918 Address Allocation for Private Internet  
RFC 2030 Simple Network Time Protocol (SNTP) v4  
RFC 2131 DHCP  
RFC 2236 IGMP Snooping  
RFC 2453 RIPv2  
RFC 2865 Remote Authentication Dial In User Service (RADIUS)  
RFC 2866 RADIUS Accounting  
RFC 3046 DHCP Relay Agent Information Option  
RFC 3411 An Architecture for Describing Simple Network Management Protocol (SNMP) Management Frameworks  
RFC 3412 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)  
RFC 3413 Simple Network Management Protocol (SNMP) Applications  
RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)  
RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)  
RFC 3416 Protocol Operations for SNMP  
RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)  
RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)  
RFC 3575 IANA Considerations for RADIUS  
RFC 3576 Ext to RADIUS (CoA only)  
RFC 4541 Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches  
RFC 4675 RADIUS VLAN & Priority  
RFC 4861 Neighbor Discovery for IP version 6 (IPv6)  
RFC 4862 IPv6 Stateless Address Autoconfiguration  
RFC 5905 Network Time Protocol Version 4: Protocol and Algorithms Specification  
UDLD (Uni-directional Link Detection)

### IP Multicast

RFC 1112 IGMP  
RFC 2236 IGMPv2  
RFC 2710 Multicast Listener Discovery (MLD) for IPv6  
RFC 3376 IGMPv3  
RFC 4541 Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches

### IPv6

RFC 1981 IPv6 Path MTU Discovery  
RFC 2080 RIPng for IPv6  
RFC 2081 RIPng Protocol Applicability Statement

## Technical Specifications

RFC 2082 RIP-2 MD5  
RFC 2460 IPv6 Specification  
RFC 2464 Transmission of IPv6 over Ethernet Networks  
RFC 2710 Multicast Listener Discovery (MLD) for IPv6  
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)  
RFC 2925 Remote Operations MIB (Ping only)  
RFC 3019 MLDv1 MIB  
RFC 3315 DHCPv6 (client and relay)  
RFC 3484 Default Address Selection for IPv6  
RFC 3513 IPv6 Addressing Architecture  
RFC 3596 DNS Extension for IPv6  
RFC 3810 MLDv2 for IPv6  
RFC 4022 MIB for TCP  
RFC 4113 MIB for UDP  
RFC 4251 SSHv6 Architecture  
RFC 4252 SSHv6 Authentication  
RFC 4253 SSHv6 Transport Layer  
RFC 4254 SSHv6 Connection  
RFC 4291 IP Version 6 Addressing Architecture  
RFC 4293 MIB for IP  
RFC 4419 Key Exchange for SSH  
RFC 4443 ICMPv6  
RFC 4541 IGMP & MLD Snooping Switch  
RFC 4861 IPv6 Neighbor Discovery  
RFC 4862 IPv6 Stateless Address Auto-configuration  
RFC 5095 Deprecation of Type 0 Routing Headers in IPv6  
RFC 6620 FCFS SAVI  
draft-ietf-savi-mix

## MIBs

IEEE 802.1ap (MSTP and STP MIB's only)  
IEEE 8021-Bridge-MIB (2008)  
IEEE 8021-Q-Bridge-MIB (2008)  
RFC 1155 Structure & ID of Mgmt Info for TCP/IP Internets  
RFC 1156 (TCP/IP MIB)  
RFC 1157 A Simple Network Management Protocol (SNMP)  
RFC 1213 MIB II  
RFC 1493 Bridge MIB  
RFC 1724 RIPv2 MIB  
RFC 2021 RMONv2 MIB  
RFC 2578 Structure of Management Information Version 2 (SMIv2)  
RFC 2579 Textual Conventions for SMIv2  
RFC 2580 Conformance Statements for SMIv2  
RFC 2613 SMON MIB  
RFC 2618 RADIUS Client MIB  
RFC 2620 RADIUS Accounting MIB  
RFC 2665 Ethernet-Like-MIB  
RFC 2668 802.3 MAU MIB  
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB  
RFC 2737 Entity MIB (Version 2)  
RFC 2819 RMON MIB  
RFC 2863 The Interfaces Group MIB  
RFC 2925 Ping MIB  
RFC 2932 IP (Multicast Routing MIB)  
RFC 2933 IGMP MIB

