Aruba JL001A

Datasheet

Product Overview

- Aruba 5400R zl2 switches deliver enterprise-grade resiliency and scale, built for modern campus cores and high-density aggregation.
- Ideal for mobile-first workplaces, it unifies wired and wireless backbones for offices, education, healthcare, and large branch networks.
- Powered by the ProVision ASIC, it offers 2 Tbps switching fabric, low-latency forwarding, and flexible 6- or 12-slot modular chassis options.
- VSF stacking, hitless failover, Fast Software Upgrade, and advanced Layer 3 features provide a robust and future-ready campus core.
- Centralized control with Aruba Central, AirWave, and ClearPass simplifies policy, visibility, and NAC across distributed environments.
- JL001A helps enterprises aggregate Wi-Fi, IoT, and IP surveillance traffic with high PoE+ density, secure segmentation, and easy lifecycle management.

Product Highlights

- **High-Performance Core Switching:** Layer 3 modular switch with VSF stacking, low latency, and high resiliency, designed for demanding campus and aggregation networks.
- **Multi-Gigabit and PoE+ Ready:** HPE Smart Rate multi-gigabit ports deliver high-speed access plus PoE+ power, supporting Wi-Fi 6/6E APs, phones, and IoT endpoints.
- **Scalable 40GbE Aggregation:** Supports line-rate 40GbE for high-bandwidth wireless and uplink aggregation, with redundant, hot-swappable power for continuous operation.
- **SDN and Centralized Security:** REST APIs, OpenFlow, and integration with Aruba ClearPass, AirWave, and Aruba Central enable policy-based control and automated management.

Detailed Features

JL001A

Quote | Help

Component	Specification
Chassis Type	5406R zl2 modular chassis, 4U, 4 open module slots
Fixed Interfaces	8 Smart Rate Multi-Gigabit RJ-45 + 8 open 10GbE SFP+ slots
Performance	960 Gbps switching capacity, up to 571.4 Mpps throughput
Latency	<2.8 µs (1G), <1.8 µs (10G), <1.5 µs (40G), 64-byte packets

Component	Specification
Power and Cooling	2 PSU slots (1 required, ordered separately), 1 fan tray slot

Virtual Switching Framework (VSF)

VSF allows two Aruba 5400R switches to operate as a single logical device, simplifying core or aggregation design. Using standard LACP, servers and access switches can dual-home to the VSF domain for automatic load balancing and link resiliency. This reduces dependency on spanning tree, ECMP, and traditional redundancy protocols, improving convergence and easing operations in enterprise campus networks.

Fast Software Upgrade (FSU)

Fast Software Upgrade minimizes downtime during maintenance windows on VSF stacks. Members in the stack are upgraded sequentially, keeping traffic forwarding active on remaining units while each node reboots. This process shrinks service interruption to only a few seconds, which is critical for voice, video, and Wi-Fi backhaul services that require continuous connectivity and predictable user experience.

Advanced Routing Resiliency

Support for VRRP in both IPv4 and IPv6 enables pairs of routers to back up each others gateway function, maintaining default gateway availability for end users. Nonstop routing works with OSPFv2/v3 and VRRP so that routing continues during management module failover. Control plane switchover is transparent to data plane forwarding, protecting business-critical applications and real-time collaboration services.

Nonstop Switching Architecture

Nonstop switching allows interface and fabric modules to keep forwarding packets even when the active management module fails and the standby module takes over. This hardware-based resilience helps avoid traffic blackholes and session drops. It is especially important for unified communications, mobility services, and latency-sensitive applications that cannot tolerate interruptions in the underlying Layer 2 forwarding path.

Redundant Power and Hot-Swappable Modules

The platform supports redundant management modules and power supplies, along with hot-swappable interface cards and PSUs. Components can be inserted or replaced without taking the chassis offline, keeping services up during hardware maintenance. Optional redundant power ensures uninterrupted operation under PSU failure or during upgrades, which is essential for 24×7 enterprise and campus environments.

