HPE Aruba Networking 9100 Series Hybrid Gateway

Scalable, secure, and intelligent cloud-based edge appliance

Key features

- Versatile, scalable platform for cloud-based wireless gateway, SD-Branch device, or VPN Concentrator use cases

- Scalable cloud-native AOS-10 architecture provides connectivity for up to 4K APs and 10K clients

- Streamlined cloud-based management and control with HPE Aruba Networking Central

- Dynamic segmentation for automated role-based policy enforcement across users, devices, and IoT

- Always-on high availability with live upgrades, clustering, and N+1 or NxN redundancy

- High-speed wired connectivity with 10GbE fiber ports for up to 20Gbps throughput

- Zero-touch provisioning simplifies deployment at branch sites

The HPE Aruba Networking 9100 Series Hybrid Gateway is a cloud-optimized edge appliance designed to extend enterprise services securely and seamlessly to large branch and small campus networks. This purpose-built high-performance edge appliance delivers Wi-Fi roaming, 24x7 reliability, and always-on connectivity — even during upgrades. Intelligent automation, AI insights, and unified infrastructure management, provided by HPE Aruba Networking Wireless Operating System (AOS-10) and HPE Aruba Networking Central, help drive efficient IT operations.

The 9100 Series provides advanced wireless capabilities, intelligent routing with both wireless and wired tunnel orchestration, and strengthens security with automated and unified role-based policy enforcement for users and IoT across LAN, WAN and SD-WAN. This cloud-based edge appliance takes advantage of AOS-10 distributed software architecture and HPE Aruba Networking Central for greater scalability, security, and AI-powered optimization. Importantly, it adds the versatility

for network services to be provided on-premises, allowing the 9100 Series to bring needed scalability to campus wireless gateway use cases or to optimize local routing and services at branch networks.

Ideal for large branch deployments and small campus networks, the 9100 Series is cloud-managed which reduces on-site IT requirements. It can operate in several modes: as an SD-Branch gateway for tunnel and route orchestration, security, and WAN management; as a powerful cloud-based wireless gateway; or VPN Concentrator (VPNC) for remote network and client VPN connectivity.

Enterprise-class performance

For small campuses or large branches that require high performance and 24x7 reliability, the 9100 Series is designed to scale to meet growing enterprise requirements. The modern cloud-native AOS-10 architecture provides the 9100 Series with scale to deliver higher performance than legacy controllers, supporting up to 4K APs and 10K clients with seamless roaming for latency sensitive applications. High-speed 10GbE fiber interfaces deliver up to 20Gbps throughput to minimize traffic bottlenecks.

High availability and resiliency

For always-on connectivity, the 9100 Series Hybrid Gateway supports redundancy, clustering, and live upgrades. The 9100 Series can be deployed with N+1 or NxN redundancy and multiple gateways can be clustered at each location supporting hitless failover that's critical for uninterrupted business continuity.

Dynamic segmentation and policy enforcement

Protecting and delivering network access across enterprise branch and campus sites is critical and complex. To improve security and simplify management, Dynamic Segmentation eliminates the time consuming and error-prone task of managing complex and static VLANs, ACLs, and subnets by dynamically assigning policies and keeping traffic secure and separated. IT can centrally configure with automatic enforcement of role-based policies that define proper access privileges for employees, guests, contractors, and other user groups- no matter where users connect on wired and WLANs. Additionally, the 9100 Series relies on a built-in Layer 4–7 stateful firewall known as the policy enforcement firewall (PEF). It streamlines policy management by working across WLAN, LAN, and WAN and policies are automatically enforced to simplify SSID, VLAN and policy management.

Versatile platform

The versatile 9100 Series takes advantage of its scalable cloud-based architecture to make it ideal for SD-Branch, wireless gateway, or VPN Concentrator use cases. It can be deployed as a high-performance cloud-based wireless gateway to provide LAN and LAN services such as Dynamic Segmentation, stateful firewall and Live Upgrades. As an SD-Branch gateway, the 9100 Series provides tunnel and route orchestration, security, and WAN management. Or it can also act as a VPN Concentrator for remote network and client VPN connectivity.

