DATA SHEET

ARUBA 9000 SERIES GATEWAY

Versatile, cost-effective branch networking, SD-WAN, and security

Aruba 9000 Series Gateways provide high-performance networking, SD-WAN and security functionality in compact and cost-effective form factors. Ideally suited for branch and small campus networks, the 9000 Series Gateways serve a key role within Aruba's SD-Branch solution, which unifies WLAN, LAN, SD-WAN and security for distributed enterprises.

The 9000 Series can be easily configured and managed using Aruba Central, a cloud-based network operations, assurance and security platform. Onsite deployment is accomplished with a simple mobile installer application.

HIGH PERFORMANCE AND RELIABILITY

For distributed enterprises with increasing performance and bandwidth needs, the 9000 Series is designed with scale and flexibility, and equipped with plenty of horsepower at a competitive price-point.

The 9000 Series provides connectivity for up to 2,048 users or client devices at up to 6 Gbps of firewall throughput.

For enhanced resiliency and high availability, the multiple 9000 Series can be clustered together at each branch.

IOT AND INTEGRATION READY

The 9000 Series includes flexible connectivity options:

- 4xGbE - 9004 / 9004-LTE
- 12xGbE (6xPoE+) – 9012
- USB 3.0 ports
- IoT Radio that supports BLE technologies
- Integrated LTE connectivity – 9004-LTE

The gateway also uses integrated device profiling to improve client visibility, and works with Aruba Central, ClearPass Policy Manager or ClearPass Device Insight to provide advanced user, device and IoT policy management and insights.

KEY FEATURES

- Cloud-managed and purpose-built for branch SDWAN requirements
- Unified policy enforcement for wired and wireless traffic through Aruba Dynamic Segmentation
- Visibility into over 3,000 applications with no added hardware
- Integrated LTE option available

SD-WAN DEPLOYMENT

For organizations that are now managing multiple WAN connections, 9000 Series Gateways can be connected to Aruba's SD-WAN fabric right out of the box. SD-WAN is a rich WAN management solution that is used to simplify management of traffic entering and exiting branch sites. Role-based intrusion detection and prevention (IDS/IPS), Dynamic Segmentation, and stateful firewall deliver integrated security requirements. Please refer to the SD-WAN datasheet for more information.

BRANCH AND CAMPUS DEPLOYMENT

9000 Series Gateways can also be re-purposed as Mobility Controllers to provide WLAN and LAN services such as Dynamic Segmentation, stateful firewall and Live Upgrades. In this mode, the 9000 Series cannot simultaneously be used for SD-WAN. For more information, refer to the ArubaOS datasheet.

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INTEGRATED LTE

The 9004-LTE is a Gateway with an integrated LTE module that can use high speed LTE as a dedicated or redundant WAN uplink. The LTE operations are managed via Aruba Central.

UNIFIED POLICY ENFORCEMENT

To simplify and secure wired and wireless network access, the 9000 Series Gateways are a pivotal component of Aruba Dynamic Segmentation. Wired and wireless traffic can be tunneled to a Gateway, which then consistently provides policy enforcement based on user role (e.g. guest, contractor, employee), device type, application and network location. Learn about Dynamic Segmentation in this guide.

MICROSOFT FEATURES

Aruba's integration with Microsoft enables unique application intelligence that detects Microsoft 365 (Office 365), Teams, and Skype for Business traffic and then prioritizes them over less critical applications. Through management interfaces on Aruba Central, ArubaOS, and Aruba AirWave, IT can visualize call quality metrics such as MOS, latency, jitter, and packet loss for additional insights.

ENHANCED CAPABILITIES

Policy Enforcement Firewall

The 9000 Series includes a Layer 4-7 stateful firewall with PEF to deliver a consistent user, device, and application awareness across WLAN, LAN, and WAN. When deployed alongside Aruba ClearPass Policy Manager, policies are automatically enforced to simplify SSID, VLAN and policy management. This is the foundation of Dynamic Segmentation, and is included within the Foundation, Foundation Base Capacity, and PEF licenses.

