ARUBA SD-WAN

Extend Context to the WAN Edge

Aruba Software-defined WAN (SD-WAN) technology simplifies branch operations and optimizes WAN management.

Ideally suited for distributed enterprises undergoing digital transformations, Aruba Central-managed SD-WAN provides simplified operations and increased visibility and control for the branch. Mid-size offices, retail stores and medical clinics can benefit from the transition to more agile, open and cloud-hosted environments.

ARUBA CENTRAL

With flexible policy, configuration and monitoring capabilities, organizations can simplify network operations by providing zero-touch provisioning and customizable templates to quickly deploy branch networks, centralize management for Aruba SD-WAN gateways, provide historical data reports, monitor for PCI compliance, and troubleshoot regional and global locations. Key insight into WAN health and optimization helps IT determine the best link and routes to send traffic to corporate data centers or access cloud applications directly via the Internet. Path Steering can be based on per-user, per-device, or per-application policies.

Product summary

Aruba Central offers a flexible subscription option that ranges from 1, 3, 5, 7, and 10 year offers. A base capacity license which limits total clients to 75 is also available for the 7005 Branch Gateway only. Features will continue to grow with successive cloud updates.

BRANCH GATEWAY

The Aruba 7000 Series is a versatile family of hardware that can operate as an SD-WAN gateway at the branch to optimize and control WAN, LAN, and cloud security services. The branch gateway provides features such as routing, firewall, security, URL filtering, and compression.

With support for multiple WAN connection types, the branch gateway routes traffic over the most efficient link based on availability, application, user-role, and link health. This allows organizations to take advantage of high-speed, lower-cost broadband links to supplement or replace traditional WAN links such as MPLS.
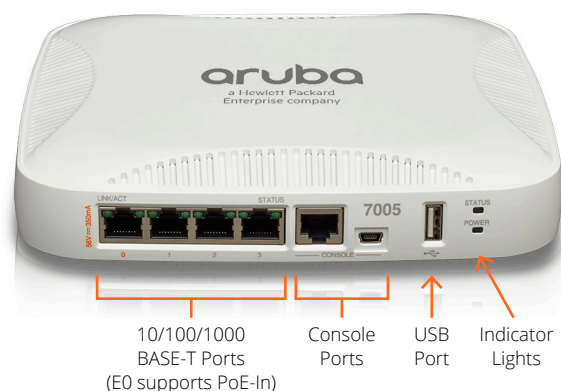
Product summary

Aruba offers a wide portfolio of branch gateways to meet the WAN and security requirements for small and large branches:

- 7005 is a compact, fanless entry-level platform for small branch or headend locations. Provides up to 2 Gbps of throughput, 4 gigabit switch ports, dual uplink capabilities, and can be powered by a Power over Ethernet (PoE) switch.
- 7008 is a compact, fanless entry-level platform for small branch or headend locations with additional switch requirements. Includes all of the features of the 7005 plus up to 8 PoE/PoE+ gigabit switch ports.

- 7010 is designed for mid-sized branch and headend deployments with up to 4 Gbps of throughput, 12 PoE/PoE+ gigabit switch ports and 2 SFP ports.
- 7024 is designed for mid-sized branch and headend deployments and includes all of the features of the 7010 plus up to 24 PoE/PoE+ gigabit switch ports and 2 SFP/SFP+ ports.
- 7030 is ideal for large branch or mid-size headend deployments with up to 8 Gbps of throughput and 8 dual-personality ports.

10/100/1000 BASE-T Ports (E0 supports PoE-In) Console Ports USB Port Indicator Lights

Front of a 7005

Security Dock Power connector

Back of a 7005

HEADEND GATEWAY

The Aruba 7200 Series acts as a headend gateway, or VPN concentrator (VPNC) for all branch offices. Branch gateways establish IPSec tunnels to one or more headend gateways over the Internet or other untrusted networks – private WAN or public Internet connections. High availability options support either multiple headend gateways deployed at a single site or headend gateways deployed in pairs at multiple sites for the highest availability.

The headend gateways support active/standby or active/active uplinks out of the branch. The most widely deployed topology is the dual hub-and-spoke where branches are multi-homed to a primary and backup data center. The headend gateway would sit at the hub site data center, and can be deployed in active/standby or active/active configurations. Any of the headend gateways can perform the function of VPNC at the hub site. These devices offer high-performance and high tunnel scale to aggregate data traffic from hundreds to thousands of branches.