Simple deployment

Zero touch and one touch provisioning automate deployment of managed devices by accessing the location and global configuration and licenses and automatically provisioning itself. Using an intuitive mobile app, on-site personnel can quickly onboard the 9100 Series, and then the IT team can verify device location, licenses, and status with no additional steps required. This is ideal for branch deployments with few or no on-site IT resources.

Connectivity

The 9100 Series includes the 9114 with four 10GbE SFP+ fiber ports and four 1GbE combo SFP/copper ports for fast and flexible connectivity. The compact 9106 model has two 10GbE SFP+ fiber ports, two 1GbE combo SFP/copper ports and two 1GbE ports supporting up to 60W PoE.

Next generation HPE Aruba Networking Gateways

	HPE Aruba Networking 9000 Series Gateway		HPE Aruba Networking 9100 Series Hybrid Gateway		HPE Aruba Networking 9200 Series Gateway
Model	9004, 9004-LTE	9012	9106	9114	9240
Use case	Small branch	Medium branch	Large branch to small campus	VPNC and small campus	Medium to large campus
Devices (APs)	128	256	2K	4K	4K-16K
Max. clients	2K	2K	8K	10K	32K-64K
Interfaces	4 x 1GbE (LTE: 9004-LTE)	12 x 1GbE; 120W PoE	2 x 10GbE SFP+; 2 x Combo (SFP/1GbE copper); 2 x 1GbE; 60W PoE	4 x 10GbE SFP+; 4 x Combo (SFP/1GbE copper)	4 x 25GbE SFP28
HPE Aruba Networking Central deployment	Cloud (SaaS) On-premises	Cloud (SaaS) On-premises	Cloud (SaaS)	Cloud (SaaS)	Cloud (SaaS) On-premises

Optimize with AOS-10

Cloud-native AOS-10 (AOS-10) is the distributed network operating system working with HPE Aruba Networking Central that acts as the control layer for HPE Aruba Networking access points and gateways. With its flexible architecture, IT can deliver reliable and secure wireless connectivity for small offices, mid-sized branches, large campus environments, and remote workers. Working in tandem with cloud-native HPE Aruba Networking Central, AOS-10 provides the WLAN management and control to deliver greater scalability, security, and AI-powered optimization. Using AOS-10 together with cloud-based Central for management and orchestration reduces processing required by the on-site gateways to manage clients and access points. Enterprises can then optimize gateway deployments with fewer gateways in very large environments with thousands of APs and devices.

SD-Branch gateway support in AOS-10

The HPE Aruba Networking EdgeConnect SD-Branch solution is included as part of AOS-10 and Central to address the entire remote branch experience from the edge to the cloud to the core, with strong security and software-defined performance benefits.

This SD-Branch solution eliminates the complexity of branch networks by delivering a simple way to centrally automate the deployment, management, and operation of your wired, wireless, WAN, and security infrastructure under a single, software-defined framework for policy and segmentation.

The multi-purpose 9100 Series is ideal for large branch deployments acting as a high-performance gateway for tunnel and route orchestration, security, and WAN management. And it can support remote work and client VPN connectivity by acting as a VPN Concentrator for microbranch sites (very small, remote corporate offices) and SD-Branch use cases.

Enhanced wireless gateway support in AOS-10

The 9100 Series running ArubaOS 10 and Central supports a wide range of enhanced Wi-Fi capabilities:

- Seamless roaming allows clients to maintain the same IP address when roaming between different network domains for more efficient roaming and a better mobile experience.

- Enhanced security with dynamic segmentation to eliminate the time consuming and error-prone task of managing complex and static VLANs, ACLs, and subnets by dynamically assigning policies and keeping traffic secure and separated. Wizard-based UI-driven workflows in HPE Aruba Networking Central NetConductor automate network design and policy creation, further streamlining network configuration and security operations from the cloud.

