EdgeMarc 7301, 7400

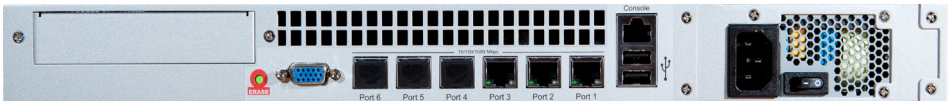
Intelligent Edge– Enterprise Session Border Controllers

Deploying voice communications over the Internet can create quality and security issues that do not normally exist with traditional phone systems. To overcome these issues, Intelligent Edges are deployed on the customer network edge to ensure successful VoIP implementations. VoIP service providers deploy an Intelligent Edge in the form of an enterprise session border controller (eSBC) to improve voice quality and visibility into the customer environment, supporting both SIP trunking and hosted unified communications.

Ribbon Communications' EdgeMarc 7000-Series Intelligent Edge is designed for the high performance applications of the mid-sized and large enterprise. Delivering gigabit data rates and up to 2,000 simultaneous calls, the 7000-Series Intelligent Edge can support thousands of end users.

Like all EdgeMarc Intelligent Edges, the 7000-Series scales according to user demands, allowing service providers to deliver high quality VoIP solutions to customers of all sizes and network configurations. Other key features include:

- Comprehensive security design includes a SIP aware firewall with stateful packet inspection
- Detailed call statistics and quality measurements are analyzed by the EdgeView Service Control Center for troubleshooting and remediation
- QoS functions including traffic shaping, guaranteed bandwidth, and call admission control
- Multiple WAN ports enable link redundancy and stateful SIP transfer



Key Benefits

- Supports up to 2,000 concurrent calls and 8,000 endpoints at data rates up to 1 Gbps.
- EdgeMarc 7400 contains a hot-swappable power supply for greater resilience
- Cloud2Edge Complete compatible, Ribbon Communications SaaS solution for Network Edge Orchestration
- Skype for Business capable (optional)

Ease of Management

As with all EdgeMarc Intelligent Edges, the EdgeMarc 7000-Series is managed with the EdgeView Service Control Center. EdgeView provides a comprehensive view of your VoIP network, enabling you to easily monitor performance and quickly remediate issues, leading to an improved customer experience and reduced costs.

Features and Capabilities	Specifications
Performance	
Maximum data throughput	1Gbps
Maximum sessions, voice only	2,000
Maximum number of registered devices (endpoints)	8,000
Cloud2Edge Complete Compatible	Yes. See www.edgewaternetworks.com/products-services/cloud2edgecomplete for more details
SIP Features	
Network Address Translation	• Network Address Translation (NAT): static, dynamic • Port Address Translation (PAT) • (provides topology hiding of hosts on the LAN)
Back-to-Back User Agent	Yes
Application Layer Gateway (SIP proxy)	Yes
Proxy Modes	• Transparent proxy mode • Multi-homed proxy mode
SIP Registration Pacing	Registration rates (LAN-side/WAN side) can be controlled
VoIP Test Call Agent	Remotely verify and troubleshoot connectivity
Header Manipulation	Full control to add/delete/modify SIP headers
Signaling Protocol (LAN/WAN)	UDP, TCP, TLS
Media Protocol (LAN/WAN)	RTP, SRTP
SIP Standards Compliance (primary standards)	• RFC 3261 • RFC 2327 • RFC 3263 • RFC 2833
Codecs	G.711, G.722, G.726 G.729
Security	
Firewall	Stateful, VoIP aware firewall
Denial of Service protection	SYN flood, UDP flood, ICMP flood, Fragment flood
Encryption and Authentication	TLS, SRTP, HTTPS, SSH, Radius
Encryption protocols supported	3DES, AES, SHA-256, MD-5
Key Management	IKE key management, IPSec
Proxy ARP	Yes
IPsec VPN	Yes (max 12 tunnels)
PPTP support	MSCHAP, MSCHAP V2, MSCHAP+MPPE
Voice Quality Measurement	
Per call statistics (LAN/WAN)	Full MOS support (including Jitter, Packet Loss)
Mean Opinion Score (MOS)	MOS tabulated every 10 seconds of every call on both WAN and LAN side of call leg.

Features and Capabilities	Specifications
Traffic Management/Routing/QoS	
Routing	• BGP - fully functional BGP stack supporting Layer 2/3 IP WAN solutions (MPLS) • RIP • OSPF • PPPoE • Secondary address / Subinterface
Multicast	Protocol Independent Multicast – sparse mode (PIM-SM)
Traffic prioritization	• Class-based queueing (up to 8) • Prioritization on IP and port • Prioritization on VoIP protocol • Traffic Shaping • Call Admission Control • Upstream, downstream bandwidth management
DHCP server	Yes
QoS	Diffserv (DSCP), IP Precedence, policing
VLANs	• 802.1Q (up to 16) • Multi-VLAN ALG support
Network addressing	IPv4, IPv6
System Management	
Device Management	CLI, (SSH, Telnet) Web GUI (HTTP, HTTPS)
Remote upgrades, back-up, restore	TFTP, FTP, SCP, HTTP, HTTPS
Firmware	Dual local firmware image for upgrade and recovery
Network Management	SNMP v1, v3
Message Analytics	System monitoring and SIP statistics
Debug tools	Packet capture (tcpdump), traceroute, ping, syslog
Endpoint monitoring	Two-way Active Monitoring Protocol (TWAMP)
Edge Orchestration	EdgeView Service Control Center for device and endpoint management
EdgeView key functions	• Remote troubleshooting • Proactive management • Inventory management • Configuration management • Reporting and data analytics (for more information, please see: www.edgewaternetworks.com/products-services/edgeview/)
Hardware Specifications	
Dimensions (W x D x H)	16.75” x 13.375” x 1.7” (1 u)
Weight	6.5 lbs.
Mounting Options	Rack Mountable
MTBF	179,330 hours
Operating Temperature	0-40 deg. Celsius
Operating Relative Humidity	4% to 90% (non-condensing)
Compliance	RoHS 2.0, UL/cUL, CB, FCC part 15, FCC part 68, IC, CE, RCM and VCCI
Power	100/240 VAC-auto selecting, 50-60 Hz
Redundancy	7400: dual, hot-swappable power supplies
Hardware Warranty	5 years
Software support and maintenance	First year included

About Ribbon Communications

Ribbon is a company with two decades of leadership in real-time communications. Built on world class technology and intellectual property, Ribbon delivers intelligent, secure, embedded real-time communications for today's world. The company transforms fixed, mobile and enterprise networks from legacy environments to secure IP and cloud-based architectures, enabling highly productive communications for consumers and businesses. With locations in 28 countries around the globe, Ribbon's innovative, market-leading portfolio empowers service providers and enterprises with rapid service creation in a fully virtualized environment. The company's Kandy Communications Platform as a Service (CPaaS) delivers a comprehensive set of advanced embedded communications capabilities that enables this transformation.

To learn more visit RibbonCommunications.com