

Aruba J9821A

Datasheet



Product Overview

- Aruba 5400R z12 switches deliver resilient, modular Layer 3 performance for mobile-first enterprise and campus networks.
- Designed for high-density wireless and wired aggregation, they serve education, healthcare, and large branch environments.
- They offer HPE Smart Rate multi-gigabit interfaces, scalable 40GbE uplinks, and low-latency switching for demanding traffic.
- Dynamic Segmentation and VSF stacking simplify access control, enable hitless failover, and support flexible network growth.
- Centralized tools like Aruba ClearPass, AirWave, and Aruba Central streamline deployment, policy enforcement, and lifecycle management.
- Together these features create a secure, scalable core or aggregation layer that supports modern Wi-Fi and business applications.

Product Highlights

- **Mobile-First L3 Modular Platform:** Layer 3 modular architecture with VSF stacking, low latency, and high resiliency to support dense mobile-first campus deployments.
- **Integrated Aruba Management:** Native support for Aruba ClearPass, AirWave, and Aruba Central to unify access control, monitoring, and cloud-based operations.
- **HPE Smart Rate Multi-Gigabit:** Smart Rate ports deliver high-speed multi-gigabit bandwidth and PoE+ power for 802.11ac/ax access points and advanced endpoints.
- **Scalable High-Speed Uplinks:** Line-rate 40GbE connectivity provides ample uplink capacity for growing wireless traffic and high-performance applications.

Detailed Features



J9821A

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Component	Specification
Product Series	HPE Aruba Networking 5400R z12 modular switch
Switching Architecture	6th generation ProVision ASIC, 2 Tbps fabric
Latency	Low 2.1 μ s forwarding latency
Uplinks	Line-rate 40 GbE, up to 96 \times 10GbE
Management Integration	Aruba ClearPass, AirWave, Central support



Mobile Campus Performance Platform

Built around the HPE Aruba 5400R z12 architecture, this switch family targets mobile campus access where dense WiFi and wired clients coexist. Multi-gigabit HPE Smart Rate ports ensure that modern 802.11ac and 802.11ax access points are not limited by uplink speeds, while robust Layer 3 capabilities maintain predictable performance across busy enterprise networks.

High-Capacity Switching Fabric

The 5400R z12 Series uses the sixth-generation ProVision ASIC with a 2 Tbps crossbar switching fabric to deliver high throughput at very low latency. Wire-speed forwarding and hardware-based classification preserve performance even when complex policies are applied. This design supports large-scale deployments that require consistent response times for voice, video, and critical data services.

Flexible Modular Connectivity

With 6- or 12-slot compact chassis options, the platform supports a wide mix of interfaces including line-rate 40GbE uplinks, up to 96 line-rate 10GbE ports (SFP+ and 10GBASET), 1GbE, and up to 288 PoE+ ports. Internal power supplies and hot-swappable modules allow administrators to tailor port density and power budgets to site needs without service disruption.

Automation-Ready Architecture

A built-in, programmable REST API provides direct integration with orchestration and automation tools. Network teams can script provisioning, policy deployment, and configuration changes, enabling faster rollouts and reducing manual errors. This API-centric design aligns the switch with modern, automated campus architectures and software-defined workflows.

Edge Resiliency and High Availability

The platform delivers uninterrupted switching and routing to support latency-sensitive applications such as unified communications. Redundant management modules and power systems increase uptime, while hot-swappable modules allow maintenance with no impact on traffic. These design choices make the switch suitable for roles where continuous operation is mandatory.

VSF Virtualization and Fast Upgrades

Virtual Switching Framework (VSF) can merge up to two physical 5400R z12 switches into one logical device, simplifying topology, management, and failover. This virtual chassis reduces spanning tree complexity and eases scaling. Fast Software Upgrade further minimizes downtime during firmware updates on VSF stacks, supporting continuous service delivery during maintenance windows.

Comprehensive Security and QoS

The switch offers extensive security capabilities including 802.1X, MAC and Web authentication, MACsec encryption on select modules, DHCP Snooping, IP Source Guard, and ARP Protection. Policy-based routing, ACLs, and granular QoS controls protect against attacks and prioritize business-critical traffic. IPv6 features like DHCPv6 Protection and Dynamic IPv6 Lockdown secure next-generation networks.