Rich Layer 2 Resiliency Features

IEEE 802.1s Multiple Spanning Tree Protocol enables separate spanning trees per VLAN group and includes compatibility with 802.1D and 802.1w Rapid Spanning Tree. IEEE 802.3ad LACP with up to 144 trunks and eight links per trunk, plus distributed trunking, delivers loop-free topologies without heavy reliance on STP. This provides higher link utilization, faster failover, and simpler designs for access and aggregation layers.

High-Performance Switching Fabric

A 2 Tbps crossbar switching fabric powered by purpose-built ProVision ASICs delivers up to 785.7 million packets per second system throughput. Selectable queue configurations allow tuning of buffer allocation and queue counts for different traffic profiles. This enables fine-grained QoS for voice, video, and data, and ensures consistent performance even under heavy load or bursty application behavior.

SDN-Ready with Open APIs

The switch supports multiple programmatic interfaces, including REST APIs and OpenFlow 1.0/1.3, enabling integration with SDN controllers and automation tools. Operators can orchestrate configuration changes, traffic steering, and monitoring through scripts or third-party platforms. This SDN readiness helps align the campus network with modern DevOps workflows, reduces manual tasks, and improves operational visibility.

Technical Specifications

Product Specifications

Feature	Value
Included accessories	Included accessories 1 HPE Aruba Networking 5400R zl2 Management Module (J9827A) 1 HPE Aruba Networking 5406R zl2 Switch Fan Tray (J9831A) 1 HPE Aruba Networking 8-port 1G/10GbE SFP+ MACsec v3 zl2 Module (J9993A) 1 HPE Aruba Networking 8-port 1/2.5/5/10GBASE-T PoE+ MACsec v3 zl2 Module (J9995A)

Feature	Value
I/O ports and slots	I/O ports and slots 8 RJ-45 HPE Smart Rate Multi-Gigabit ports (100M, 1/2.5/5GBASE-T and 10GBASE-T) 8 open 10GbE SFP+ transceiver slots 4 open module slots Supports a maximum of 144 autosensing 10/100/1000 ports or 144 SFP ports or 48 SFP+ ports or 48 HPE Smart Rate Multi-Gigabit or 12 40GbE ports, or a combination
Power supplies and fan tray	Power supplies 2 power supply slots 1 minimum power supply required (ordered separately) Fan tray includes: 1 x J9831A 1 fan tray slot
Physical characteristics	Physical characteristics Dimensions 17.5(w) x 17.75(d) x 6.9(h) in (44.45 x 45.09 x 17.53 cm) Weight (4U height)
Memory and processor	Memory and processor v3 Gigabit module Dual ARM Coretex A9 @ 1 GHz; Packet buffer size: 13.5 MB internal v2 Gigabit module ARM 11 @ 450 MHz; Packet buffer size: 18 MB internal v3 10G module Dual ARM Coretex A9 @ 1 GHz; Packet buffer size: 13.5 MB internal v2 10G module ARM11 @ 550 MHz; Packet buffer size: 18 MB internal v3 40G module Dual ARM Coretex A9 @ 1 GHz; Packet buffer size: 13.5 MB internal Management Module Freescale P2020 dual core @ 1.2 GHz, 16 MB flash, 1 GB SD Card, 4 GB DDR3 SODIMM
Mounting and enclosure	Mounting and enclosure Mounts in an EIA standard 19-inch telco rack or equipment cabinet (hardware included); Horizontal surface mounting only
Performance	Performance 1000 Mb Latency < 2.8 µs (FIFO 64-byte packets) 10 Gbps Latency < 1.8 µs (FIFO 64-byte packets) 40 Gbps Latency < 1.5 µs (FIFO 64-byte packets) Throughput up to 571.4 Mpps Routing/Switching capacity 960 Gbps Switch fabric speed 1015 Gbps Routing table size 10000 entries (IPv4), 5000 entries (IPv6) MAC address table size 64000 entries
Environment (temperature)	Environment Operating temperature 32°F to 113°F (0°C to 45°C); 0°C to 40°C with J8177C transceiver installed, 0°C to 35°C with FIPS Opacity Shield installed Non-operating/Storage temperature -40°F to 158°F (-40°C to 70°C)
Environment (humidity, altitude, acoustics)	Environment Operating relative humidity 15% to 95% @ 113°F (45°C), noncondensing Non-operating/Storage relative humidity 15% to 95% @ 149°F (65°C), noncondensing Altitude up to 10,000 ft (3 km) Acoustic Power: 44 dB, Pressure: 31.7 dB ISO 7779, ISO 9296

