

EdgeMarc 250 Series

Enterprise Session Border Controllers

The EdgeMarc 250W combines multiple voice and data features into a single, easy to use enterprise session border controller.

Introduction

The EdgeMarc 250W is used to connect users to SIP trunking, Hosted PBX and other cloud-based IP services. It is also used to connect branch/remote offices to datacenter communications systems. The EdgeMarc 250W provides enterprise-class session border controller features in a package that is optimized for small and medium offices.

All-in-One

- Replaces multiple standalone devices by integrating an enterprise session border controller, ADSL, Ethernet WAN, LAN switch, IAD, PSTN gateway, 802.11 b/g/n WAP and more.

Survivability

- VoIP calls can be routed between WAN interfaces, over the PSTN or using certified USB modems during WAN link failures.

Quality of Service

- Packet prioritization and data traffic shaping for VoIP calls.

Security

- VoIP-aware stateful packet inspection firewall, encryption services and more.

Simplified Troubleshooting

- MOS statistics, call monitoring, LAN/WAN problem isolation from the router, Integrated

Product Benefits

Connect, protect, optimize and monitor IP-based communications

Enterprise-class session border controller optimized for small and medium offices

Applications:

- Connect key systems/IP phones to IP services like SIP trunking and Hosted PBX
- Connect branch/remote offices to datacenter communications systems



Key Features

Enterprise Session Border Controller

- Protocol mediation
- Security services

Flexible Interfaces

- IP to IP, IP to analog
- ADSL, Ethernet, USB broadband modems
- FXS to key systems or fax machines
- FXO for PSTN connections

Survivability

- Wan link redundancy: Ethernet, ADSL or certified USB broadband modem
- PSTN failover

NAT/Firewall Traversal

IPSEC encryption

- 2 Mbs throughput

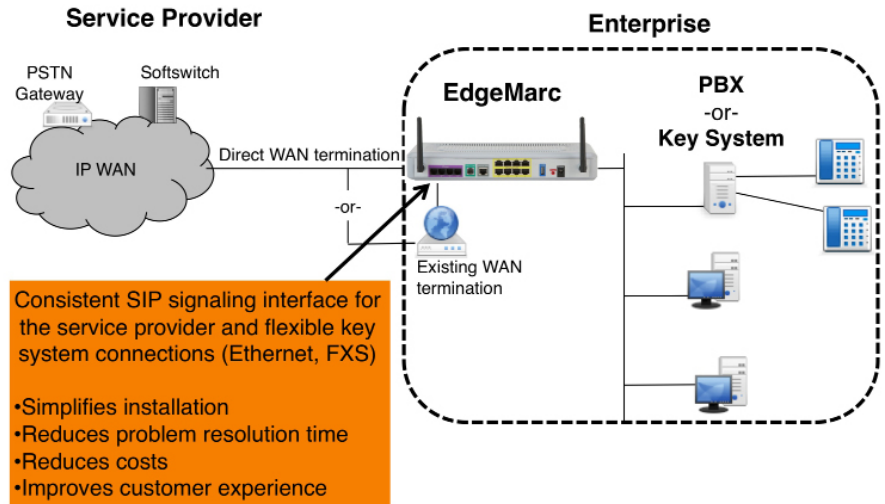
Traffic Management

- Prioritization
- Shaping

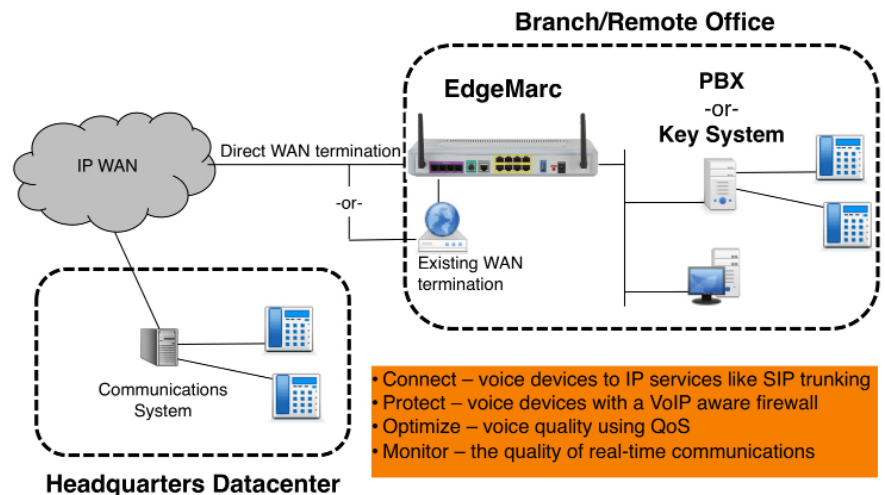
Call Quality Monitoring

- LAN and WAN interface scores
- Listening quality MOS
- Conversational quality MOS
- R-factor and more