Product summary

Aruba offers a family of headend gateways for VPN concentration and routing functions for corporate data center locations:

- 7210 provides higher performance and availability with up to 20 Gbps of throughput, 2 dual-personality ports, 4 10G SFP+ ports, hot-swappable redundant power supplies and field-replaceable fan trays.
- 7220/7240/7240XM provides scale, performance, and availability with up to 40 Gbps of throughput, 2 dual-personality ports, 4 10G SFP+ ports, hot-swappable redundant power supplies and field-replaceable fan trays.
- 7280 provides unprecedented scale, performance, and maximum availability with up to 80 Gbps of throughput, 8 10G SFP+ ports, 2 40G QSFP+ ports, hot-swappable redundant power supplies and field-replaceable fan trays.

KEY CAPABILITIES

Stateful Firewall

Introduces contextual, role-based awareness across WLAN, LAN, and WAN. Information on branch-wide users, devices, applications and WAN state enhances visibility and security end-to-end.

Dynamic Segmentation

Provide a simpler approach to segment the branch network across WLAN, LAN and WAN in a consistent way. Micro-segmentation policies based on user-roles helps with secure onboarding of IoT devices such as sensors and video cameras at branch locations, without the additional overhead of VLANs and subnets.

Traffic Analysis

Gain rich application awareness into over 2,600 applications across 21 categories. WebCC provides protection from malicious or unauthorized web URLs.

Deep Packet Inspection (DPI)

Monitors application usage and performance while optimizing bandwidth, priority and network paths in real time, including apps that are encrypted or appear as web traffic. DPI is vital to understanding usage patterns that may require changes to network design and capacity.

Zero-touch Provisioning and Install Manager with Installer App

Simplify on-site deployment with ZTP through cloud-based Aruba Central, and deploy new branches more efficiently with a customizable mobile app.
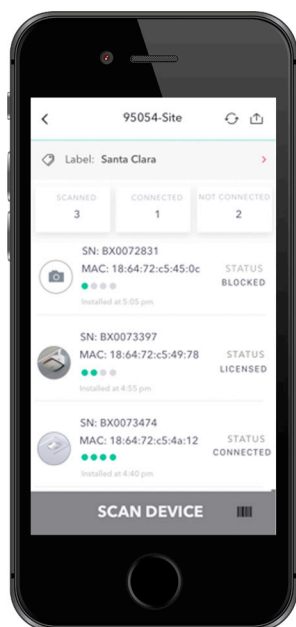
Path Quality Monitoring

The branch gateway can actively and passively monitor traffic flows for latency, jitter, packet loss, and throughput.

Policy-based Routing

Traffic can be routed across private or public WAN uplinks based on application or user role (e.g. guest or employee), in addition to traditional destination-based routing.

Dynamic Path Steering

When multiple WAN links exist, Dynamic Path Steering (DPS) will help choose the best available path for an application based on characteristics like throughput, latency, jitter, and packet loss.

WAN Compression

To improve overall bandwidth efficiency, the branch gateway can enable data compression on the IPsec sessions between the branch and headend gateways. Compression efficiency varies depending on the traffic type, but real-world scenarios typically show 40-60% bandwidth savings.

Hybrid WAN

The branch gateway can support multiple uplinks, such as Internet broadband, existing MPLS, and cellular connectivity, with multiple transport overlays across uplinks. Traffic destined for the Internet can be routed locally, while traffic destined for the data center can be routed either over MPLS or any available Internet path.

Third-party Integration

To reduce local branch complexity, integration with cloud services provided by firewall vendors such as ZScaler, Palo Alto Networks*, CheckPoint* and UCC applications such as Microsoft Skype for Business make extending security and Quality of Service easier and more reliable across the distributed enterprise.

ARUBA CENTRAL

A selection of features enabled by each tier are included below. 7005 Base Capacity Licenses support client counts up to 75 users.

