

Casa Systems Axyom™ Wireless Access Gateway (WAG)



The face of the Wi-Fi services industry is changing. Service providers must meet ever-increasing consumer demands for easy access and high-speed performance coupled with a high-quality user experience.

Casa's Axyom Wi-Fi Access Gateway offers service providers a simple, scalable, carrier-grade WAG solution ideal for community Wi-Fi environments such as homespots, MDUs and venue-based public Wi-Fi. Axyom leverages the modular software approach to deliver the cable industry's first and highest density converged access platform. Leveraging a multi-purpose virtual edge computing platform, the Axyom WAG offers best-in-class performance and scale for 3G/4G, trusted / untrusted Wi-Fi access.

Casa's Axyom WAG puts intelligent data plane management and processing at the edge for performance. The Axyom WAG delivers leading performance per RU providing better performance per authenticated sessions, migrant clients, APs, throughput and CEPS on a per RU basis than competitors' solutions.

The Axyom WAG provides a flexible solution for multiple applications including:

- Enterprise: High availability, priority based queuing, line rate IPsec
- Public Wi-Fi: Hotspot 2.0 AP vendor independence, optimized AP roaming, 1M Active / 10M migrant clients per RU
- Hospitality: Intelligent traffic isolation and management, deployment on premise or at the edge
- MDUs: Dynamic rate limiting, intelligent traffic isolation and management per SSID, deployment on premise or at the edge
- Home as a Hotspot: Active traffic management, vCPE and service chaining support

Service providers who choose Casa's Axyom WAG obtain competitive advantages, including 6x higher capacity performance per RU and 40x greater throughput per RU. It also delivers strategic benefits for the long term — including lower TCO and investment protection.

*Under roadmap for release

Highlights

Compact footprint using latest COTS technologies supporting distributed and centralized deployments

Carrier-grade reliability with industry-leading performance and security in both control and data planes

AP vendor independence

Vertical traffic segregation and processing per SSID

Active traffic management:

- DSCP marking/remarking
- Dynamic rate limiting & QoS
- CGNAT
- HS 2.0 Support*
- Pre-Paid Accounting*
- vCPE support / service chaining*
- TWAG / S2a interface*

Secure WAG:

- Scalable IKEv2 and IPsec SA rekeying
- IPsec tunnels /MOBIKE security association and DOS and DDOS detection, protection, and prevention
- Anti-Spoofing, Subscriber session limits and Multiple Child SA support
- Pre-shared keys and certification (X.509)
- Dead Peer Detection (DPD), Broad support of encryption and authentication algorithms
- Supports Encapsulating Security Payload (ESP) tunnel mode

Feature	Benefit
<p>Scalability</p>	<p>1M Access Points per RU (1M SoftGRE Tunnels)</p> <p>1M authenticated clients per RU</p> <p>10M unauthenticated (Migrant) clients per RU</p> <p>80 Gbps line rate throughput</p> <p>Independent scaling of CEPS, sessions and throughput</p> <p>Latency less than 1 millisecond</p>
<p>Functionality</p>	<p>SoftGRE/EoGRE Tunneling</p> <p>IEEE 802.1q VLAN for SSID segregation</p> <p>RADIUS Proxy*: Authentication, Accounting and CoA/DM</p> <p>vCPE: Pre & Post Authentication Policy Enforcement, Dynamic Captive Portal Policy per SSID, Carrier Grade NAT(IPv4), Vertical traffic segregation and processing per SSID, Intelligent Traffic Isolation</p> <p>Dual Stack IPv4/IPv6</p> <p>IS-IS</p> <p>BGP</p> <p>OSPF</p>
<p>High Availability + Redundancy</p>	<p>99.999% availability</p> <p>In-service software upgrades</p> <p>Intra Axyom Automatic Failure Detection and session recovery</p> <p>L2 & L3 Inter Axyom stateful redundancy</p> <p>RFC 4786 Anycast</p> <p>IEEE 802.1ad Link Aggregation</p>

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