

## DATA SHEET

# ARUBA SD-WAN

Improved visibility and control at the WAN edge

Software-defined WAN (SD-WAN) technology is the answer to growing bandwidth demands and tightening budget considerations. New solutions offer simplified WAN operations and reduced operational costs for those managing public and private WAN connections, and those shifting toward cloud-based services altogether.

Aruba SD-WAN is designed for all of this and more – optimizing routing decisions and improving visibility across the WAN edge. Full Layer 7 application awareness combines with unique in-branch visibility based on end-user roles, device type, and location context to make Aruba SD-WAN ideal for distributed enterprises.

In fact, organizations in the retail, hospitality and healthcare space – which typically have lean and centralized network teams – can improve the time to deploy, manage and maintain WAN connections, while enhancing the user experience and business operations. Aruba SD-WAN serves a key role in Aruba's overall SD-Branch solution.

## INTELLIGENT WAN MANAGEMENT

Through simplified workflows, managing a WAN can be completely orchestrated to improve the speed of deployment, network performance, and ongoing configuration changes. Aruba Central, an AI-powered network operations, assurance, and security platform, provides SD-WAN, as well as WLAN and LAN visibility and controls. Cloud advantages make it easy to to configure and deploy and see data from Aruba branch gateways, headend gateways, and virtual gateways from anywhere. There is no on-premises management equipment to update or maintain.

## CLOUD-BASED SD-WAN ORCHESTRATION

Using cloud-scale best practices, Aruba SD-WAN provides end-to-end orchestration to easily distribute routes and build scalable and secure VPN tunnels on-demand. This is based on the data center preference configured in Aruba Central. The orchestrator also simplifies the deployment of virtual gateways within Amazon AWS and Microsoft Azure public cloud infrastructure by automating cloud discovery, onboarding, and management.



## KEY FEATURES

- On-premises and virtual gateway options
- Policy-based routing for 3,000+ applications with no additional hardware
- Licenses with unrestricted bandwidth for every SD-WAN gateway
- Flexible, cloud-based SD-WAN orchestration
- Policy enforcement for WAN, WLAN, and LAN
- Security integration with cloud and on-premises solutions

## UNRESTRICTED BANDWIDTH

Unlike other SD-WAN vendors, Aruba's SD-WAN solution offers unrestricted bandwidth per every gateway license. This means you have access to full hardware performance capabilities right out of the box – no upgrade purchases required.

## SD-WAN GATEWAYS

### SD-WAN Gateways for Branch

Aruba's SD-WAN gateways are designed to support multiple WAN connections that can be either broadband, MPLS or cellular links. Software features include the ability to route and prioritize traffic being sent to the data center, public cloud infrastructure or the Internet. Each gateway also supports High Availability (HA) requirements (e.g. active/active and active/standby), making it ideal for sites that need full redundancy.

### SD-WAN Gateways for Headend

Aruba SD-WAN gateways deployed in headend/data center environments act as VPN concentrators (VPNCs) to terminate traffic from branch gateways. These gateways offer support for up to thousands of branch sites. In a typical dual hub-and-spoke model, one or more headend gateways can be used to terminate IPsec tunnels established from branch gateways.

### SD-WAN Gateways for Public Cloud

Aruba virtual gateways are deployed in public cloud infrastructures, such as a Microsoft [Azure Virtual Network \(VNET\)](#) or Amazon Web Services [virtual private cloud \(AWS VPC\)](#). These gateways serve as a virtual instance of a headend gateway, and enable seamless and secure connectivity for all branch and data center locations connecting to public clouds. Virtual gateways support public Internet and private connections such as Direct Connect.



Figure 1: Aruba's virtual gateway can be deployed in Azure or AWS.

Virtual gateways are managed by Aruba Central and include full orchestration that completely automates VNET/VPC discovery, subnet management, gateway onboarding, HA configuration and status monitoring.

Virtual gateways support up to 4 Gbps of throughput, with 1, 3, and 5 year subscription options.