## Technical Specifications

RFC 3414 SNMP-User based-SM MIB  
RFC 3415 SNMP-View based-ACM MIB  
RFC 3417 Simple Network Management Protocol (SNMP) over IEEE 802 Networks  
RFC 3418 MIB for SNMPv3  
RFC 4836 Managed Objects for 802.3 Medium Attachment Units (MAU)

### Network Management

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)  
RFC 1155 Structure of Management Information  
RFC 1157 SNMPv1  
RFC 2021 Remote Network Monitoring Management Information Base Version 2 using SMIv2  
RFC 2576 Coexistence between SNMP versions  
RFC 2578 Structure of Management Information Version 2 (SMIv2)  
RFC 2579 Textual Conventions for SMIv2  
RFC 2580 Conformance Statements for SMIv2  
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)  
RFC 2819 Remote Network Monitoring Management Information Base  
RFC 2856 Textual Conventions for Additional High Capacity Data Types  
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations  
RFC 3164 BSD syslog Protocol  
RFC 3176 sFlow  
RFC 3411 SNMP Management Frameworks  
RFC 3412 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)  
RFC 3413 Simple Network Management Protocol (SNMP) Applications  
RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)  
RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)  
RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)  
RFC 5424 Syslog Protocol  
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)  
SNMPv1/v2c/v3  
XRMON

### QoS/CoS

IEEE 802.1p (CoS)  
RFC 2474 DiffServ Precedence, including 8 queues/port  
RFC 2475 DiffServ Architecture  
RFC 2597 DiffServ Assured Forwarding (AF)  
RFC 2598 DiffServ Expedited Forwarding (EF)  
Ingress Rate Limiting

### Security

IEEE 802.1X Port Based Network Access Control  
RFC 1321 The MD5 Message-Digest Algorithm  
RFC 1334 PPP Authentication Protocols (PAP)  
RFC 1492 An Access Control Protocol, Sometimes Called TACACS  
RFC 1492 TACACS+  
RFC 1994 PPP Challenge Handshake Authentication Protocol (CHAP)  
RFC 2082 RIP-2 MD5 Authentication  
RFC 2104 Keyed-Hashing for Message Authentication  
RFC 2138 RADIUS Authentication  
RFC 2139 RADIUS Accounting  
RFC 2246 Transport Layer Security (TLS)  
RFC 2548 Microsoft Vendor-specific RADIUS Attributes



## Technical Specifications

RFC 2618 RADIUS Authentication Client MIB  
RFC 2620 RADIUS Accounting Client MIB  
RFC 2716 PPP EAP TLS Authentication Protocol  
RFC 2818 HTTP Over TLS  
RFC 2865 RADIUS (client only)  
RFC 2865 RADIUS Authentication  
RFC 2866 RADIUS Accounting  
RFC 2867 RADIUS Accounting Modifications for Tunnel Protocol Support  
RFC 2868 RADIUS Attributes for Tunnel Protocol Support  
RFC 2869 RADIUS Extensions  
RFC 2882 NAS Requirements: Extended RADIUS Practices  
RFC 3162 RADIUS and IPv6  
RFC 3576 Dynamic Authorization Extensions to RADIUS  
RFC 3579 RADIUS Support For Extensible Authentication Protocol (EAP)  
RFC 3580 IEEE 802.1X RADIUS  
RFC 3580 IEEE 802.1X Remote Authentication Dial In User Service (RADIUS) Usage Guidelines  
RFC 4675 RADIUS Attributes  
Access Control Lists (ACLs)  
draft-grant-tacacs-02 (TACACS)  
Guest VLAN for 802.1X  
MAC Authentication  
MAC Lockdown  
MAC Lockout  
Port Security  
Secure Sockets Layer (SSL)  
SSHv2 Secure Shell  
Web Authentication

## Accessories

### Aruba 2930F Switch Series accessories

#### Transceivers

HPE X111 100M SFP LC FX Transceiver	J9054C
HPE X121 1G SFP LC SX Transceiver	J4858C
HPE X121 1G SFP LC LX Transceiver	J4859C
HPE X121 1G SFP LC LH Transceiver	J4860C
HPE X121 1G SFP RJ45 T Transceiver	J8177C
HPE X132 10G SFP+ LC SR Transceiver	J9150A
HPE X132 10G SFP+ LC LR Transceiver	J9151A
HPE X132 10G SFP+ LC ER Transceiver	J9153A
HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B