- Deep Packet Inspection provides greater application visibility and control. As a part of the policy enforcement firewall, the 9100 Series consistently evaluates and optimizes performance and usage policies for over 3,800 applications for granular, per-app traffic enforcement, allowing IT to block, prioritize, and rate-limit bandwidth for an individual or groups of apps.

- Web Content Classification (WCC) classifies websites by content category and rates them by reputation and risk score, enabling IT to block malicious sites to help prevent phishing, DDoS, botnets, and other common attacks.

Learn more about AOS-10 here.

HPE Aruba Networking Central

HPE Aruba Networking Central is an AI-powered solution that simplifies IT operations, improves agility, and reduces costs by unifying management of all network infrastructure. Built for enterprise-grade resiliency and security, while simple enough for smaller businesses with limited IT staff, Central is your single point of visibility and control that spans the entire network -from branch to data center, wired and wireless LAN to WAN. The 9100 Series is supported by Central cloud-based version only and requires a Central subscription. See the Central Ordering Guide here.

Simplified, flexible consumption

9100 Series Hybrid Gateways require HPE Aruba Networking Central subscription-based licenses, which are purchased on a per-device basis for APs and gateways. Licenses are available in 1-, 3-, 5-, 7-, and 10-year increments, making it easy to align requirements for AIOps, security, and other desired management features. AOS-10 is included in the subscription. Learn more about Central here.

Warranty

Hardware: 1-year parts/ labor, can be extended with support contract. See here for warranty and support information included with your product purchase.

Support

HPE Aruba Networking network devices (access points, switches, and gateways) that have an active HPE Aruba Networking Central SaaS subscription are fully supported and include:

- 24x7 priority technical support for troubleshooting

- Software updates and upgrades for HPE Aruba Networking Central and hardware products managed by HPE Aruba Networking Central

Learn more about our support services.

HPE Aruba Networking 9106 and 9114 Series Hybrid Gateways technical specifications

	9106 Series Hybrid Gateway	9114 Series Hybrid Gateway
Performance and capacity		
Firewall throughput (Gbps)	10	20
Encrypted throughput GRE (Gbps)	10	20
Encrypted throughput AES-CBC-128 (Gbps)	10	20
Encrypted throughput AES-CBC-256 (Gbps)	10	20
Encrypted throughput AES-GCM-128 (Gbps)	10	20
Encrypted throughput AES-GCM-256 (Gbps)	10	20
Cluster size	6	6
Maximum clients (user MAC)	8K	10K
Maximum clients per cluster	32K	40K
Max devices (APs)	2K	4K
Max devices (APs) per cluster	4K	8K
Maximum datapath/firewall sessions	2M	2M
Maximum bridge table	256K	512K
Firewall session creation rate (1000 sessions per sec)	1,000	1,000
L2 VLANs	4,094	4,094
L3 VLANs (IPv4 interface)	4,094	4,094
L3 VLANs (IPv6 interface)	259	515
Concurrent IPSec tunnels	16K	32K
Total tunnels	20K	40K
ARP	16K	20K
Max DHCP clients	16K	32K
Max IPv4 static routes	2K	2K
IPV6 neighbors	32K	40K
Maximum routes	32K	12K
Access control lists	2,678	2,678
Configurable bandwidth contracts	1K	1K
Interfaces and indicators		
Form factor	Desktop	1 RU
Interface	2x SFP+ 2x Combo (SFP/1G Copper) 2x 1GbE	4x SFP+ 4x Combo (SFP/1G Copper)

HPE Aruba Networking 9106 and 9114 Series Hybrid Gateways technical specifications