Threat Defense with IDS/IPS

To improve security against a growing attack surface, gateways deployed in SD-WAN mode add role and identity-based intrusion detection and prevention capabilities (IDS/IPS) on top of existing security features. The threat defense function is further augmented with one-click integration with third-party cloud-based security solutions. This feature requires the appropriate Aruba Central subscription license.

Application visibility and control

Deep Packet Inspection (DPI) technology, which is a component of PEF, consistently evaluates and optimizes performance and usage policies for over 3,000 applications. This ensures the highest possible Quality of Service (QoS) – even for encrypted traffic.

High Availability

The 9000 Series can be deployed with N+1 or NxN redundancy, and can also join a controller cluster when deployed as a Mobility Controller managed by Mobility Conductor. This increases performance and scale for enhanced resiliency.

Simple to use, mobile provisioning

Allows on-site personnel to use a mobile app to onboard gateways. A central IT team can verify device location, licenses, and status with no additional steps required. Available for iOS and Android.

Unified Communications and Collaboration (UCC)

Visualize and troubleshoot networks based on call quality metrics such as MOS, latency jitter and packet loss. Supported applications include: Teams, Skype for Business, Wi-Fi Calling, FaceTime, SIP, Jabber, Spark and more.

9004 Gateway

9004-LTE Gateway

9012 Gateway

TECHNICAL SPECIFICATIONS

PERFORMANCE AND CAPACITY	9004	9004-LTE	9012
SD-Branch[1.1]	√	√	√
WLAN Gateway[1.2]	√	X	√
Sizing	Small site		Medium site
Interfaces	4x GbE[2]	4x GbE 4G Cellular	12x GbE
Power over Ethernet	X	X	√ (120W)
Maximum campus or remote Access Points	32	NA	32
Maximum clients	Up to 2,048		
Active Firewall sessions	64K (128K on SD-Branch 2.3+)[3]		
Maximum concurrent users/devices	2,048		
Maximum VLANs	4,096		
Concurrent GRE tunnels	544		
Concurrent IPsec sessions	2,048		
Concurrent SSL sessions	2,048		
Concurrent tunneled ports	2,048		
Firewall throughput (Gbps)	4	4	6
Wired bridged throughput (Gbps)	4	4	6
Encrypted throughput 3DES (Gbps)	4	4	4
Encrypted throughput AES-CBC-256 (Gbps)	4	4	4
Encrypted throughput AES-CCM (Gbps)	2	2	2
Encrypted throughput AES-GCM-256 (Gbps)	4	4	6

[1] These modes are only enabled when the appropriate minimum licenses and ArubaOS firmware are deployed:
- [1.1] SD-WAN Mode – Aruba Central Foundation, Foundation Base, or Advanced Licenses
- [1.2] WLAN Gateway Mode – ArubaOS Licenses

[2] The 9004 was originally released (8.5) to operate in an Auto/Auto configuration. A software fix was introduced in 8.7.1.5, 8.8.0.2, 10.2.0.3, and SDWAN-2.3.0.2, which allows users to configure the speed and duplex of the interfaces on the 9004 to: Auto/Auto, 1000/Full, or 100/Full.

Speed Configuration
The 9004 Interface speed can now be set to **Auto/1000/100**.

Full Duplex Configuration
9004 Interface = Auto
Partnering Device Duplex Configuration = **Full**
Partnering Device Auto Negotiation = **Enabled**

[3] Prior to 8.6, the active number of firewall sessions was set to 32K.

INTERFACES AND INDICATORS

Features	9004/9004-LTE	9012
Form factor/footprint	Desktop/Fanless[2] Optional Mount Rack Tray	Rack mount
100/1000BASE-T	4	12 (6x PoE+ ports)
10G SFP+ Ports (SFP also supported)	–	–
Bluetooth 5	Yes	Yes
USB 3.0 Type-A	1	2
System status LED	Yes	Yes
WAN ports status LED	Yes	Yes
LAN ports status LED	Yes	Yes
Gateway mode LED	Yes	Yes
Central connectivity status LED[1]	Yes	Yes
Cellular (LTE) status LED	Yes	Yes
Console port	micro USB, RJ45	micro USB, RJ45

[1] LED utilized by the SD-WAN solution
[2] 1RU can support two 9004 gateways side-by-side using an optional mount kit.

