ARUBA 2530 SWITCH SERIES

**PRODUCT OVERVIEW**

The Aruba 2530 Switch Series provides cost-effective, reliable and secure access layer connectivity for enterprises, branch offices and small and midsize businesses.

These fully managed switches deliver Layer 2 capabilities with enhanced access security, traffic prioritization, sFlow, and IPv6 host support. Right size deployment is available with a range of Gigabit and Fast Ethernet models including compact and fanless models which are ideal for use in quiet work spaces. PoE+ models deliver up 370W to power access points, IP phones and cameras.

The Aruba 2530 Switch Series is easy to deploy, use and manage using Aruba AirWave or Aruba Central. Aruba ClearPass offers Network Access Control and external captive portal support. The switches include a Limited Lifetime Warranty.

**ENHANCED FEATURES**

**Wired and Wireless Support**

1. 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
2. Local 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 local switch configuration (YA releases only)

**Quality of Service (QoS)**

1. Traffic prioritization (IEEE 802.1p) for real-time traffic classification. Support for eight priority levels mapped to either two or four queues, and uses weighted deficit round robin (WDRR) or strict priority
   1. Simplified quality of service (QoS) configuration Port-based traffic prioritization by specifying a port and priority level
   2. VLAN-based traffic prioritization by specifying a VLAN and priority level
   3. 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
   4. Rate limiting establishes per-port ingress-enforced maximums for all traffic or for broadcast, multicast, or unknown destination traffic
   5. Layer 4 prioritization enables priorities based on TCP/UDP port numbers
   6. Flow control delivers reliable communication during full-duplex operation

**Simplified Configuration and Management**

1. Aruba Central cloud-based management platform offers a simple, secure and cost effective way to manage switches. Complies with RFC 7030 for encryption key enrollment
2. Zero-Touch-Provisioning (ZTP) simplifies installation of the switch infrastructure using DHCP-based process with AirWave
3. Flexible management – Supports both cloud-based Central and on-premise AirWave without ripping and replacing switching infrastructure
   1. Choice of management interfaces HTML-based easy-to-use Web GUI allows configuration of the switch from any Web browser
   2. Robust CLI provides advanced configuration and diagnostics
   3. Simple network management protocol (SNMPv1/v2c/v3) allows the switch to be managed with a variety of third-party network management applications

**KEY FEATURES**

1. Cost-effective, reliable and secure Aruba Layer 2 switch series
2. Flexible Management via Aruba AirWave, Aruba Central, and Aruba ClearPass Policy Manager
3. Right size deployment with choice of 8, 24 and 48 port Gigabit and Fast Ethernet models
4. Up to 370W PoE+ to power IoT, APs and cameras
5. REST API support
6. Simple deployment with Zero Touch Provisioning

**2**

1. Provides single IP address management for up to 16 switches individually
2. sFlow® (RFC 3176) delivers wire-speed traffic accounting and monitoring, configured by SNMP and CLI with three terminal encrypted receivers
3. IEEE 802.1AB Link-Layer Discovery Protocol (LLDP) automates device discovery protocol for easy mapping by network management applications
4. Provides local and remote logging of events via SNMP (v2c and v3) and syslog; provides log throttling and log filtering to reduce the number of log events generated
5. Port mirroring allows traffic to be mirrored on any port or a network analyzer to assist with diagnostics or detecting network attacks
6. Remote monitoring (RMON) provides advanced monitoring and reporting capabilities for statistics, history, alarms, and events
7. Friendly port names allows assignment of descriptive names to ports
8. Dual flash images provides independent primary and secondary operating system files for backup while upgrading
9. Multiple configuration files are easily stored with a flash image
   1. Front-panel LEDs Locator LEDs allows users to set the locator LED on a specific switch to turn on, blink, or turn off; and simplifies troubleshooting by making it easy to locate a particular switch within a rack of similar switches
   2. Per-port LEDs provides an at-a-glance view of the status, activity, speed, and full-duplex operation
   3. Power and fault LEDs display issues, if any

