

Aruba R0X30A

Datasheet

Product Overview

- The HPE Aruba Networking CX 6400 Series, including the R0X30A, is a modular, intelligent Layer 3 switch line built for modern enterprise networks.
- Designed for campus access, aggregation, and core, as well as data center top-of-rack or end-of-row roles, it serves enterprises and large branch sites.
- It delivers high-performance switching with a powerful Gen7 ASIC, deep buffers, line-rate 1/10/25/40/50/100GbE ports, and support for high-power IEEE 802.3bt PoE.
- Advanced features such as VSX for non-disruptive upgrades, dynamic segmentation, and rich telemetry set it apart in secure, scalable switching.
- With ArubaOS-CX, Network Analytics Engine, and Aruba Central integration, it simplifies provisioning, monitoring, and lifecycle operations across wired and wireless.
- In demanding IoT, mobile, and cloud-heavy environments, the R0X30A provides resilient, secure connectivity that keeps users and devices consistently protected.

Product Highlights

- **Advanced L3 and MPLS Capabilities:** Modular Layer 3 design with BGP, MPLS, EVPN, VXLAN, VRF, and OSPF delivers flexible segmentation, scalable routing, and strong QoS and security for complex enterprise networks.
- **High-Performance Non-Blocking Fabric:** Up to 28 Tbps switching and 11.4 Bpps forwarding with non-blocking 1/10/25/40/50/100GbE interfaces ensure low latency and ample bandwidth for data center and campus cores.
- **Resilient VSX Architecture:** VSX enables high availability with live upgrades, redundant power supplies and fans, and fast failover, minimizing downtime and simplifying dual-chassis designs.
- **Smart Rate and Analytics Integration:** HPE Smart Rate 1/2.5/5/10GbE multi-gig ports with 60W90W PoE, plus Aruba Network Analytics Engine and Central, provide intelligent monitoring, automation, and secure user and IoT access.

Detailed Features



R0X30A

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Component	Specification
Port Configuration	48 × 1/10GbE SFP+ + 8 × 1/10/25/50GbE SFP56 uplinks

Next-Generation Modular Architecture

R0X30A is part of the HPE Aruba Networking CX 6400 Series, built on a Gen7 ASIC and a fully programmable ArubaOS-CX platform. This combination delivers high throughput, low latency, and deterministic performance even under heavy loads. The modular 7U chassis design supports multiple I/O and power modules, enabling flexible scaling of port density and services without forklift upgrades, ideal for evolving campus and data center cores.

High-Density Multi-Gigabit and Uplink Options

The switch offers 48 × 100/1000/2.5G/5G SFP+ PoE+ access ports and 8 × 1Gbit/10Gbit/25Gbit/50Gbit SFP56 uplinks, providing broad flexibility for edge and aggregation layers. Multi-gigabit HPE Smart Rate support protects existing cabling while enabling higher throughput for Wi-Fi 6/6E APs and IoT devices. This design allows gradual bandwidth upgrades without disruptive recabling, optimizing both performance and investment.

Comprehensive Layer 3 and Multicast Routing

R0X30A supports a rich set of routing protocols including EGP, BGP-4, OSPFv2/v3, ECMP, VRRP, MSDP, and policy-based routing. Static IPv4/IPv6 routing and advanced multicast features such as IGMPv1/v2/v3, MLD/MLDv2, and BFD provide granular control and fast failure detection. These capabilities allow architects to build resilient, multi-tenant, and service-rich topologies for large enterprises and service providers.

Robust PoE+ and Power Redundancy Design

With PoE+ support on access ports and compliance with IEEE 802.3af/at/bt standards, the R0X30A can power high-density AP deployments, IP surveillance, and collaboration endpoints from a single platform. The chassis accepts up to four internal power supplies with optional power redundancy, ensuring continued operation during a power module failure. This design reduces the need for external injectors and simplifies power management across large installations.

Deep Buffering and Jumbo Frame Support

A MAC address table of 32000 entries and jumbo frame support up to 9198 bytes enable efficient handling of mixed traffic types, including large data center workloads and storage replication flows. Deep buffers maintain throughput during microbursts and congestion events, reducing packet loss for latency-sensitive applications. This provides a stable network foundation for virtualization, backup, and media streaming services.

Secure Access and Authentication Controls

The switch integrates multiple authentication methods such as SSH/SSH2, RADIUS, and TACACS+ to secure administrative access. Combined with 802.1X, dynamic segmentation, and role-based policies, it extends consistent security from wireless into the wired domain. This unified approach ensures that users and IoT devices receive appropriate access control regardless of connection type, simplifying compliance and audit requirements.

Rich Operations and Management Tooling

R0X30A supports a wide range of management protocols including RMON, XRMON, SNMPv2c/v3, HTTPS, SFTP, TFTP, Telnet, and full-featured CLI. Integration with Aruba Central and NetEdit adds automated configuration, verification, and change control. These tools, along with USB-based console access and backup, streamline day-to-day operations and reduce the risk of human error in complex environments.