### MICROSOFT FEATURES

#### Office 365, Teams and Skype for Business

Aruba's [integration with Microsoft](#) enables unique application insight that detects Office 365, Teams and Skype for Business traffic and then prioritizes them over less critical applications. Aruba Central also includes specific call quality heuristics for additional visibility.

### Microsoft preferred solution

Aruba Virtual Gateways are a [Microsoft preferred solution](#) on the Azure Marketplace. This means the gateway application has been validated by Microsoft experts as having proven competencies and capabilities that meet customer needs.

### POLICY-BASED ROUTING AND SUPPORTED PROTOCOLS

With Policy-based Routing (PBR), traffic can be routed across multiple private or public WAN uplinks based on application type and link health, device profile, user role, and destination. Supported protocols include BGP, OSPF and static routes.

### SAAS OPTIMIZATION

Aruba Central enables the discovery of SaaS application servers based on geography, monitoring of application performance, and dynamic steering of WAN traffic from one server to another. This capability ensures that users who access SaaS applications such as Microsoft 365 (Office 365), Box, Slack, and Zendesk are matched to the best available points of presence. This feature requires the SD-WAN Advanced License. For more information, please refer to the latest [Aruba Central documentation](#).

### KEY WAN FEATURES

#### Overlay and Hybrid WAN Management

Aruba SD-WAN introduces a new architecture that provides a network overlay for WAN connections to improve visibility and control across private and public connections (hybrid WAN).

#### Hub-and-Spoke Topology

Secure connections can be established from a branch site to a headend site using public or private connections. This allows users to efficiently access corporate resources hosted in data centers.

#### Site-to-Site VPNs

Secure connections can also be established from one branch site to another over a public Internet connection. This allows users from different locations to access network resources hosted within the corporate network without going through the data center.

## Dynamic Path Steering (DPS)

WAN traffic can be automatically routed over the best available uplink based on characteristics, such as WAN throughput, latency, jitter and packet loss.

## WAN Visibility

With deep packet inspection technology, Aruba Central provides monitoring for application traffic that enters and exits a branch network – regardless of the uplink type. This makes it easy for IT to manage WAN environments that increasingly utilize public WAN connections.

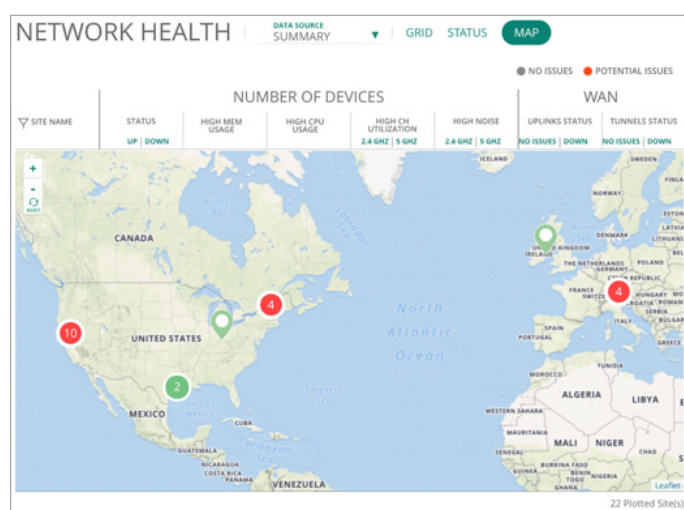


Figure 2: Aruba Central WAN Health Dashboard

## WAN Compression

Ideal for use during periods of network congestion, this WAN compression feature allows IT to send more traffic through the same WAN circuit at any given moment or timeframe.

## Unrestricted Bandwidth

Aruba SD-WAN licenses provide access to the full bandwidth specification for each gateway. No additional license upgrades required.

## KEY CONFIGURATION FEATURES

### Simplified Installation Wizard

For easy configuration of SD-WAN gateways, Aruba Central provides users with a step-by-step navigation that simplifies provisioning of the network.

### Configuration Hierarchy

Network settings can be pre-configured and customized in Aruba Central based on branch-specific requirements. Zero Touch Provisioning (ZTP) provides an easy and error-free deployment model.

