

Casa Systems Mobile Edge Computing ePDG



Key Benefits

- Leverage existing Wi-Fi access to securely expand coverage
- Deploy new revenue generating services, including VoWiFi and VoLTE
- Enhance customer experience with seamless, secure mobility

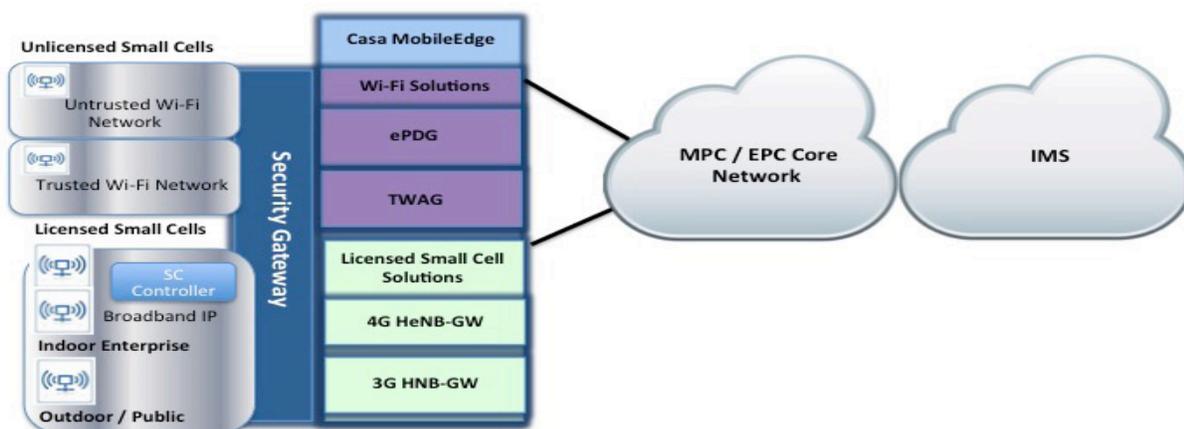
Overview

The mobile network edge – where services are accessed and performance is ultimately judged – is getting denser, more complex, and more intelligent each year. Service providers are striving to meet this burgeoning demand with new, differentiated and profitable ultra-broadband services. Incorporating cellular as well as trusted and untrusted Wi-Fi into their portfolios opens up big opportunities for service providers. However, being able to provide universally accessible services that are scalable and deliver a seamless user experience is one of today's top mobile network challenges.

From an engineering perspective, the right solution has to satisfy many, sometimes conflicting, objectives. For example: securing Wi-Fi traffic before it enters the core network, while simultaneously delivering throughput at ultra broadband speeds; extracting and processing real-time intelligence about subscribers, sessions and applications while simultaneously scaling to millions of IPsec tunnels; and, deploying highly dense fabrics of small cells and Wi-Fi access points while achieving profitable growth.

It's an engineering challenge well-suited for Casa Systems' heritage as a provider of innovative fixed broadband infrastructure solutions which incorporate RF engineering, high density access aggregation, and extreme subscriber and session management capabilities.

Rising to the challenge, Casa Systems' Mobile Edge Computing platform is an integrated multi-access solution which delivers ePDG, TWAG, HeNB-GW, HNB-GW and SeGW functions. Casa's innovative modular and distributed software architecture allows independent scaling of throughput, sessions and CEPs, deeply integrated security – with no performance degradation.