Standards-Based Interoperability

Compliance with a broad list of IEEE standards such as 802.1D, 802.1Q, 802.1p, 802.1w, 802.1s, 802.1x, 802.1AX, 802.3af, 802.3at, and 802.3bt ensures strong interoperability with existing multi-vendor networks. LLDP and related extensions improve device discovery and topology visibility, while LACP-based link aggregation enhances bandwidth and resiliency. This standards-driven design protects prior investments and eases integration into diverse network infrastructures.

Technical Specifications

Product Specifications

Feature	Value
Product Model	R0X30A Specification
Device Type	Switch - 48 ports - L3 - managed
Enclosure Type	Rack-mountable 7U
Subtype	10 Gigabit Ethernet



Feature	Value
Ports	48 x 1 Gigabit / 10 Gigabit SFP+ + 8 x 1 Gigabit / 10 Gigabit / 25 Gigabit / 50 Gigabit SFP56 (uplink)
Power Over Ethernet (PoE)	PoE+
MAC Address Table Size	32000 entries
Jumbo Frame Support	9198 bytes
Routing Protocol	EGP, BGP-4, IGMPv2, IGMP, VRRP, OSPFv2, IGMPv3, OSPFv3, MSDP, static IPv4 routing, static IPv6 routing, ECMP, policy-based routing (PBR), MLDv2, MLD, Bidirectional Forwarding Detection (BFD)
Remote Management Protocol	RMON, Telnet, SNMP 3, SNMP 2c, HTTPS, TFTP, SSH, SSH-2, CLI, XRMON, SFTP
Authentication Method	Secure Shell (SSH), RADIUS, TACACS+, Secure Shell v.2 (SSH2)
Compliant Standards	IEEE 802.1D, IEEE 802.1Q, IEEE 802.1p, IEEE 802.3af, IEEE 802.3ad (LACP), IEEE 802.1w, IEEE 802.1x, IEEE 802.3ae, IEEE 802.1s, IEEE 802.1t, IEEE 802.1v, IEEE 802.1ab (LLDP), IEEE 802.1ak, IEEE 802.3at, IEEE 802.1AX, IEEE 802.3bt
Interfaces	48 x 100/1000/2.5G/5G SFP+ PoE+ 8 x 1Gbit/10Gbit/25Gbit/50Gbit (uplink) SFP56 1 x USB-C console 1 x console RJ-45 1 x USB Type A
Installed Modules Qty (Max)	4 (installed) / 7 (max)
Power Device	Internal power supply (not installed)
Installed Qty	4 (max)
Power Redundancy	Optional

Product Comparison

Feature	R0X30A	R8S90A	R8S89A
Product Type	Modular L3 switch chassis	Aruba CX 100G aggregation/core switch	Aruba CX 25G/100G data center switch
Fixed / Modular Ports	48 x 1/10G SFP+ + 8 x 1/10/25/50G SFP56 (module-based)	High-density 25/100G QSFP28 (fixed)	Mix of 10/25/100G ports (fixed)
PoE Capability	PoE+ on access SFP+ ports	Typically non-PoE data center focused	Non-PoE, optimized for spine/leaf
Layer 3 Features	BGP, OSPFv2/v3, VRRP, ECMP, PBR, IPv4/IPv6 static	Advanced L3 with BGP, OSPF, VRF	Advanced L3 with BGP, EVPN, VXLAN



Feature	R0X30A	R8S90A	R8S89A
Deployment Role	Campus access/aggregation with PoE and multi-gig	Campus or data center aggregation/core	High-performance data center leaf/spine
Form Factor	Rack-mountable 7U chassis	Fixed 1RU/2RU appliance (model dependent)	Fixed 1RU appliance
Power Redundancy	Up to 4 internal PSUs, optional redundancy	Redundant hot-swappable PSUs	Redundant hot-swappable PSUs
Management & Automation	CLI, SNMP, HTTPS, Aruba Central & NetEdit	CLI, SNMP, telemetry, Aruba Central	CLI, SNMP, telemetry, Aruba Central

Accessories

Category	Accessories
Included Accessories	<ul style="list-style-type: none"> - Rack mounting kit - Console cable (RJ-45 or USB-C) - Quick Installation Guide
Optional Accessories	<ul style="list-style-type: none"> - Additional internal power supply modules - SFP/SFP+/SFP56 optical transceivers - DAC breakout and stacking cables



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Sales Inquiries: sales@router-switch.com

Expert Technical Support: ccie-support@router-switch.com

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Hong Kong: +852-25925389 / +852-25925411

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USA Branch

35 E Horizon Ridge Pkwy, Ste 110 #30131, Henderson, NV 89002, USA

Shenzhen Branch

Jingfeng Building, 1001 Shangbu South Road, Futian District, Shenzhen, China

UK Branch

Third Floor, 207 Regent Street, London W1B 3HH, UK



References

[1] HPE Aruba Networking. (n.d.). R0X30A Specification. Retrieved from <https://www.hpe.com/psnow/doc/a00085158enw>