#### Cables

Aruba X2C2 RJ45 to DB9 Console Cable	JL448A
HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
HPE LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A

#### Aruba 2930F 24G 4SFP+ Switch (JL253A)

HPE X410 1U Universal 4-post Rackmount Kit	J9583A
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#### Aruba 2930F 48G 4SFP+ Switch (JL254A)

HPE X410 1U Universal 4-post Rackmount Kit	J9583A
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#### Aruba 2930F 24G PoE+ 4SFP+ Switch (JL255A)

HPE X410 1U Universal 4-post Rackmount Kit	J9583A
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#### Aruba 2930F 48G PoE+ 4SFP+ Switch (JL256A)

HPE X410 1U Universal 4-post Rackmount Kit	J9583A
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**Accessories****Aruba 2930F 8G PoE+ 2SFP+ Switch (JL258A)**

Aruba 2930F 8-port Cable Guard

JL311A

Aruba 2930F 8-port Power Shelf

JL312A

**Aruba 2930F 24G 4SFP Switch (JL259A)**

HPE X410 1U Universal 4-post Rackmount Kit

J9583A

**Aruba 2930F 48G 4SFP Switch (JL260A)**

HPE X410 1U Universal 4-post Rackmount Kit

J9583A

**Aruba 2930F 24G PoE+ 4SFP Switch (JL261A)**

HPE X410 1U Universal 4-post Rackmount Kit

J9583A

**Aruba 2930F 48G PoE+ 4SFP Switch (JL262A)**

HPE X410 1U Universal 4-post Rackmount Kit

J9583A

## Accessory Product Details

**NOTE:** Details are not available for all accessories. The following specifications were available at the time of publication.

<b>Aruba 2930F 8-port Cable Guard (JL311A)</b>	<b>Product Type</b> <b>Physical characteristics</b>	Mounting Kit Dimensions: 1.42(w) x 4.33(d) x 0.69(h) in (3.6 x 11 x 1.75 cm) Weight: 1.28 lb (0.58 kg) <b>Notes</b> Dimensions: 10.94" x 3.62" x 1.69" or 27.8cm x 9.2cm x 4.3cm w/ears 10.94" x 1.69" x 1.69" or 27.8cm x 4.3cm x 4.3cm without ears Weight: 1.262 lbs or 57 kg (including faceplate, ears, and screws) 1.026 lbs or . 47 kg (faceplate only) <b>Warranty</b> Limited Lifetime Warranty: See <a href="http://www.hpe.com/networking/warrantysummary">http://www.hpe.com/networking/warrantysummary</a> for warranty and support information included with your product purchase. <b>Services</b> Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.
The Cable Guard secures cables that are connected to the switch and provides extra security against theft or tampering with the switch and its cables after it is installed	<b>Notes</b> <b>Warranty</b> <b>Services</b>	
<b>Aruba 2930F 8-port Power Shelf (JL312A)</b>	<b>Product Type</b> <b>Physical characteristics</b>	Mounting Kit Dimensions: 10.75(w) x 6(d) x 2(h) in (27.31 x 15.24 x 5.08 cm) Weight: 0.93 lb (0.42 kg) <b>Overall Positioning Statement</b> The Aruba 2930F 8-port Power Shelf provides an easy to use solution for attaching the external power adapter to the Aruba 2930F 8G 2SFP+ PoE+ Switch. The power adapter shelf can be quickly attached on the rear of the Aruba 2930F 8G PoE+ 2SFP+ Switch and the adapter fit into place. This power adapter shelf is designed for wall, table or rack deployments. <b>Key Features</b> <ul style="list-style-type: none"> <li>• Quickly attach external power adapter to 8 port switch</li> <li>• Designed for use with Aruba 2930F 8G PoE+ 2SFP+ Switch</li> </ul> <b>Notes</b> The Aruba 2930F 8-port Power Shelf is an accessory for the Aruba 2930F 8G PoE+ 2SFP+ Switch. The shelf mounts on the back of the switch providing a place to hold the external power adapter. <b>Warranty</b> Limited Lifetime Warranty: See <a href="http://www.hpe.com/networking/warrantysummary">http://www.hpe.com/networking/warrantysummary</a> for warranty and support information included with your product purchase. <b>Services</b> Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.
An easy-to-use solution for attaching the external power adapter to any of the Aruba 2530 8-port switches.	<b>Overall Positioning Statement</b> <b>Key Features</b> <b>Notes</b> <b>Warranty</b> <b>Services</b>	
<b>HPE X121 1G SFP LC SX Transceiver (J4858C)</b>	<b>Ports</b> <b>Physical characteristics</b>	1 LC 1000BASE-SX port; Duplex: full only Dimensions: 2.24(d) x 0.54(w) x 0.48(h) in. (5.69 x 1.37 x 1.22 cm) Weight: 0.04 lb. (0.02 kg) Transceiver form factor: SFP <b>Environment</b> Operating temperature: 32°F to 158°F (0°C to 70°C) Operating relative humidity: 5% to 85%, noncondensing Nonoperating/Storage temperature: -40°F to 203°F (-40°C to 85°C) Altitude: up to 10,000 ft. (3 km) <b>Electrical characteristics</b> Power consumption typical: 0.4 W Power consumption maximum: 0.7 W
A small form-factor pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550 m on multimode fiber.	<b>Environment</b> <b>Electrical characteristics</b>	