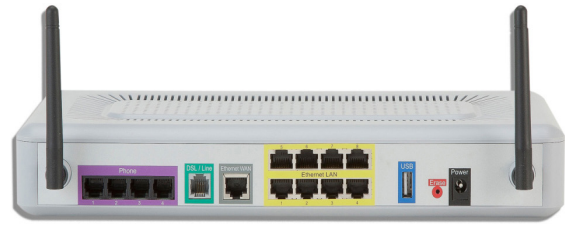
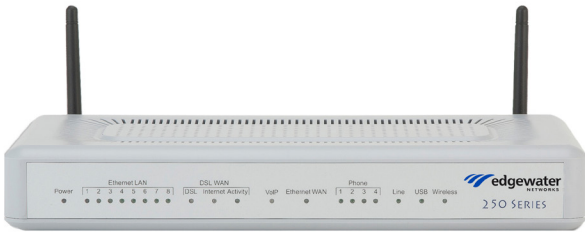
SIP Trunking Application



Branch/Remote Office Connectivity



Specifications



Interfaces

ADSL WAN: 1 port (shared with FXO)

- Support for ADSL, ADSL2, ADSL2+ (G.992.1)
- Support for Annex A, Annex B, Annex M

Ethernet WAN: 1 x 10/100 Mbps

- Auto Sensing
- RJ-45
- Half or Full Duplex

Ethernet LAN: 8 x 10/100/1000 Mbps

- Auto Sensing
- RJ-45
- Half or Full Duplex
- Managed VLAN

Phone/FXS: 4 port RJ-11

- Loop start
- Ringer Equivalency Number (REN): 5 per port/10 per system
- Ringing voltage: $\geq 50V_{rms}$ at 20 Hz sinusoidal waveform
- Selectable resistive and complex impedances for global usage
- 48V on-hook voltage
- 24mA off-hook current

Line/FXO: 1 port RJ-11

- Loop start
- Far end disconnect supervision - battery reversal
- Far end disconnect supervision - RTP silence detection

Wireless: 802.11 WAP for Data

- b/g/n, WEP, WPA/WPA2, AES

USB Port: 1

Power, Dimensions and Certifications

Height 1 .59", **Width** 12", **Depth** 7.10"

Weight: 1.75 lbs

Power: External Brick: 12V, 3.0A

Power Consumption: 36W (Maximum)

Certifications: UL, cUL, CE, FCC Part 68, FCC Part 15, Industry Canada, CB, ROHS, TBR21

VoIP

- SIP ALG
- NAT for SIP
- Survivability (SIP) - station to station
- Survivability (SIP) - PSTN failover
- SIP registration pacing
- Softswitch redundancy
- Proxy mode
- Multi-homed proxy mode
- Transparent proxy mode
- EdgeView Plug & Dial Compatible
- Dynamic VoIP clients list
- SIP RFC 3261
- SIP RFC 2327
- SIP RFC 3263
- SIP RFC 2833
- VoIP Test Call Agent

Management

- Web GUI
- CLI
- HTTP, HTTPS
- SSH, Telnet
- SNMP v1, v3
- TCPdump, Traceroute, Ping, Syslog
- Configuration backup/restore
- Remote Upgrades (FTP)

System Services

- DHCP server
- Local TFTP/FTP server
- Automatic TFTP/FTP download on re-start

Specifications

Security

- Stateful packet inspection firewall
- VoIP aware firewall
- Dynamic network address translation
- Static network address translation
- Port address translation
- Denial of Service protection - SYN flood, UDP flood, ICMP flood, Fragment flood
- IPSec
- IKE key management
- 3DES
- AES
- SHA-1
- MD-5

Traffic Management/Routing/QoS

- Class-based queuing (up to 8)
- Prioritization on IP
- Prioritization on VoIP Protocol
- Traffic shaping
- Guaranteed bandwidth
- Upstream bandwidth management
- Downstream bandwidth management
- VoIP call admission control
- Diffserv marking
- Diffserv policing
- IP routing
- Secondary address/subinterface support
- VLAN - 802.1Q (up to 16)

Passive Call Quality Monitoring

- Per call statistics
- LAN side measurements
- WAN side measurements
- Listening quality - Mean Opinion Score (MOS)
- Conversational quality - Mean Opinion Score (MOS)
- Listening quality R-factor
- Conversational quality R-factor
- Below threshold MOS alerts
- Jitter
- Packet loss

Call Features- Phone and Line Ports

- SIP User Agent
- SIP PSTN gateway
- Transfer
- Hold
- Conferencing (Network based)
- Caller id
- Call waiting
- T.38 fax support
- G711 u-law
- G711 a-law
- G722
- G723
- G729
- Inbound PSTN calling line port
- Inbound PSTN calling line port - forwarded phone number or extension
- Inbound PSTN calling line port - 2 stage dialing (survivable mode)
- Outbound calling line port - PSTN failover (survivable mode)
- Outbound calling line port - local enterprise gateway

Ordering Information

250W-100-0002: 250W EdgeMarc 2 Enterprise Session Border Controller - 8 LAN+ 1 WAN (ADSL or Ethernet) + 4FXS/1FXO + 802.11 WAP

250W-100-0005: 250W EdgeMarc 5 Enterprise Session Border Controller - 8 LAN+ 1 WAN (ADSL or Ethernet) + 4FXS/1FXO + 802.11 WAP

250W-100-0010: 250W EdgeMarc 10 Enterprise Session Border Controller - 8 LAN+ 1 WAN (ADSL or Ethernet) + 4FXS/1FXO + 802.11 WAP

250U-1xx-5: 250 EdgeMarc VoIP License Upgrade - 5 WAN calls

250U-1xx-10: 250 EdgeMarc VoIP License