

EdgeMarc 4500 Network Services Gateway

Introduction

The 4500 is the ideal device for connecting business VoIP networks to service providers. It acts as a demarcation point for VoIP services by combining important VoIP, data, traffic management, diagnostic and security functions into a single, easy to use converged networking router.

The 4500 supports many applications including hosted VoIP, SIP trunking and enterprise video over IP. It includes a 10/100 Mbps Ethernet WAN, VPN hardware accelerator and an integrated 4 port managed VLAN switch.



Feature Rich, Simple to Use - Key Features

- VoIP application layer gateway (SIP and H.323) resolves NAT/Firewall traversal issues
- VoIP survivability (local)
- VoIP-aware VPN/Firewall
- VoIP call admission control
- Passive call quality monitoring (MOS, jitter, latency and more)
- Stateful packet inspection firewall
- QoS: priority queuing, traffic shaping, diffserv marking/policing
- 10/100 Mbps Ethernet WAN
- Integrated 4 port managed Ethernet switch with VLAN support
- IPSEC VPN hardware accelerator
- DHCP server
- NAT/PAT

Product Benefits

All-in-one

Replaces multiple standalone devices needed for converged networking environments.

Security

IPSec, Stateful packet inspection firewall, optional "media-aware" ALG security.

Quality of Service

Packet prioritization and data traffic shaping for VoIP calls, survivability.

Plug & Dial

Interoperates with top softswitch vendors to configure IP phones and the integrated analog ports in minutes, not hours.

Simplified diagnostics

MOS statistics, call monitoring, LAN/WAN problem isolation from the router, TCP-dump, PING, Traceroute and more.

Carrier-grade, yet built for business

Businesses can benefit from a tried and tested platform designed for large scale service provider deployments.



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Specifications

Interfaces

Ethernet WAN	1
Autosensing	Yes
10/100 Mbps	Yes
Duplex	Full or half
PPPoE	Yes
Ethernet LAN	4
Autosensing	Yes
10/100 Mbps	Yes
Duplex	Full or half
Managed VLAN	Yes
USB ports	2
Console Connector	DB9 Male



Power, Dimensions, Certifications

Size	Height 1.77", Width 10.0", Depth 7.0"
Weight	2 lbs.
Power	External Brick (AC)- 12V, 3.0A
Certifications	
UL	Yes
CE	Yes
FCC Part 15	Yes
Industry Canada	Yes

Security

Stateful packet inspection firewall	Yes
VoIP protocol aware firewall	Yes
Dynamic network address translation	Yes
Static network address translation	Yes
Port address translation	Yes
Denial of Service protection - SYN flood	Yes
Denial of Service protection - UDP flood	Yes
Denial of Service protection - ICMP flood	Yes
Denial of Service protection - Fragment flood	Yes
IPSec	Yes
IKE key management	Yes
3DES	Yes
AES	Yes
SHA-1	Yes
MD-5	Yes
IPSec Hardware Acceleration	Yes
Number of Tunnels	Up to 12

Management

Web GUI	Yes
CLI	Yes
http, https	Yes
SSH, Telnet	Yes
SNMP V1	Yes
SNMP V3	Yes
TCPdump, Traceroute, Ping, Syslog	Yes
Configuration backup/restore	Yes
Remote Upgrades (FTP)	Yes

System Services

DHCP server	Yes
Local TFTP/FTP server	Yes
Automatic TFTP/FTP download on restart	Yes

Traffic Management/QoS/Routing

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

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Specifications

VoIP	
SIP ALG	Yes
H.323 ALG	Yes
NAT for SIP	Yes
NAT for H.323	Yes
Survivability (SIP) - station to station	Yes
Survivability (SIP) - PSTN failover	Yes
SIP registration pacing	Yes
Softswitch redundancy	Yes
Proxy mode	Yes
Multi-homed proxy mode	Yes
Transparent mode	Yes
EdgeView Plug & Dial Compatible	Yes
Dynamic VoIP clients list	Yes
SIP RFC 3261	Yes
SIP RFC 2327	Yes
SIP RFC 3263	Yes
SIP RFC 2833	Yes
H.323 version 4	Yes
H.225.0v5	Yes
H.245.0v10	Yes

Passive Call Quality Monitoring	
Per call statistics	Yes
LAN side measurements	Yes
WAN side measurements	Yes
Mean Opinion Score (MOS)	Yes
Bad MOS score alarms	Yes
Below threshold MOS counters	Yes
Degradation in MOS due to network impairments	Yes
Jitter	Yes
Packet loss	Yes
Consecutive lost packets	Yes
Total # of RTP packets received	Yes
Sum of received & expected packets	Yes
Out of sequence packets	Yes
Average packet loss burst length	Yes
Estimated jitter buffer delay	Yes
Estimated jitter buffer packet discard rate	Yes
Probability that degradation is due to LAN congestion	Yes
Probability that degradation is due to Router congestion	Yes
Probability that degradation is due to access link congestion	Yes
Probability that degradation is due to diverse routing	Yes
Probability that degradation is due to unreliable link	Yes

Ordering Information/SKU	
EM-4500-02	4500 EdgeMarc 2 Converged Networking Router, 2 concurrent WAN calls
EM-4500-05	4500 EdgeMarc 5 Converged Networking Router, 5 concurrent WAN calls
EM-4500-10	4500 EdgeMarc 10 Converged Networking Router, 10 concurrent WAN calls
EM-4500-15	4500 EdgeMarc 15 Converged Networking Router, 15 concurrent WAN calls
EM-4500-30	4500 EdgeMarc 30 Converged Networking Router, 30 concurrent WAN calls
EM-4500U-05	4500 EdgeMarc VoIP License Upgrade 2 to 5 WAN calls
EM-4500U-10	4500 EdgeMarc VoIP License Upgrade 5 to 10 WAN calls
EM-4500U-15	4500 EdgeMarc VoIP License Upgrade 10 to 15 WAN calls
EM-4500U-30	4500 EdgeMarc VoIP License Upgrade 15 to 30 WAN calls

Ordering Information

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