Product Comparison

Feature	JL001A	R8R46A	R8Q71A
Product Type	Modular Layer 3 campus switch chassis	Fixed-configuration Aruba switch	Fixed-configuration Aruba switch
Form Factor	4U 5406R zl2 chassis, modular slots	Fixed 1U rack-mount chassis	Fixed 1U rack-mount chassis
Max Ports	Up to 144x 10/100/1000 or 48x SFP+ or 48x Smart Rate or 12x 40GbE	Lower port density vs JL001A (fixed ports)	Lower port density vs JL001A (fixed ports)
PoE Capability	Up to 288 PoE+ ports with appropriate modules	PoE/PoE+ on selected ports (model dependent)	PoE/PoE+ on selected ports (model dependent)
Switching Capacity	960 Gbps, fabric speed 1015 Gbps	High, but below modular 5400R chassis class	High, but below modular 5400R chassis class
Stacking / VSF	Supports VSF clustering of two chassis	Supports VSF on selected models	Supports VSF on selected models
Redundancy	Redundant management modules, hot-swappable PSUs and line cards	Redundant power options, non-modular design	Redundant power options, non-modular design
Target Deployment	Campus core / large aggregation with modular growth	Access or small aggregation in branches	Access or small aggregation in branches

Accessories

Category	Accessories
Included Accessories	- 1 × HPE Aruba Networking 5400R zl2 Management Module (J9827A) - 1 × HPE Aruba Networking 5406R zl2 Switch Fan Tray (J9831A) - 1 × 8-port SFP+ MACsec v3 zl2 Module (J9993A)
Optional Accessories	- Additional 8-port 1/2.5/5/10GBASE-T PoE+ MACsec v3 zl2 Modules (J9995A) - Extra hot-swappable power supplies - SFP/SFP+ and 40GbE transceiver modules

Support & Warranty

24/7 Online Service

3-Year Premium Warranty

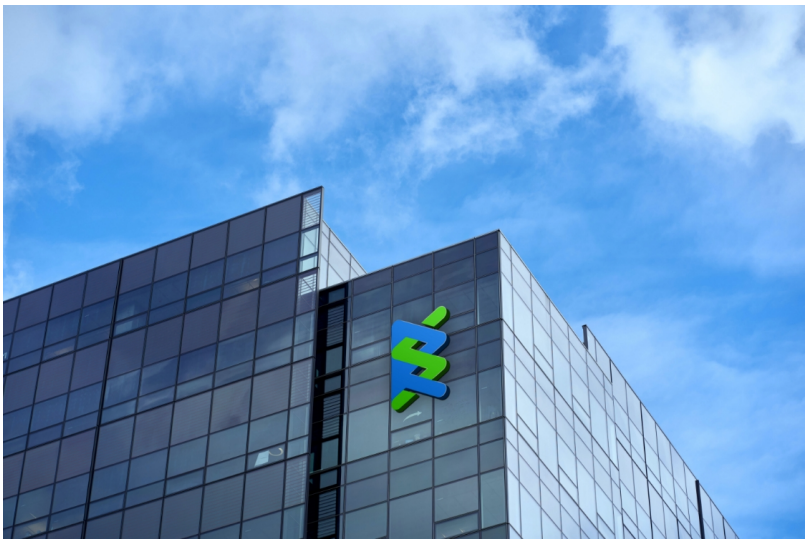
Professional Technical Support

100% Low Price Guarantee

100% Quality Assurance

100% Money Back Guarantee

About Us



Router-switch.com, headquartered in Hong Kong since 2002, has been a trusted global leader in ICT distribution for 23 years. We provide cutting-edge networking, cybersecurity, data center, and AI solutions to meet evolving business needs. Our wide range includes products from top brands like Cisco, Arista, Aruba, Fortinet, Mellanox, and Huawei, ensuring access to the latest technology and innovations.