INTEGRATED LTE

Available on the 9004-LTE only	
Downlink/Uplink Speed	600/150 Mbps
LTE Category	12
Connectors	2xSMA connectors for Main and Diversity Antenna 1xSMA connector for GPS Antenna

Bands Supported	
Regions Supported	Global Worldwide LTE-A and UMTS/HSPA+ coverage
LTE-FDD	B1/B2/B3/B4/B5/B7/B8/B9/B12/B13/B14/B17/B18/B19/B20/B21/B25/B26/B28/B29/B30/B32/B66
LTE-TDD	B38/39/B40/B41
2 x CA	B1+B3/B5/B18/B19/B20/B21/B26; B2+B2/B4/B5/B12/B13/B17/B29/B30/B66; B3+B3/B5/B7/B8/B19/B20/B28; B4+B4/B5/B12/B13/B17/B29/B30; B5+B7/B25/B30/B66; B7+B7/B20/B28; B12+B25/B30; B13+B66; B20+B32; B25+B25/B26/B41; B29+B30; B38+B38; B40+B40; B41+B41; B66+B66
3 x CA	DL inter-band 3CA: B1+B3+B7; B1+B3+B19; B1+B3+B20; B1+B19+B21; B2+B4+B5; B2+B4+B13; B2+B5+B30; B2+B12+B30; B2+B29+B30; B3+B7+B20; B3+B7+B28; B4+B5+B30; B4+B12+B30; B4+B29+B30; B5+B66+B2; B13+B66+B2 DL 2 contiguous plus inter-band 3CA: B2+B2+B5; B2+B2+B13; B3+B3+B7; B3+B7+B7; B3+B3+B20; B4+B4+B5; B4+B4+B13; B5+B66+B66; B13+B66+B66; B66+B66+B2; B66+B66+B66
UMTS	B1/B2/B3/B4/B5/B8/B19
Certifications	CE/ FCC/ IC/ NCC/ RCM/ GCF*/ PTCRB*/ ICASA* / WHQL AT&T, Verizon

PHYSICAL		
	9004/9004-LTE	**9012**
Dimensions (H x W x D)	3.82 cm x 19.85 cm x 15.31 cm (1.5" x 7.815" x 6.03")	4.37 cm x 39.5 cm x 26.00 cm (1.72" x 15.55" x 10.24")
Weight	1.143 kg (2.519 lbs)	3.42 kg (7.54 lbs)

ENVIRONMENTAL RANGE		
Specification	**9004/9004-LTE**	**9012**
Operating Temperature	0° C to 40° C (32° C to 104° F)	0° C to 40° C (32° C 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)
Operating Humidity	10% to 90% (RH), non-condensing	10% to 90% (RH), non-condensing
Storage Humidity	10% to 95% (RH), non-condensing	10% to 95% (RH), non-condensing
Operating Altitude	10,000 feet	10,000 feet
Acoustic Noise	0 dBA (fan less)	29.1 – 63.5 dBA
Cooling	Conduction cooling	Forced cooling
Maximum Power Consumption	25W (with USB)	160W (with 120W of PoE)
Power Source	12v DC, 2.5A AC-to-DC power adapter	Internal Power Supply 90VAC – 264VAC 47-63Hz 3A at 100Vrms

POWER ADAPTER SPECIFICATIONS	
Features	**9004/9004-LTE**
Input voltage range	90 VAC to 264 VAC
Output Voltage	+12VDC, 2.5A
Input frequency	47-63 Hz
AC line input current (steady state)	1.0A
Operating Temperature	-0° to +40° C
Cooling	–
Weight	0.28 kg (.61 lbs)