### Zero Touch Provisioning (ZTP)

Using Zero Touch Provisioning, the hardware gateways can be factory-shipped and deployed onsite using Aruba Activate™, a cloud-based activation service that seamlessly works with Aruba Central. Settings can be applied based on configuration and other network-specific requirements.

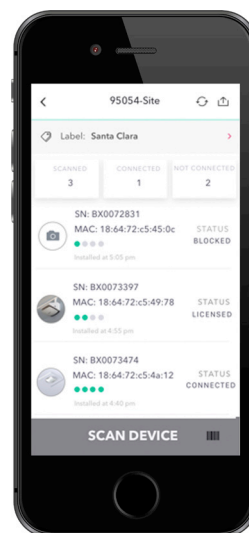


Figure 3: Example of Aruba's mobile installer app for device onboarding.

## Simple, mobile provisioning

Aruba's mobile installer app allows on-site personnel to easily onboard gateways. A central IT team can verify device location, licenses, and status with no additional steps required. This is available for iOS and Android.

## KEY SECURITY AND VISIBILITY FEATURES

### Dynamic Segmentation

To simplify and better secure wired and wireless network access, the branch gateway can automatically enforce per user and per-device roles on wired and wireless networks. Integration with ClearPass Policy Manager allows for centralized role and policy management. This ensures consistent policy regardless of user role and device type, and eliminates the need to configure unnecessary SSIDs, ACLs, VLANs and subnets at every node in the network. For more information on Dynamic Segmentation, please refer to the [solution overview](#).

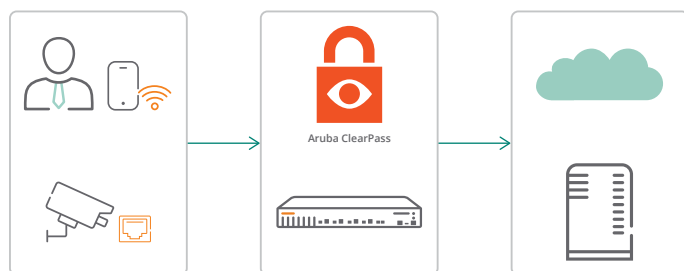


Figure 4: Segment mobile and IoT traffic using Aruba

### Policy Enforcement Firewall

Included within the Foundation license, PEF allows for wired and wireless user and application traffic to be sent to a branch gateway through GRE tunnels for inspection. Enforcement of policies based on user role, device type, application and location is accomplished through Aruba Dynamic Segmentation.

### Application visibility and control

Also included in the Foundation license is an application visibility feature that uses Deep Packet Inspection (DPI) technology to evaluate and optimize performance and QoS policies for over 3,000 applications, including encrypted and hidden traffic.

### Web content filtering

The Web Content Classification (WebCC) bundle is also part of the Foundation license. This classifies websites by content category and rates them by reputation. It can also block, apply QoS, bandwidth-limit, mirror, and log web content.

### Unified Communications and Collaboration (UCC)

Measure and troubleshoot networks based on call quality metrics such as Mean Opinion Score, latency, jitter and packet loss. Supported applications include: Teams, Skype for Business®, Wi-Fi Calling, Facetime, SIP, Jabber, Spark and more.

### Third-party security gateway and firewall support

For advanced malware or antivirus protection, Aruba gateways can assume the role of an on-premises agent of centrally-hosted firewalls such as those provided by Palo Alto Networks and Check Point Software, or web security gateways such as Zscaler and Symantec.