21,500+ global customers

600,000+ end-users

200+ countries & regions

20+ years experience

500+ global vendors

100,000+ SKUs available

700+ local sales experts

50-98% off global list prices

Contact Us

Email

Sales Inquiries: sales@router-switch.com
Expert Technical Support: ccie-support@router-switch.com
Cooperative Partnerships: partner@router-switch.com

Follow Us

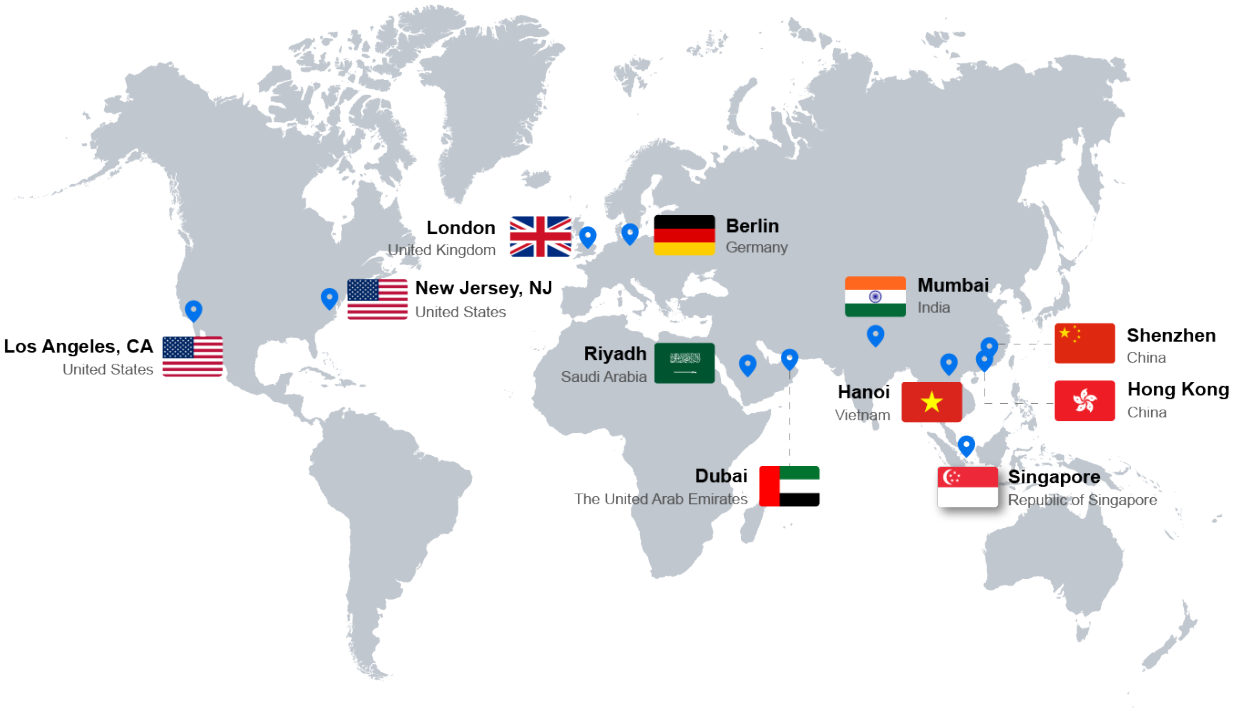
Facebook: @Routerswitchdotcom
LinkedIn: Router-switch.com
X: @routerswitchcom
Instagram: @routerswitchdotcom

Phone

USA: +1-626-655-0998
Hong Kong: +852-25925389 / +852-25925411

Global Footprint

Global Warehouses & Service Centers Across Continents.



Global Branches

Hong Kong Branch

Rm 605, 6/F, Fa Yuen Comm Bldg, 75-77 Fa Yuen St, Mongkok, Kowloon, Hong Kong, China

Shenzhen Branch

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

USA Branch

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

UK Branch

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

References

[1] Hewlett Packard Enterprise. (2016). HPE Aruba 5400R zl2 Switch Series Datasheet (c04293383). Retrieved from https://www.hpe.com/psnow/doc/c04293383