Unified Wired and Wireless Management

Tight integration with Aruba ClearPass Policy Manager enables consistent access policies for wired and wireless users, including guest access and onboarding. Aruba AirWave and Aruba Central provide zero-touch provisioning, monitoring, and reporting via RMON, XRMON, and sFlow. The same switch hardware supports both cloud and on-premises management, allowing migration without replacing the infrastructure.

Technical Specifications

Product Specifications

Feature	Value
Product Series	HPE Aruba Networking 5400R z12 Switch Series
Architecture	6th generation ProVision ASIC with 2 Tbps crossbar switching fabric
Latency	Low 2.1µ latency forwarding
Chassis Options	6-slot compact chassis; 12-slot compact chassis
Uplink Capability	Supports line rate 40 GbE uplinks
10GbE Port Capacity	Up to 96 line rate 10 GbE ports (SFP+ and 10 GBASE-T)
PoE+ Port Capacity	Up to 288 PoE+ ports with internal power supplies



Feature	Value
Management Interfaces	Built-in programmable REST API interface
Unified Management Tools	ClearPass Policy Manager, AirWave, and Central supported
Layer 2 Features	Advanced Layer 2 feature set (license free)
Layer 3 Features	Advanced Layer 3 feature set including IPv6, IPv4 BGP, PBR, VRRP, OSPF, Tunnel Node
QoS Capabilities	Robust QoS for traffic prioritization
High Availability	Hitless failover, redundant management, and power systems
VSF Stacking	Virtual Switching Framework (VSF) virtualizes up to two physical switches
Software Upgrade	Fast Software Upgrade for minimized downtime
Security Features	Flexible authentication (802.1X, MAC, Web), MACsec (select modules), DDOS protections
Monitoring	RMON, XRMON, and sFlow for statistics, history, alarms, and events
IPv6 Edge Protection	DHCPv6 Protection and Dynamic IPv6 Lockdown
Management Platforms	Supports both cloud-based Central and on-premise AirWave with same hardware
Traffic Tunnel Feature	Tunnel Node to transport traffic to controller for policy enforcement

Product Comparison

Feature	J9821A	R8R50A	R8S89A
Product Type	Modular Layer 3 campus switch	Fixed-configuration Aruba switch	Fixed-configuration Aruba switch
Chassis / Form Factor	Modular 5400R z12 chassis	Fixed 1U rack-mount	Fixed 1U rack-mount
Uplink Capacity	Line-rate 40GbE, up to 96 × 10GbE	Multiple 10GbE SFP+ uplinks	Multiple 10GbE SFP+ uplinks
PoE+ Support	Up to 288 PoE+ ports with internal PSUs	PoE/PoE+ models available	PoE/PoE+ models available
Stacking / Virtualization	VSF virtualizes up to two chassis	VSF/stacking on selected models	VSF/stacking on selected models
Layer 3 Feature Set	Advanced L3 with IPv4 BGP, OSPF, VRRP, IPv6, PBR	Rich L3 for enterprise access/aggregation	Rich L3 for campus access



Feature	J9821A	R8R50A	R8S89A
High Availability	Redundant management, power, hitless failover	Redundant power options on selected SKUs	Redundant power options on selected SKUs
Management Integration	ClearPass, AirWave, Central, REST API	ClearPass, AirWave, Central	ClearPass, AirWave, Central

Accessories

Category	Accessories
Included Accessories	<ul style="list-style-type: none"> - AC Power Supply Module (pre-installed, model dependent) - Rack Mount Kit / Mounting Brackets - Quick Installation Guide / Documentation
Optional Accessories	<ul style="list-style-type: none"> - Additional Power Supply Modules for redundancy - Aruba 10GbE/40GbE SFP/SFP+/QSFP Transceivers - Aruba Compatible DAC/AOC Cables and Expansion Interface Modules



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References

[1] HPE Aruba Networking. (n.d.). HPE Aruba 5400R z12 Switch Series: Technical overview and specifications. Retrieved from <https://www.hpe.com/psnow/doc/PSN6635525NLEN.pdf>