## Accessory Product Details

### Cabling

Type:

- 62.5/125  $\mu\text{m}$  or 50/125  $\mu\text{m}$  (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively;

Maximum distance:

- 2-220 m (62.5  $\mu\text{m}$  core diameter, 160 MHz\*km bandwidth)
- 2-275 m (62.5  $\mu\text{m}$  core diameter, 200 MHz\*km bandwidth)
- 2-500 m (50  $\mu\text{m}$  core diameter, 400 MHz\*km bandwidth)
- 2-550 m (50  $\mu\text{m}$  core diameter, 500 MHz\*km bandwidth)

Cable length: 2-550m

Fiber type: Multi Mode

### Services

Refer to the Hewlett Packard Enterprise website at

<http://www.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.

### HPE X121 1G SFP LC LX Ports Transceiver (J4859C)

HPE X121 1G SFP LC LX

Transceiver: An SFP

format

gigabit transceiver with LC

connectors using LX

technology.

### Physical characteristics

1 LC 1000BASE-LX port (IEEE 802.3z Type 1000BASE-LX); Duplex: full only

Dimensions: 2.24(d) x 0.54(w) x 0.486(h) in. (5.69 x 1.37 x 1.23 cm)

Weight: 0.04 lb. (0.02 kg)

### Environment

Operating temperature: 32°F to 158°F (0°C to 70°C)

Operating relative humidity: 0% to 85%, noncondensing

Nonoperating/Storage temperature: -40°F to 212°F (-40°C to 100°C)

Altitude: up to 10,000 ft. (3 km)

### Cabling

Type:

- Either single mode or multimode; 62.5/125  $\mu\text{m}$  or 50/125  $\mu\text{m}$  (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively; Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1;

Maximum distance:

- 2-550 m (multimode 62.5  $\mu\text{m}$  core diameter, 500 MHz\*km bandwidth)
- 2-550 m (multimode 50  $\mu\text{m}$  core diameter, 400 MHz\*km bandwidth)
- 2-550 m (multimode 50  $\mu\text{m}$  core diameter, 500 MHz\*km bandwidth)
- 2-10,000 m (single-mode fiber)

### Notes

A mode conditioning patch cord may be needed in some multimode fiber installations.