Foundation License (1, 3, 5, 7, 10 year subscriptions available)			
Cloud management	Gateway management	Zero-touch provisioning	Mobile installer app
Role and application policies	LAN segmentation	Static/dynamic routing	Load balancing
NAT and DHCP services	Layer 7 DPI	Web content classification	User/app stateful firewall
VIA support	Dynamic Path Steering	VPN overlay, hub/spoke	Gateway redundancy
SKUs	**Subscription SKU Descriptions**		
Branch Gateways			
JZ118AAE	Aruba 70xx Gateway Foundation 1yr Subscription E-STU		
JZ119AAE	Aruba 70xx Gateway Foundation 3yr Subscription E-STU		
JZ120AAE	Aruba 70xx Gateway Foundation 5yr Subscription E-STU		
R0G52AAE	Aruba 70xx Gateway Foundation 7yr Subscription E-STU		
R0G53AAE	Aruba 70xx Gateway Foundation 10yr Subscription E-STU		
JZ124AAE	Aruba 7005 Gateway Foundation Base Capacity 1yr Subscription E-STU		
JZ125AAE	Aruba 7005 Gateway Foundation Base Capacity 3yr Subscription E-STU		
JZ126AAE	Aruba 7005 Gateway Foundation Base Capacity 5yr Subscription E-STU		
R0G56AAE	Aruba 7005 Gateway Foundation Base Capacity 7yr Subscription E-STU		
R0G57AAE	Aruba 7005 Gateway Foundation Base Capacity 10yr Subscription E-STU		
Headend Gateways			
JZ195AAE	Aruba 72xx Gateway Foundation 1yr Subscription E-STU		
JZ196AAE	Aruba 72xx Gateway Foundation 3yr Subscription E-STU		
JZ197AAE	Aruba 72xx Gateway Foundation 5yr Subscription E-STU		
R0G60AAE	Aruba 72xx Gateway Foundation 7yr Subscription E-STU		
R0G61AAE	Aruba 72xx Gateway Foundation 10yr Subscription E-STU		

BRANCH GATEWAYS AT A GLANCE

Features	7005	7008	7010	7024	7030
Deployment mode	Micro/Small	Small site	Medium	Medium	Large
Maximum clients	Up to 1,024*	1,024	2,048	2,048	4,096
Firewall throughput	2 Gbps	2 Gbps	4 Gbps	4 Gbps	8 Gbps
Encrypted throughput (3DES, AES-CBC)	1.2 Gbps	1.2 Gbps	2.4 Gbps	2.4 Gbps	2.4 Gbps
Encrypted throughput (AES-CCM)	1.6 Gbps	1.6 Gbps	3.4 Gbps	3.4 Gbps	4.0 Gbps
Maximum VLANs	4,094	4,094	4,094	4,094	4,094
WAN/LAN Interfaces	4	8	16	24	8 (combo)
PoE in/out	In; E0	Out; 100W	Out; 150W	Out; 400W	–
USB 2.0 (WAN)	Yes (1)	Yes (2)	Yes (2)	Yes (1)	Yes (1)
Form factor/footprint	Desktop/1RU	Desktop/1RU	1RU	1RU	1RU

HEADEND GATEWAYS AT A GLANCE

	7210	7220	7240/XM	7280
Deployment mode	VPNC	VPNC	VPNC	VPNC
Firewall throughput	20 Gbps	40 Gbps	40 Gbps	100 Gbps
Encrypted throughput (3DES, AES-CBC)	8 Gbps	21 Gbps	28 Gbps	56 Gbps
Encrypted throughput (AES-CCM)	5.6 Gbps	17 Gbps	24 Gbps	45 Gbps
Maximum VLANs	4,094	4,094	4,094	4,094
WAN/LAN Interfaces	6	6	6	10
Form factor/footprint	1RU	1RU	1RU	1RU

HARDWARE SPECIFICATIONS (BRANCH GATEWAYS)

PERFORMANCE AND CAPACITY

Features	7005	7008	7010	7024	7030
Firewall throughput	2 Gbps	2Gbps	4 Gbps	4 Gbps	8 Gbps
Encrypted throughput (3DES, AES-CBC)	1.2 Gbps	1.2 Gbps	2.4 Gbps	2.4 Gbps	2.4 Gbps
Encrypted throughput (AES-CCM)	1.6 Gbps	1.6 Gbps	3.4 Gbps	3.4 Gbps	4.0 Gbps
Maximum concurrent endpoints	Up to 1,024*	1,024	2,048	2,048	4,096
Maximum VLANs	4,094	4,094	4,094	4,094	4,094
Active firewall sessions	16,384	16,384	32,768	32,768	65,536
Tunneled Node ports	512	512	1,024	1,024	2,048

INTERFACES AND INDICATORS

Features	7005	7008	7010	7024	7030
Form factor/footprint	Compact	Compact	1 rack unit	1 rack unit	1 rack unit
Auto-negotiating 10/100/1000BASE-T	4	8	16	24	8 (combo)
GE ports (GBIC or SFP)	N/A	N/A	2 SFP	2 SFP+	8 (combo)
USB 2.0	Yes (1)	Yes (2)	Yes (2)	Yes (1)	Yes (1)
Management/status LEDs	Yes	Yes	Yes	Yes	Yes
LINK/ACT and status LEDs	No	No	No	Yes	Yes
LCD panel/navigation	No	No	Yes	Yes	Yes
Console port	Yes (micro USB/RJ-45)	Yes (micro USB/RJ-45)	Yes (micro USB/RJ-45)	Yes (micro USB/RJ-45)	Yes (micro USB/RJ-45)
Out-of-band management port	No	No	Yes	Yes	Yes