## TECHNICAL SPECIFICATIONS\*

BRANCH GATEWAYS						
Features	9004	7005	7008	7010	7024	7030
Deployment mode	Small/Medium	Small	Small	Medium	Medium	Large
Maximum clients	Up to 2,048**	Up to 1,024**	Up to 1,024**	2,048	2,048	4,096
Firewall throughput	4 Gbps	4 Gbps	4 Gbps	8 Gbps	8 Gbps	8 Gbps
Encrypted throughput (3DES)	4 Gbps	1.2 Gbps	1.2 Gbps	2.4 Gbps	2.4 Gbps	2.4 Gbps
Encrypted throughput (AES-CBC)	4 Gbps	1.3 Gbps	1.3 Gbps	2.6 Gbps	2.6 Gbps	2.6 Gbps
Active firewall sessions	64K	32K	32K	32K	32K	64K
WAN/LAN Interfaces	4	4	8	16	24	8 (combo)
PoE in/out	-	In; E0	Out; 100W	Out; 150W	Out; 400W	-
USB (WAN)	Yes (1); USB 3.0	Yes (1); USB 2.0	Yes (2); USB 2.0	Yes (2); USB 2.0	Yes (1); USB 2.0	Yes (1); USB 2.0
Form factor/footprint	Desktop/1RU <sup>1</sup>	Desktop/1RU	Desktop/1RU	1RU	1RU	1RU

<sup>1</sup> 1RU can support two 9004 gateways side-by-side using an optional mount kit.

HEADEND GATEWAYS						
Features	7010	7024	7030	7210	7220	7240XM
Deployment mode	VPN Concentrator (VPNC)	VPNC	VPNC	VPNC	VPNC	VPNC
Encrypted throughput (3DES)	2.4 Gbps	2.4 Gbps	2.4 Gbps	7 Gbps	25 Gbps	28 Gbps
Encrypted throughput (AES-CBC)	2.6 Gbps	2.6 Gbps	2.6 Gbps	7 Gbps	22 Gbps	30 Gbps
WAN compression performance	2.5 Gbps	2.5 Gbps	2.5 Gbps	10 Gbps	10 Gbps	10 Gbps
Maximum tunnels	512	512	512	1,024	4,096	6,144
Route scale	3,000	3,000	6,000	6,000	20,000	30,000
Form factor/footprint	1RU	1RU	1RU	1RU	1RU	1RU

VIRTUAL GATEWAYS		
Features	Amazon AWS VPC	Microsoft Azure VNET
Deployment mode	Public Cloud Infrastructure (VPNC)	Public Cloud Infrastructure
Firewall throughput	500 Mbps, 2 Gbps, 4 Gbps	500 Mbps
Number of interfaces	3 (plus 1 for management)	
Virtual CPU	Up to 16	4
Memory	Up to 60GB	14GB
Maximum tunnels	Up to 1,600	
Infrastructure	Additional VPC infrastructure costs based on a BYOL model	

\*For complete hardware specifications, please see the 9004 Gateway and 7000/7200 Mobility Controller datasheets.

\*\*The 9004 and 7005/7008 offers a base capacity license for up to 75 clients.

\*\*\*For complete virtual gateway specifications, please see the [Aruba Central Virtual Gateway Deployment Guide](#)

## SERVICE AND WARRANTY INFORMATION

- Hardware: 1-year parts/labor, can be extended with hardware-only support contract
- Branch and Headend Gateway Subscriptions: 1, 3, 5, 7, or 10-year options which include software support
- Virtual Gateway Subscriptions: 1, 3, or 5-year options which include software support