Wavelength: 1310nm

Power Consumption: < 500mW Typical

### Services

Refer to the Hewlett Packard Enterprise website at

## Accessory Product Details

		<a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.
<p><b>HPE X121 1G SFP LC LH Ports Transceiver</b> (J4860C)</p> <p>A small form-factor pluggable (SFP) Gigabit LH transceiver that provides a full-duplex Gigabit solution up to 70 km on single-mode fiber.</p>	<p><b>Physical characteristics</b></p> <p>1 LC 1000BASE-LH port (no IEEE standard exists for 1550 nm optics); Duplex: full only</p> <p>Dimensions: 2.17(d) x 0.60(w) x 0.46(h) in. (5.5 x 1.53 x 1.18 cm)</p> <p>Weight: 0.04 lb. (0.02 kg)</p> <p><b>Environment</b></p> <p>Operating temperature: -40°F to 185°F (-40°C to 85°C)</p> <p>Operating relative humidity: 0% to 95% @ 77°F (25°C), noncondensing</p> <p>Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C)</p> <p>Altitude: up to 10,000 ft. (3 km)</p> <p><b>Cabling</b></p> <p>Cable type:</p> <ul style="list-style-type: none"> <li>Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1;</li> </ul> <p>Maximum distance:</p> <ul style="list-style-type: none"> <li>10-70,000 m (single-mode fiber)</li> </ul> <p><b>Notes</b></p> <p>Power consumption is 0.8 watts typical with 1 watt maximum at 100% utilization.</p> <p>For distances less than 20 km, a 10 dB attenuator must be used.</p> <p>For distances between 20 km and 40 km, a 5 dB attenuator must be used.</p> <p>Attenuators can be purchased from most cable vendors.</p> <p><b>Services</b></p> <p>Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.</p>	
<p><b>HPE X111 100M SFP LC FX Transceiver</b> (J9054C)</p> <p>HP X111 100M SFP LC FX Transceiver: An SFP format 100-megabit transceiver with LC connectors using FX technology.</p>	<p><b>Physical characteristics</b></p> <p>1 LC 100BASE-FX port (IEEE 802.3u Type 100BASE-FX); Duplex: half or full</p> <p>Dimensions: 2.7(d) x 0.54(w) x 0.48(h) in. (6.86 x 1.38 x 1.22 cm)</p> <p>Weight: 0.06 lb. (0.03 kg)</p> <p><b>Environment</b></p> <p>Operating temperature: 32°F to 158°F (0°C to 70°C)</p> <p>Operating relative humidity: 5% to 95%</p> <p>Nonoperating/Storage temperature: -40°F to 185°F (-40°C to 85°C)</p> <p>Nonoperating/Storage relative humidity: 5% to 85%</p> <p>Altitude: up to 10,000 ft. (3 km)</p> <p><b>Cabling</b></p> <p>Cable type:</p> <p>62.5/125 <math>\mu</math>m or 50/125 <math>\mu</math>m (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively; Maximum distance:</p> <ul style="list-style-type: none"> <li>2 km (full duplex) or 412 m (half duplex)</li> </ul> <p><b>Notes</b></p> <p>Transmitter wavelength: 1310nm</p> <p>Power consumption is 1.1 watt maximum.</p> <p>For supported platforms and minimum software requirements to support this product, see the document titled "Support for the J9054C 100-FX SFP-LC Transceiver" on the "ProCurve Mini-GBICs and SFPs" Manuals Web page.</p>	

## Accessory Product Details

### Services

Refer to the Hewlett Packard Enterprise website at <http://www.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.

### HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable (AJ833A)

### Cabling

#### Cable type:

50/125  $\mu\text{m}$  (core/cladding) diameter, multimode fiber optic, with effective modal bandwidth of 2000 MHz/km as detailed in TIA-492AAAC for distances of up to 300 m

#### Maximum distance:

10Gbps Transfer Rate (Ethernet): 300m

### Notes

Cable Specs: Tight buffered duplex fiber optic multimode OM3 50/125  $\mu\text{m}$  fiber optic cable and Ethernet assembly with LC duplex connectors on one end and LC duplex connectors on other end.

- Dimensions: Core diameter: 50  $\pm$  3.0 $\mu\text{m}$  Cladding diameter: 125  $\pm$  2.0 $\mu\text{m}$  Coating diameter: 245  $\pm$  10 $\mu\text{m}$
- Optical glass: Bandwidth: For LED sources: 1500/500 MHz-km @850/1300nm.
- Optical glass: Bandwidth: For Laser sources: 2000/500 MHz-km @850/1300nm. VCSEL Laser sources: 600 / 600 meters @850/1300nm for Gigabit Ethernet compliant links.
- CABLE: The cable is duplex zipcord graded index 50/125 $\mu\text{m}$  multimode optical fiber and designed to work in both the 850 and 1300 nm wavelength windows.
- BULK CABLE & CABLE ASSEMBLY CONFIGURATION:
- Jacket Material: Riser Grade - Low Smoke Zero Halogen thermoplastic.
- Jacket Color: Aqua for OM3 multimode per TIA 598
- Boot Color: White
- Insertion Loss: less than 0.5 dB @ 850 with LED source, 0.003 dB/M added for lengths > 30 meters.
- Maximum Cable attenuation: 3.0 dB/km @ 850 nm, 1.0 dB/Km @ 1310 nm @ 23°C as tested in accordance with EIA 455-46.
- Weight: Air Packed Weight: 1 LB Net Weight: 0.454Kg

### Services

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### HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable (QK732A)

### Notes

Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125 $\mu\text{m}$  duplex cable and Ethernet assembly with LC duplex connectors on each end.