POWER OVER ETHERNET SUPPORT (POE)

Features	7005	7008	7010	7024	7030
PoE Role[1]/Mode	Powered Device (PD)	Power Source Equipment (PSE)	PSE	PSE	–
PoE In or Out	4	Out	Out	Out	–
Number of PoE+[2] Ports	N/A	8	12	24	–
Max concurrent PoE Ports	Yes (1)	8	12	24	–
Max concurrent PoE+ Ports	Yes	3	5	13	–
PoE Power Budget	No	100W	150W	400W	–

[1]PoE: 802.3af, 15.4W from the PSE and 12.95W at the PD
[2]PoE+: 802.3at, 30W from the PSE and 25.5W at the PD

PHYSICAL DIMENSIONS

	7005	7008	7010	7024	7030
Dimensions (H x W x D)	4.1 cm x 20 cm x 20 cm (1.6" x 7.9" x 7.9")	4.2 cm x 20.32 cm x 20 .32 cm (1.65" x 8.0" x 8.0")	4.42 cm x 31.75 cm x 33.7 cm (1.74" x 12.75" x 13.3")	4.37 cm x 44.2 cm x 31.3 cm (1.7" x 17.4" x 12.32")	4.4 cm x 30.5 cm x 21.1 cm (1.7" x 12" x 8.3")
Weight	0.92 kg (2.03 lbs)	1.0 kg (2.2 lbs)	3.4 kg (7.5 lbs)	5.127 kg (11.3 lbs)	2.06 kg (4.54 lbs)
MTBF (hours, @ 25C)	323,896	300,000	232,843	311,901	390,679

ENVIRONMENTAL RANGE

Features	7005	7008	7010	7024	7030
Operating temperature	0° C to 40° C				
Storage temperature	-40° C to 70° C				
Humidity/storage humidity	10% to 95%, NC				
Operating altitude	10,000 feet				
Acoustic noise[1]	0 dBA (fanless)	0 dBA (fanless)	39.8 - 58.6 dBA	34.3 - 71.2 dBA	29.1 - 57.4 dBA
Maximum power consumption	16.6W with USB	126W with PoE (26W without PoE)	190W with PoE	450W with PoE	55 watts

[1]Sound power per ETSI 300 753 in accordance w/ISO 7779

REGULATORY AND SAFETY COMPLIANCE

Description	Specification
Safety certifications	UL 60950-1 Second Edition; CAN/CSA-C22.2 No. 60950-1 Second Edition; EN 60950-1 Second Edition; EN 60950:2005 ; IEC 60950-1 Second Edition; NOM (obtained by partners and distributors)
Electromagnetic emissions certifications	FCC Part 15 Class B CE; AS/NZS CISPR22 Class B; CISPR22 Class A (7010, 7024, 7030), Class B (7005); EN55022 Class A (7010, 7024, 7030), Class B (7005); ICES-003 Class A (7010, 7024, 7030), Class B (7005); VCCI Class A (7010, 7024, 7030), Class B (7005); EN61000-3-2; EN61000-3-3; EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4- 6, EN 61000-4-8, EN 61000-4-11, AS/NZS 3548; KN22 Class B; KCC; CNS13438 Class B; EN55024/CISPR24; KN24; Industry Canada Class B; CE mark, cTUVus, CB, C-tick, Anatel, NOM, MIC
Telco	Common Language Equipment Identifier (CLEI) Code
Regulatory SKU information	ARCN01014 (7005), ARCN0103 (7010), ARCN7024 (7024), ARCN7030 (7030)
Minimum Software Release	ArubaOS 8.4; Aruba Central 2.4.3
Warranty	Hardware Limited: 1 year parts/labor; can be extended with support contract Software: 24/7 support; included in Aruba Central SD-WAN subscription

7000 SERIES ORDERING INFORMATION

Please refer to the SD-WAN Gateway Ordering Guide.