	9106 Series Hybrid Gateway	9114 Series Hybrid Gateway
Interfaces and indicators		
PoE budget	60W	–
Out of band management port	1x RJ45	1x RJ45
Console port	USB-C, RJ45	USB-C, RJ45
USB 3.0 type-A	1	2
LCD display	–	1
Power LED	Yes	Yes
Status LED	Yes	Yes
Gateway LED	Yes	
Peered LED (reserved for future use)	TBD	TBD
Expansion slot (reserved for future use)	–	1
Power supply slots	–	1 + Redundant
Fan trays	–	3
Physical		
Dimensions (HxWxD)	43.7mm (H) x 294.8mm (W) x 201.05mm (D)	43.7mm (H) x 442mm (W) x 351mm (D)
Weight	2.305 kg	6.2 Kg
MTBF (Hours at 25C with Fans and PSU)	236076	2,80,165
Environmental		
Operating temperature	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
Storage temperature	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)
Humidity/storage humidity	10% to 90% (RH)/10% to 95% (RH), non-condensing	10% to 90% (RH)/10% to 95% (RH), non-condensing
Operating altitude	10,000 feet	10,000 feet
Acoustic noise	54.6 dBA	61.8 dBA
Maximum heat dissipation (BTU/hour)	290	631
Maximum power consumption	150W	185W
Power source	165W	250-watt power supply

HPE Aruba Networking 9106 and 9114 Series Hybrid Gateways technical specifications

	9106 Series Hybrid Gateway	9114 Series Hybrid Gateway
Power supply certifications		
Input voltage range	100 VAC to 240 VAC	100 VAC to 240 VAC
Output voltage	54V	12V
Input frequency	50 to 60 Hz	50 to 60 Hz
AC line input current (steady state)	2.5A	2.2A-0.9A
Operating temperature	0°C to 40°C	0°C to 60°C
Cooling	–	1 fan
Weight	0.5 +/- 0.02 kg	0.9 kg
Regulatory and safety compliance		
Minimum supported software version	AOS 10.6	AOS 10.5
Regulatory SKU information	ARCN9106	ARCN9114
Safety certifications	CSA/UL 62368-1:2014	CSA/UL 62368-1:2014
	CSA/UL 62368-1:2019	CSA/UL 62368-1:2019
	EN/IEC 62328-1, 2nd edition	EN/IEC 62328-1, 2nd edition
	EN/IEC 62368-1, 3rd edition	EN/IEC 62368-1, 3rd edition
Electromagnetic emissions certifications	FCC Part 15, Class B	FCC Part 15, Class A
	EN55032, Class B	EN55032, Class A
	ICES-003, Class B	ICES-003, Class A
	CNS13438, Class B	CNS13438, Class A
	EN55035	EN55035
	EN 300 386	EN 300 386
	KS C 9832:2019	KS C 9832:2019
	KS C 9835:2019	KS C 9835:2019
	AS/NZS CISPR32 Class B	AS/NZS CISPR32 Class A
	VCCI Class B	VCCI Class A

For complete ordering information including all accessories such as rack mount kit and power supplies, see the 9100 Series Ordering Guide and the HPE Aruba Networking Central Ordering Guide.

Ordering information

Part number	Description
R9M45A	HPE Aruba Networking 9114 Hybrid Gateway 4xSFP+ 4xCombo 1 Expansion
R9M46A	HPE Aruba Networking 9114DC Hybrid Gateway 4xSFP+ 4xCombo 1 Expansion
R9M47A	HPE Aruba Networking 9114 TAA Hybrid Gateway 4xSFP+ 4xCombo 1 Expansion
R9M48A	HPE Aruba Networking 9114DC TAA Hybrid Gateway 4xSFP+ 4xCombo 1 Expansion
S0B85A	HPE Aruba Networking 9106 Hybrid Gateway 2xSFP+ 2xCombo 2xPoE
S0B86A	HPE Aruba Networking 9106 TAA Hybrid Gateway 2xSFP+ 2xCombo 2xPoE

Learn more

HPE Aruba Networking gateways provide high-performance network access, security, and resiliency for the campus and branch across WLAN, LAN, and SD-WAN. Find out more.

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