**Connectivity**

1. Compact and fanless 8-port models offer quiet operation for acoustically sensitive areas and uplink flexibility with two dual-personality ports that can be used as either RJ-45 Gigabit Ethernet or SFP ports
2. Four built-in Gigabit Ethernet uplinks on 24- and 48- port models. Gigabit models have small form factor pluggable (SFP) for fiber connectivity and Fast Ethernet models have two SFP and two RJ-45 Gigabit uplinks
   1. IPv6 IPv6 host allows the switch to be deployed and managed at the edge of an IPv6 network
   2. Dual stack (IPv4/IPv6) supports connectivity for both protocols; provides a transition mechanism from IPv4 to IPv6
   3. MLD snooping forwards IPv6 multicast traffic to appropriate interface; prevents IPv6 multicast traffic from flooding the network
   4. IPv6 ACL/QoS supports ACL and QoS for IPv6 network traffic on Gigabit and 48 port 10/100 models
   5. Security RA Guard, DHCPv6 Protection, Dynamic IPv6 Lockdown (YA only)
   6. 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 cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments
   7. Auto-MDIX adjusts automatically for straight-through or crossover cables on all ports
   8. Pre-standard PoE support detects and provides power to pre-standard PoE devices
   9. SFP slots provides fiber connectivity such as Gigabit-SX, LX, LH, and BX with four SFP slots on all 24- and 48-port Gigabit Ethernet models. Fast Ethernet 24- and 48-port models have two SFP slots and two RJ-45 Gigabit uplinks; 8-port models have two dual-personality ports supporting either SFP or RJ-45 Gigabit uplinks
   10. Dual-personality (RJ-45 or USB micro-B) serial console port gives easy access to switch CLI with front-of-switch location and the flexibility of using either an RJ-45 or USB micro-B serial console port

**Layer 2 switching**

1. Support for 512 VLANs and 4,094 VLAN IDs
2. Jumbo packet support improves the performance of large data transfers; supports frame size of up to 9,220 bytes; 8- and 24-port Fast Ethernet models automatically support up to 2,000-byte frames with no configuration needed
3. 16K MAC address table provides access to many Layer 2 devices
4. GARP VLAN Registration Protocol allows automatic learning and dynamic assignment of VLANs
5. Rapid Per-VLAN Spanning Tree (RPVST+) allows each VLAN to build a separate spanning tree to improve link bandwidth usage; is compatible with PVST+

**Security**

1. Access control lists (ACLs) accommodate IPv4/IPv6 port and VLAN-based ACLs (IPv6 ACL is supported only on Gigabit Ethernet and 48-port models.)
2. Source-port filtering allows only specified ports to communicate with each other

**3**

1. RADIUS/TACACS+ eases switch management security administration by using a password authentication server
2. Secure Sockets Layer (SSL) encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
3. Port security allows access only to specified MAC addresses, which can be learned or specified by the administrator
4. MAC address lockout prevents particular configured MAC addresses from connecting to the network
   1. Multiple user authentication methods Uses an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate in accordance with industry standards
   2. 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
   3. Supports MAC-based client authentication
   4. Secure shell (SSH) v2 encrypts all transmitted data for secure remote CLI access over IP networks
   5. STP BPDU port protection blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
   6. STP root guard protects the root bridge from malicious attacks or configuration mistakes
   7. Secure management access delivers protected encryption of all access methods (CLI, GUI, or MIB) through SSHv2 and SNMPv3
   8. Custom banner displays security policy when users log in to the switch
   9. Secure FTP allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
   10. Protected ports CLI offers intuitive CLI to configure the source-port filter feature, by allowing specified ports to be isolated from all other ports on the switch; the protected port or ports can communicate only with the uplink or shared resources
   11. Authentication flexibility Multiple IEEE 802.1X users per port provides authentication for up to 32 IEEE 802.1X users per port; prevents a user from “piggybacking” on another user’s IEEE 802.1X authentication
   12. Concurrent IEEE 802.1X, Web or MAC authentication schemes per port allows a switch port to accept IEEE 802.1X and either Web or MAC authentications
   13. Switch management logon security helps secure switch CLI logon by optionally requiring either RADIUS or TACACS+ authentication
   14. DHCP protection blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
   15. Dynamic ARP protection blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
   16. Dynamic IP lockdown works with DHCP protection to block traffic from unauthorized hosts, preventing IP source address spoofing
   17. MAC Pinning allows non-chatty legacy devices to stay authenticated by pinning client MAC addresses to the port until the clients logoff or get disconnected

**Convergence**

1. IEEE 802.1AB Link Layer Discovery Protocol (LLDP) facilitates easy mapping using network management applications with LLDP automated device discovery protocol
2. LLDP-MED (Media Endpoint Discovery) defines a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones
3. 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
4. Voice VLAN uses LLDP-MED to automatically configure a VLAN for IP phones
5. IP multicast (IGMP) prevents flooding of IP multicast traffic
6. LLDP-CDP compatibility receives and recognizes CDP packets from Cisco’s IP phones for seamless interoperation
7. Local MAC Authentication assigns attributes such as VLAN and QoS using locally configured profile that can be a list of MAC prefixes Unified Wired and Wireless