- Core Diameter: 50 $\mu\text{m}$   $\pm$  3 $\mu\text{m}$ , Cladding diameter: 125 $\mu\text{m}$   $\pm$  2 $\mu\text{m}$ ; Coating diameter: 245  $\pm$  10 $\mu\text{m}$
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White

## Accessory Product Details

	<ul style="list-style-type: none"> <li>• Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul>
<b>Services</b>	<p>Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.</p>

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### HPE Premier Flex LC/LC Notes Multi-mode OM4 2 fiber 2m Cable (QK733A)

	<p>Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.</p> <ul style="list-style-type: none"> <li>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>• Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>• Jacket Color: Blue</li> <li>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul>
<b>Services</b>	<p>Refer to the Hewlett Packard Enterprise website at <a href="http://www.hpe.com/networking/services">http://www.hpe.com/networking/services</a> 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.</p>

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### HPE Premier Flex LC/LC Notes Multi-mode OM4 2 fiber 5m Cable (QK734A)

	<p>Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.</p> <ul style="list-style-type: none"> <li>• Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um</li> <li>• Bandwidth: 3000 MHz-km @ 850nm (Laser)</li> <li>• Jacket Color: Blue</li> <li>• Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic</li> <li>• Boot Color: White</li> <li>• Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.</li> <li>• Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths &gt;30m</li> <li>• Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45</li> </ul>
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## Accessory Product Details

### Services

Refer to the Hewlett Packard Enterprise website at <http://www.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.

### HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable (QK735A) Notes

Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.

- Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

### Services

Refer to the Hewlett Packard Enterprise website at <http://www.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.

### HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable (QK736A) Notes

Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+ 50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.

- Core diameter: 50um ±3um, Cladding diameter: 125um ±2um; Coating diameter: 245 ± 10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

### Services

Refer to the Hewlett Packard Enterprise website at <http://www.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.

### HPE Premier Flex LC/LC Notes

Cable Specs: Graded-index, "bendable" fiber optic multimode OM3+

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## Accessory Product Details

### Multi-mode OM4 2 fiber 50m Cable (QK737A)

50/125um duplex cable and Ethernet assembly with LC duplex connectors on each end.

- Core diameter: 50um  $\pm$ 3um, Cladding diameter: 125um  $\pm$ 2um; Coating diameter: 245  $\pm$  10um
- Bandwidth: 3000 MHz-km @ 850nm (Laser)
- Jacket Color: Blue
- Jacket Material: Riser Grade – Low Smoke Zero Halogen (LSZH) thermoplastic
- Boot Color: White
- Outer Jacket Print: HPE PremierFlex OM3+ Fiber Optic Cable, 50/125um, Type OFNR (UL), LSZH, cUL, OFN FT4, ROHS. Cable also has a longitudinal white stripe that runs the entire length of the cable.
- Insertion Loss: Less than 0.5dB @ 850nm with LED source, 0.003dB/m added for lengths >30m
- Maximum Cable Attenuation: 3.0 dB/km @ 850nm, 1.0 dB/km @ 1310nm @ 23°C as tested in accordance with EIA 455-45

### Services

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## Summary of Changes

Date	Version History	Action	Description of Change:
03-Jul-2017	From Version 5 to 6	Added	SKU added: JL448A
20-Jan-2017	From Version 4 to 5	Changed	Minor changes made on Standards and protocols
07-Nov-2016	From Version 3 to 4	Changed	Product overview, Features and Benefits, Technical Specifications updated
02-Sep-2016	From Version 2 to 3	Changed	Product description updated.
24-June-2016	From Version 1 to 2	Changed	Updated B2E Attribute Description for all switches on the Configuration section.
06-Jun-2016	Version 1	Creation	Document creation



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