REGULATORY AND SAFETY COMPLIANCE		
Description	**9004/9004-LTE**	**9012**
Minimum Supported Software Version		
AOS 8 (WLAN Gateway Mode)	9004: 8.5.0.5 9004-LTE: Not Supported	8.7.1.1 or 8.8.0.0
SD-Branch	9004: SD-WAN R1.7 and Aruba Central 2.5.x in SD-WAN mode 9004-LTE: SD-WAN R2.2.0.2 or R2.3.0.0 and Aruba Central 2.51.x in SD-WAN mode	SD-WAN R2.2.0.2 or R2.3.0.0 and Aruba Central 2.5.x in SD-WAN mode
Regulatory SKU information	ARCN9004 / ARCN9004LTE	ARCN9012
Safety certifications	UL 60950-1 Second Edition	UL 60950-1 Second Edition
	CAN/CSA-C22.2 No. 60950-1 Second Edition	CAN/CSA-C22.2 No. 60950-1 Second Edition
	EN 60950-1 Second Edition	EN 60950-1 Second Edition
	EN 60950:2005	EN 60950:2005
	IEC 60950-1 Second Edition	IEC 60950-1 Second Edition
	EN/IEC 62368-1 2nd Edition	EN/IEC 62368-1 2nd Edition
	NOM (obtained by partners and distributors)	NOM (obtained by partners and distributors)
Electromagnetic emissions certifications	FCC Part 15 Class B	FCC Part 15 Class A
	CISPR32 Class B	CISPR32 Class A
	EN55032 Class B	EN55032 Class A
	ICES-003 Class B	ICES-003 Class A
	VCCI Class B	VCCI Class A
	EN61000-3-2	EN61000-3-2
	EN61000-3-3	EN61000-3-3
	EN55024, EN301 489-1/-17, EN301 489-52 (9004-LTE)	EN55024, EN301 489-1/-17
	KN32 Class B , KN35, KN301 489-1/-17, KN301 489–52 (9004-LTE)	KN32 Class A, KN35, KN301 489-1/-17
	CNS13438 Class B	CNS13438 Class A
Telco	Common Language Equipment Identifier (CLEI) Code	Common Language Equipment Identifier (CLEI) Code
Wireless certifications	FCC/ISED	FCC/ISED
	RED Directive 2014/53/EU	RED Directive 2014/53/EU
	Others: MIC, NCC, ANATEL, COFTEL, CCC	Others: MIC, NCC, ANATEL, COFTEL, CCC

SERVICE AND WARRANTY INFORMATION

- Hardware: 1 year parts/labor, can be extended with support contract
- WLAN Gateway Software: 90 days, can be extended with support contract
- SD-WAN Gateway Software: 1, 3, 5, 7, or 10 year subscription licenses