Casa Systems Mobile Edge Computing ePDG



Casa's Mobile Edge Computing Platform for Wi-Fi: Security + Speed

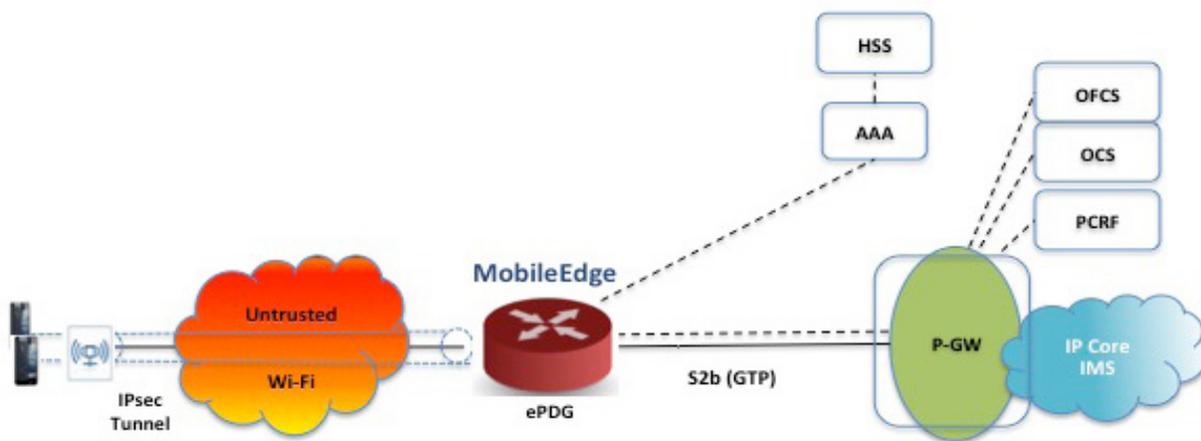
Whether for trusted or untrusted Wi-Fi, Casa's Mobile Edge Computing platform enables service providers to manage millions of Wi-Fi enabled devices with high control over not only user experience, but also security. Built upon flexible, modular software architecture, our Mobile Edge Computing platform delivers superior performance while applying the full range of security functions (IPSec, firewall, DOS / DDOS, QoS) to each packet that enters or leaves the core network without any add-on modules. Through VRF based traffic segmentation with the ability to provision unique policy enforcement and access controls toward the access and core areas of the network, a constant flow of gigabit traffic processes at line rate for the ultimate in the ultra broadband experience.

ePDG Solution

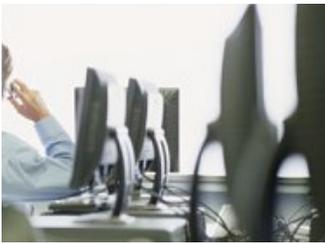
Casa Systems' ePDG software application is a highly reliable carrier-grade solution, with all the features service providers need to extract the benefits from untrusted Wi-Fi, without the risks.

Positioned between Wi-Fi and the mobile core, Casa's ePDG:

- Authenticates the UE attempting to attach to the core
- Secures the data transmission between the UE and the EPC over an untrusted non-3GPP access
- Acts as a termination node of IPSec tunnels established with the UE
- Applies real-time subscriber, session and application intelligence
- Enables service providers to extend wireless service coverage, reduce the load on the macro wireless network, and make use of existing backhaul infrastructure to reduce the cost of carrying wireless calls
- Enables service providers to offer secure VoWiFi / VoLTE to Wi-Fi with seamless mobility



Casa Systems Mobile Edge Computing ePDG



Key Features

Carrier-grade Security

- Firewall and filtering
- DOS and DDOS detection, protection and prevention
- Anti-spoofing
- Subscriber session limits
- KEv2 with certificate based authentication
- KE and IPSec SA rekeying
- Multiple child SA support
- Diffie-Hellman Groups 1, 2, 5 and 4
- Dead Peer Detection (DPD)
- KE and IPSEC rekeying
- Supports Encapsulating Security Payload (ESP) tunnel mode
- Extensible Authentication Protocol (EAP)
- Supported encryption and authentication algorithms
 - MAC-MD5-96
 - HMAC-SHA1-96
 - AES-128-CSC
 - AES-192-CBC
 - DES-CBC
 - 3DEC-CBC
 - PRF-AES-128-CBC
 - AES-128, 192 and 256
 - Null encryption
- AAA interface for EAP-AKA authentication
- Pre-shared keys and certification (X.509)
- Realtime logging and statistics

High Availability + Redundancy

- 99.999% availability
- In-service software upgrades
- Geographical redundancy
- Automatic failover
- Session recovery
- Stateful intra-chassis redundancy

Scaling and Performance

- Massively scalable up to 3 million IPSec tunnels with throughput of 130Gbps
- Security, encryption and authentication applied to every packet with no degradation of performance
- Independent scaling of CEPS, sessions and throughput

Intelligence Applied

- Real-time integrated subscriber, session and application intelligence which can be applied for both network optimization and for monetization of new services

Whether for Wi-Fi calling, cellular network off-load, or coverage, service providers continue to explore all the ways that Wi-Fi can contribute to profitable growth. They need a partner unencumbered by legacy mobile products but with an edge network heritage who can bring a fresh set of eyes and new thinking to network solutions. Casa Systems' Mobile Edge Computing platform is a key component delivering unique, ubiquitous, ultra broadband solutions across fixed and mobile broadband networks.



Casa Systems, Inc.
100 Old River Road
Suite 100
Andover, MA 01810

Tel: 978.688.6706
Fax: 978.688.6584

info@casa-systems.com
www.casa-systems.com