



# EdgeMarc 7301

Intelligent Edge™ – Enterprise Session Border Controllers



Deploying voice communications over the Internet has the potential to create quality and security issues if providers don't take proactive measures to prevent issues. Ribbon's Intelligent Edge™ solutions are deployed at the edge of a customer's network to give communication service providers a better way to monitor, manage and secure voice traffic as it enters and exits a customer's site.

EdgeMarc elements can operate independently or be centrally managed with the EdgeView Service Control Center. By centrally managing hundreds or thousands of EdgeMarc elements, EdgeView gives providers a local view of issues as well as a holistic view of their network. EdgeView also enables:

- Zero touch provisioning for consistent, low touch, low cost deployments.
- Centralized reporting and management tools reduce expensive truck rolls and many of the customer satisfaction issues that create churn.

Ribbon's EdgeMarc 7301 Intelligent Edge™ is focused on high-performance applications in mid-sized and large enterprise. It has the largest call capacity in the EdgeMarc portfolio, delivering up to 2,000 simultaneous calls and gigabit data rates; the 7301 Intelligent Edge™ can support thousands of end users.

Like all EdgeMarc Intelligent Edges™, the 7301 is licensed to scale 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 that 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 Capabilities

- Highly scalable - Up to 2,000 concurrent calls and 8,000 endpoints at data rates up to 1 Gbps.
- Available in Cloud2Edge configurations
- Microsoft Certified for Teams Direct Routing
- Zoom Certified for Zoom Phone

### Key Connectivity Choices

Up to 2000 concurrent sessions

4 Gb LAN ports

2 Ethernet WAN ports

Note: The EdgeMarc 7400 is also available - it is identical to the EdgeMarc 7301 and adds dual hot swappable power supplies

zoom

Certified

Certified for Zoom Phone



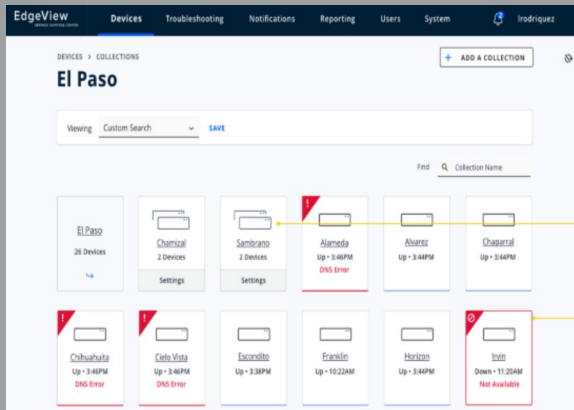
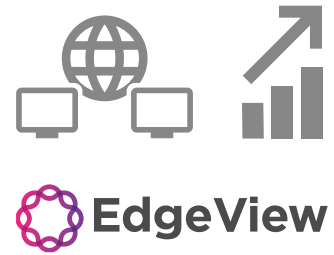
Microsoft Certified for Teams Direct Routing

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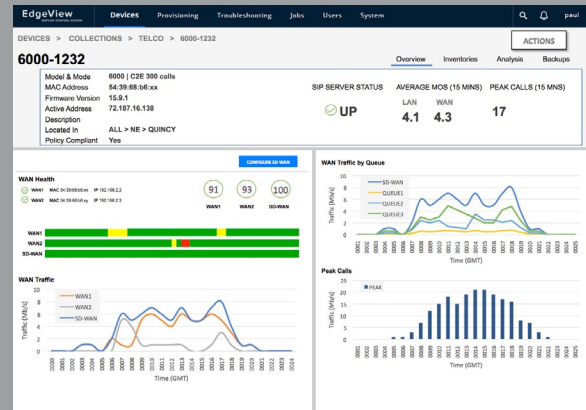
## Centrally Managed - A Strategic Investment that Pays for Itself

As with all EdgeMarc Intelligent Edges™, the EdgeMarc 7301 is centrally managed with the EdgeView Service Control Center. EdgeView provides zero touch provisioning along with a comprehensive view of the customer and provider's VoIP network, enabling providers to monitor performance and quickly remediate issues, leading to improved customer experience and reduced costs.