## ORDERING INFORMATION\*\*\*

Item	Part Number	Description
7005, 7008, 7010, 7024, 7030, 9004	JZ118AAE	Aruba 70xx or 90xx Gateway Foundation 1yr Subscription E-STU
7005, 7008, 7010, 7024, 7030, 9004	JZ119AAE	Aruba 70xx or 90xx Gateway Foundation 3yr Subscription E-STU
7005, 7008, 7010, 7024, 7030, 9004	JZ120AAE	Aruba 70xx or 90xx Gateway Foundation 5yr Subscription E-STU
7005, 7008, 7010, 7024, 7030, 9004	R0G52AAE	Aruba 70xx or 90xx Gateway Foundation 7yr Subscription E-STU
7005, 7008, 7010, 7024, 7030, 9004	R0G53AAE	Aruba 70xx or 90xx Gateway Foundation 10yr Subscription E-STU
7005, 7008, 9004	JZ124AAE	Aruba 70xx or 90xx Gateway Foundation Base Capacity 1yr Subscription E-STU
7005, 7008, 9004	JZ125AAE	Aruba 70xx or 90xx Gateway Foundation Base Capacity 3yr Subscription E-STU
7005, 7008, 9004	JZ126AAE	Aruba 70xx or 90xx Gateway Foundation Base Capacity 5yr Subscription E-STU
7005, 7008, 9004	R0G56AAE	Aruba 70xx or 90xx Gateway Foundation Base Capacity 7yr Subscription E-STU
7005, 7008, 9004	R0G57AAE	Aruba 70xx or 90xx Gateway Foundation Base Capacity 10yr Subscription E-STU
7210, 7220, 7240/XM	JZ195AAE	Aruba 72xx Gateway Foundation 1yr Subscription E-STU
7210, 7220, 7240/XM	JZ196AAE	Aruba 72xx Gateway Foundation 3yr Subscription E-STU
7210, 7220, 7240/XM	JZ197AAE	Aruba 72xx Gateway Foundation 5yr Subscription E-STU
7210, 7220, 7240/XM	R0G60AAE	Aruba 72xx Gateway Foundation 7yr Subscription E-STU
7210, 7220, 7240/XM	R0G61AAE	Aruba 72xx Gateway Foundation 10yr Subscription E-STU
7005, 7008, 7010, 7024, 7030, 9004	JZ121AAE	Aruba 70xx or 90xx Gateway Advanced 1yr Subscription E-STU
7005, 7008, 7010, 7024, 7030, 9004	JZ122AAE	Aruba 70xx or 90xx Gateway Advanced 3yr Subscription E-STU
7005, 7008, 7010, 7024, 7030, 9004	JZ123AAE	Aruba 70xx or 90xx Gateway Advanced 5yr Subscription E-STU
7005, 7008, 7010, 7024, 7030, 9004	R0G54AAE	Aruba 70xx or 90xx Gateway Advanced 7yr Subscription E-STU
7005, 7008, 7010, 7024, 7030, 9004	R0G55AAE	Aruba 70xx or 90xx Gateway Advanced 10yr Subscription E-STU
7210, 7220, 7240XM	JZ198AAE	Aruba 72xx Gateway Advanced 1yr
7210, 7220, 7240XM	JZ199AAE	Aruba 72xx Gateway Advanced 3yr
7210, 7220, 7240XM	JZ200AAE	Aruba 72xx Gateway Advanced 5yr
7210, 7220, 7240XM	R0G62AAE	Aruba 72xx Gateway Advanced 7yr Subscription E-STU
7210, 7220, 7240XM	R0G63AAE	Aruba 72xx Gateway Advanced 10yr Subscription E-STU
Virtual Gateway (AWS)	R3V73AAE	Aruba vGateway 2Gbps 1yr Sub E-STU
Virtual Gateway (AWS)	R3V74AAE	Aruba vGateway 2Gbps 3yr Sub E-STU
Virtual Gateway (AWS)	R3V75AAE	Aruba vGateway 2Gbps 5yr Sub E-STU
Virtual Gateway (AWS)	R3V76AAE	Aruba vGateway 4Gbps 1yr Sub E-STU
Virtual Gateway (AWS)	R3V77AAE	Aruba vGateway 4Gbps 3yr Sub E-STU
Virtual Gateway (AWS)	R3V78AAE	Aruba vGateway 4Gbps 5yr Sub E-STU
Virtual Gateway (AWS, Azure)	R0X97AAE	Aruba Virtual Gateway 500Mbps 1yr Sub E-STU
Virtual Gateway (AWS, Azure)	R0X98AAE	Aruba Virtual Gateway 500Mbps 3yr Sub E-STU
Virtual Gateway (AWS, Azure)	R0X99AAE	Aruba Virtual Gateway 500Mbps 5yr Sub E-STU

\*\*\*For hardware ordering information, please refer to the SD-WAN Ordering Guide

For additional information on ordering and full gateway hardware specifications, please refer to:

- [7000 Series Mobility Controller Data sheet](#)
- [7200 Series Mobility Controller Data sheet](#)
- [9004 Series Gateways Datasheet](#)