**Resiliency and high availability**

* 1. Port trunking and link aggregation Trunking supports up to eight links per trunk to increase bandwidth and create redundant connections; and supports L2, L3, and L4 trunk load-balancing algorithm (L4 trunk load balancing is supported only on Gigabit Ethernet and 48-port models.)
  2. IEEE 802.3ad Link Aggregation Control Protocol (LACP) eases configuration of trunks through automatic configuration
  3. 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
  4. SmartLink provides easy-to-configure link redundancy of active and standby links

**4**

**Product architecture**

* 1. Energy-efficient design IEEE 802.3az reduces power consumption during periods of low data activity on Gigabit Ethernet switches
  2. Port low-power mode enables the port to automatically go into low-power mode to conserve energy when no link is detected
  3. Fan-less and variable-speed fans decrease power consumption in fan-less (all 8-port, 2530-24, and 2530- 48 PoE+ switches) as well as variable-speed fan switches
  4. Port LEDs conserves energy by optionally turning off port link and activity LEDs
  5. Switch on a chip provides a highly integrated, high-performance switch design with a nonblocking architecture

**Flexibility**

* 1. Power Savings with Energy Efficient Design Rack mountable allows the switch to be mounted on a standard 19-inch rack, with the hardware included
  2. Wall mountable allows the switch to be mounted on a wall, using the hardware included
  3. Surface mountable allows the switch to be mounted above or below a surface (such as a desk or table), using the hardware included
  4. Quiet operation lowers noise, making it suitable for deployments in acoustically sensitive environments such as conference rooms and office spaces
  5. Compact size reduces space requirements (refer to the product specifications for the exact dimensions)

**Warranty and support**

1. Limited Lifetime Warranty See www.hpe.com/networking/warrantysummary for warranty and support information included with your product purchase.
2. To find software for your product, refer to www.hpe.com/ networking/support; for details on the software releases available with your product purchase, refer to www.hpe. com/networking/warrantysummary
3. Services Refer to the Hewlett Packard Enterprise website at 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.

**5**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SPECIFICATIONS** | | | | | |
| **Aruba 2530-48G-PoE+ Switch (J9772A) (J9772ACM**1**)** | | **Aruba 2530-24G-PoE+ Switch (J9773A) (J9773ACM**1**)** | | **Aruba 2530-8G-PoE+ Switch (J9774A) (J9774ACM**1**)** | |
| **I/O ports and slots** | | | | | |
| 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+); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only  4 fixed Gigabit Ethernet SFP ports  1 dual-personality (RJ-45 or USB micro-B) serial console port | | 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+); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only  4 fixed Gigabit Ethernet SFP ports  1 dual-personality (RJ-45 or USB micro-B) serial console port | | 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+); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only  2 dual-personality ports; each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base- TX; IEEE 802.3ab1000Base-T Gigabit Ethernet) or as a SFP slot (for use with SFP transceivers)  1 dual-personality (RJ-45 or USB micro-B) serial console port | |
| **Physical characteristics** | | | | | |
| Dimensions | 17.44 (w) x 13.00 (d) x 1.75 (h) in (44.3 x 32.26 x 4.45 cm) (1U height) | | 17.44 (w) x 13.00 (d) x 1.75 (h) in (44.3 x 33.02 x 4.45 cm)  (1U height) | | 10.00(w) x 6.28(d) x 1.75(h) in (25.4 x 15.95 x 4.45 cm)  (1U height) |
| Weight | 10.4 lb (4.72 kg) | | 8.7 lb (3.95 kg) | | 2.2 lb (1 kg) |
| **Memory and processor** | | | | | |
| Processor | ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 3 MB dynamically allocated | | ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 1.5 MB dynamically allocated | | ARM9E @ 800 MHz, 128 MB flash, 256 MB DDR3 DIMM; packet buffer size: 1.5 MB dynamically allocated |
| **Mounting and enclosure** | | | | | |
| Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); Horizontal surface mounting; Wall mounting | | Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); Horizontal surface mounting; Wall mounting | | Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available); Horizontal surface mounting; Wall mounting | |
| **Performance** | | | | | |
| IPv6 Ready Certified | | IPv6 Ready Certified | | IPv6 Ready Certified | |
| 100 Mb Latency | < 7.4 μs (LIFO 64-byte packets) | | < 7.4 μs (LIFO 64-byte packets) | | < 7.4 μs (LIFO 64-byte packets) |
| 1000 Mb Latency | < 2.3 μs (LIFO 64-byte packets) | | < 2.3 μs (LIFO 64-byte packets) | | < 2.6 μs (LIFO 64-byte packets) |
| Throughput | up to 77.3 Mpps (64-byte packets) | | up to 41.6 Mpps (64-byte packets) | | up to 14.8 Mpps (64-byte packets) |
| Switching capacity | 104 Gbps | | 56 Gbps | | 20 Gbps |
| MAC address table size | 16000 entries | | 16000 entries | | 16000 entries |