ORDERING INFORMATION

Part Number	Description
Aruba 9004 Gateway	
R1B20A	Aruba 9004 (US) Gateway – 4xGbE, 2K Clients, 32 APs
R1B21A	Aruba 9004 (RW) Gateway – 4xGbE, 2K Clients, 32 APs
R1B22A	Aruba 9004 (JP) Gateway – 4xGbE, 2K Clients, 32 APs
R1B23A	Aruba 9004 (IL) Gateway – 4xGbE, 2K Clients, 32 APs
R1B24A	Aruba 9004 (EG) Gateway – 4xGbE, 2K Clients, 32 APs
R1B25A	Aruba 9004 (US) TAA Gateway – 4xGbE, 2K Clients, 32 APs
R1B26A	Aruba 9004 (RW) TAA Gateway – 4xGbE, 2K Clients, 32 APs
R1B27A	Aruba 9004 (JP) TAA Gateway – 4xGbE, 2K Clients, 32 APs
R1B28A	Aruba 9004 (IL) TAA Gateway – 4xGbE, 2K Clients, 32 APs
R1B29A	Aruba 9004 (EG) TAA Gateway – 4xGbE, 2K Clients, 32 APs
Aruba 9004-LTE Series Gateway	
R3V91A	Aruba 9004 (US) 4-Port GbE Branch Gateway, 2K Clients - CAT 12 LTE
R3V90A	Aruba 9004 (RW) 4-Port GbE Branch Gateway, 2K Clients - CAT 12 LTE
R3V89A	Aruba 9004 (JP) 4-Port GbE Branch Gateway, 2K Clients - CAT 12 LTE
R3V88A	Aruba 9004 (IL) 4-Port GbE Branch Gateway, 2K Clients - CAT 12 LTE
R3V87A	Aruba 9004 (EG) 4-Port GbE Branch Gateway, 2K Clients - CAT 12 LTE
R3V96A	Aruba 9004 (US) TAA 4-Port GbE Branch Gateway, 2K Clients - CAT 12 LTE
R3V95A	Aruba 9004 (RW) TAA 4-Port GbE Branch Gateway, 2K Clients - CAT 12 LTE
R3V94A	Aruba 9004 (JP) TAA 4-Port GbE Branch Gateway, 2K Clients - CAT 12 LTE
R3V93A	Aruba 9004 (IL) TAA 4-Port GbE Branch Gateway, 2K Clients - CAT 12 LTE
R3V92A	Aruba 9004 (EG) TAA 4-Port GbE Branch Gateway, 2K Clients - CAT 12 LTE
Aruba 9012 Series Gateway	
R1B31A	Aruba 9012 (US) Gateway – 12xGbE (6xPoE+), 2K Clients, 32 APs
R1B32A	Aruba 9012 (RW) Gateway – 12xGbE (6xPoE+), 2K Clients, 32 APs
R1B33A	Aruba 9012 (JP) Gateway – 12xGbE (6xPoE+), 2K Clients, 32 APs
R1B34A	Aruba 9012 (IL) Gateway – 12xGbE (6xPoE+), 2K Clients, 32 APs
R1B35A	Aruba 9012 (EG) Gateway – 12xGbE (6xPoE+), 2K Clients, 32 APs
R1B36A	Aruba 9012 (US) TAA Gateway – 12xGbE (6xPoE+), 2K Clients, 32 APs
R1B37A	Aruba 9012 (RW) TAA Gateway – 12xGbE (6xPoE+), 2K Clients, 32 APs
R1B38A	Aruba 9012 (JP) TAA Gateway – 12xGbE (6xPoE+), 2K Clients, 32 APs
R1B39A	Aruba 9012 (IL) TAA Gateway – 12xGbE (6xPoE+), 2K Clients, 32 APs
R1B40A	Aruba 9012 (EG) TAA Gateway – 12xGbE (6xPoE+), 2K Clients, 32 APs

ACCESSORIES	
Part Number	**Description**
Aruba 9004 Gateway	
R1B30A[3]	Aruba 9004-MNT-19 Rack Mount Kit
R3K00A	12V/36W AC/DC spare power adapter type B
Aruba 9004-LTE Gateway	
R3W17A	Aruba 9004-LTE-MNT-19 Rack Mount Kit
R4Y91A	Aruba 90xx-LTE Indoor Ant Ext Kit-20ft
R4Y92A	Aruba 90xx-LTE Indoor Ant Ext Kit-40ft
R4Y93A	Aruba 90xx-LTE Outdoor Ant Ext Kit-35ft
R4Y94A	Aruba 90xx-LTE Spare Indoor Antenna
R4Y95A	Aruba 90xx-LTE Spare SIM Tray Kit
R6M37A	Aruba 90xx-LTE Spare Outdoor Antenna
R3K00A	12V/36W AC/DC spare power adapter type B
Aruba 9012 Gateway	
R4X13A	Aruba 9012-MNT-19 Spare Rack Mount Kit

[3] 1RU can support two 9004 gateways side-by-side using an optional mount kit.

For additional information on the Aruba 9004 Series Gateways, please refer to:

- 9000 Series Ordering Guide
- SD-WAN Datasheet
- ArubaOS Datasheet

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