HARDWARE SPECIFICATIONS (HEADEND GATEWAYS) PERFORMANCE AND CAPACITY

Features	7210	7220	7240/XM	7280
Firewall throughput	20 Gbps	40 Gbps	40 Gbps	100 Gbps
Encrypted throughput (3DES, AES-CBC)	8 Gbps	21 Gbps	28 Gbps	56 Gbps
Encrypted throughput (AES-CCM)	5.6 Gbps	17 Gbps	24 Gbps	45 Gbps
Maximum concurrent endpoints	16,384	24,576	32,768	32,768
Maximum VLANs	4,094	4,094	4,094	4,094
Active firewall sessions	2,015,291	2,015,291	2,015,291	2,015,291
Tunneled Node ports	8,192	12,288	16,384	16,384
Concurrent GRE tunnels (System BSSIDs)	9,216	17,408	34,816	36,613
Concurrent IPsec/VPN sessions	16,384	24,576	32,768	32,768
Concurrent SSL fallback sessions	8,192	8,192	8,192	8,192

INTERFACES AND INDICATORS

Features	7210	7220	7240/XM	7280
Form factor/footprint	1RU	1RU	1RU	1RU
Auto-negotiating 10/100/1000BASE-T	2 (1G combo)	2 (1G combo)	2 (1G combo)	None
GE ports (GBIC or SFP)	4	4	4	8
Gigabit Ethernet ports (40G QSFP+)	N/A	N/A	N/A	2
USB 2.0	Yes (1)	Yes (1)	Yes (1)	Yes (1)
Management/status LEDs	Yes	Yes	Yes	Yes
LINK/ACT and status LEDs	Yes	Yes	Yes	Yes
LCD panel/navigation	Yes	Yes	Yes	Yes
Console port	Yes (mini USB, RJ-45)	Yes (mini USB, RJ-45)	Yes (mini USB, RJ-45)	Yes (micro USB, RJ-45)
Out-of-band mgmt port	Yes	Yes	Yes	Yes
Expansion slot (reserved for future use)	Yes	Yes	Yes	Yes

PHYSICAL DIMENSIONS

	7210	7220	7240/XM	7280
Dimensions (H x W x D)	4.4 cm x 44.5 cm x 44.5 cm (1.75" x 17.5" x 17.5")	4.4 cm x 44.5 cm x 44.5 cm (1.75" x 17.5" x 17.5")	4.4 cm x 44.5 cm x 44.5 cm (1.75" x 17.5" x 17.5")	4.4 cm x 44.2 cm x 40.1 cm (1.73" x 17.40" x 15.79")
Weight (includes AC power supply)	7.45 kg (16.43 lbs)	7.45 kg (16.43 lbs)	7.45 kg (16.43 lbs)	7.9 kg (17.41 lbs)
MTBF (hours, @ 25C)	106,536	113,751	116,590	281,896 @ 45C

ENVIRONMENTAL RANGE

Features	7210	7220	7240/XM	7280
Operating temperature	0° C to 40° C			
Storage temperature	-40° C to 70° C			
Humidity/storage humidity	10% to 90% non-condensing /10% to 95%, non-condensing			
Operating altitude	10,000 feet			
Acoustic noise[1]	52.9 dBA	52.9 dBA	52.9 dBA	47.1 dBA
Maximum power consumption	110 watts	125 watts	165 watts	240 watts
	350-watt AC power supply (7210/7220/7240/7240XM)			550-watt AC power supply (7280 Only)
AC input voltage	100 VAC to 240 VAC			
AC input current	5 - 2.5A			7.1 - 3.4A
AC input frequency	50-60 Hz			
Weight	1.3 kg (2.8 lbs)			0.87 kg (1.9 lbs)

[1]Sound power per ETSI 300 753 in accordance with ISO 7779 Power Supply Specifications

REGULATORY AND SAFETY COMPLIANCE

Description	Specification
Safety certifications	UL 60950, EN60950; CAN/CSA 22.2 #60950; CE mark, cTUVus, CB, C-tick, Anatel, NOM, MIC
Electromagnetic emissions certifications	FCC Part 15 Class A CE; Industry Canada Class A; VCCI Class A (Japan); EN 55022 Class A (CISPR 22 Class A), EN 61000-3; EN 61000-4-2, EN 61000-4-3, EN 61000-4-4 ;EN 61000-4-5, EN 61000-4-6, EN 61000-4-8; EN 61000-4-11, EN 55024, AS/NZS 3548
Regulatory SKU information	ARCN7280 (7280); ARCN0102 (7240/7240XM); ARCN0101 (7220); ARCN0100 (7210)
Minimum Software Release	ArubaOS 8.4; Aruba Central 2.4.3
Warranty	Hardware Limited: 1 year parts/labor; can be extended with support contract Software: 24/7 support; included in Aruba Central SD-WAN subscription

7200 SERIES ORDERING INFORMATION

Please refer to the SD-WAN Gateway Ordering Guide.