EdgeMarc 2900e and 2900a PoE

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 2900e and 2900a Power over Ethernet (PoE) Intelligent Edge devices are ideally suited for Hosted PBX applications that require PoE functionality to power IP endpoints. This solution enables service providers to easily support locations with less than 12 phones with a single device (larger implementations can utilize external PoE switches).

EdgeMarc Intelligent Edges scale according to user demands, allowing service providers to deliver high quality VoIP solutions to customers of all sizes and network configurations.

Key Benefits

- 12 fully managed PoE ports
- Combined deployment of Edge-View Service Control Center and EdgeMarc Intelligent Edge greatly reduces operational expenses and increases customer satisfaction
- Supports data rates up to 1 Gb/s and 300 concurrent calls
- Cloud2Edge Complete capable

Ease of Management

As with all EdgeMarc Intelligent Edges, the EdgeMarc 2900e and 2900a PoE are 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.

	EdgeMarc 2900e PoE	EdgeMarc 2900a PoE
Ports		
WAN 1Gbps Ethernet (RJ-45)	2	2
Optical WAN 1 Gbps ports (SFP)	2	2
LAN 1 Gbps Power over Ethernet (RJ-45)	12	12
FXO (RJ-11)	0	2
FXS (RJ-11)	0	6
Micro SD (SDXC) slot	1	1
Console (RJ-45)	1	1

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Features and Capabilities	Specifications
Performance	
Maximum data throughput	1Gbps
Maximum sessions, voice only	300
Maximum number of registered devices (endpoints)	2000
PoE ports	Twelve (12) 15.4 watt ports, fully managed
Cloud2Edge Complete Compatible	Yes. See www.edgewaternetworks.com/products-services/cloud2edgecomplete for more details
Analog Port Features (2900a only)	
FXO Port	Loop start, Far end disconnect supervision, Battery reversal, RTP silence detection
FXS Port	• Loop Start • Ringer Equivalency Number (REN) – 5/port, 20/system • Ringing voltage >= 48Vrms 20Hz, selectable impedance • 48v on hook voltage, 24mA off-hook current
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
Fax	T.38 support for FXS interfaces
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.

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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)	17" x 11.4" x 1.75" (1U rack)
Weight	8 lbs.
Mounting Options	Shelf, Rack Mountable
MTBF	332,520 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	110-240 VAC, 50-60 Hz, 3.2 A
Hardware Warranty	5 years
Software support and maintenance	First year included

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