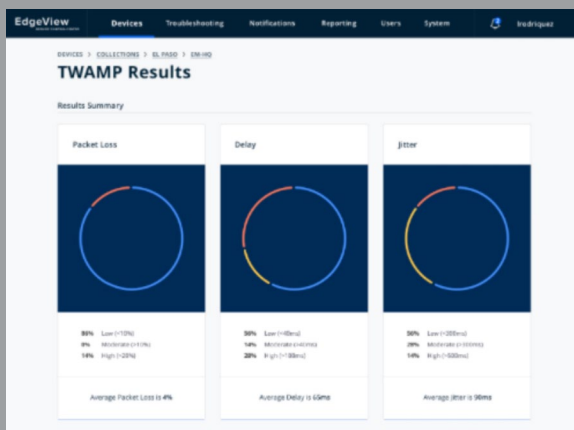
It's no wonder many of the world's leading service providers use EdgeView and deploy an EdgeMarc element as part of EVERY one of their UCaaS and SIP Trunk deployments. The solution pays for itself.



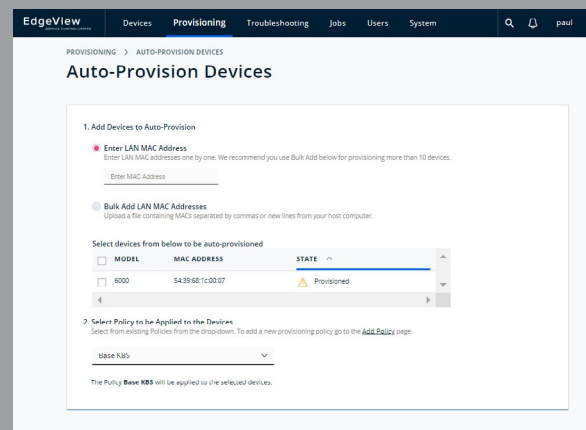
Manage hundreds of thousands of sites and devices



Easily spot issues



Measure voice quality to the desktop



Zero Touch Provisioning



PSTN Gateway



WAN Router



NAT/DHCP



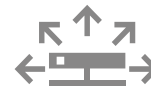
SIP Firewall



LTE



ALG/B2BUA



Voice Quality Monitor



Traffic Shaper

EdgeView and the EdgeMarc 7301 provide a comprehensive solution to secure and centrally manage communications all the way to the enterprise edge

Features and Capabilities	Specifications
<b>Performance</b>	
Maximum data throughput	1 Gbps
Maximum sessions, voice only	2,000
Maximum number of registered devices (endpoints)	8,000
Cloud2Edge Complete Compatible	Yes. See <a href="https://ribboncommunications.com/solutions/enterprise-solutions/intelligent-edge-sd-wan/cloud2edge-complete">https://ribboncommunications.com/solutions/enterprise-solutions/intelligent-edge-sd-wan/cloud2edge-complete</a> for more details
<b>SIP Features</b>	
Network Address Translation	<ul style="list-style-type: none"> <li>• Network Address Translation (NAT): static, dynamic</li> <li>• Port Address Translation (PAT)</li> <li>• (provides topology hiding of hosts on the LAN)</li> </ul>
Back-to-Back User Agent	Yes
Application Layer Gateway (SIP proxy)	Yes
Proxy Modes	<ul style="list-style-type: none"> <li>• Transparent proxy mode</li> <li>• Multi-homed proxy mode</li> </ul>
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)	<ul style="list-style-type: none"> <li>• RFC 3261</li> <li>• RFC 2327</li> <li>• RFC 3263</li> <li>• RFC 2833</li> </ul>
Codecs	G.711, G.722, G.726 G.729
<b>Security</b>	
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
<b>Voice Quality Measurement</b>	
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
<b>Traffic Management/Routing/QoS</b>	
Routing	<ul style="list-style-type: none"> <li>• BGP - fully functional BGP stack supporting Layer 2/3 IP WAN solutions (MPLS)</li> <li>• RIP</li> <li>• OSPF</li> <li>• PPPoE</li> <li>• Secondary address / Subinterface</li> </ul>
Multicast	Protocol Independent Multicast – sparse mode (PIM-SM)
Traffic prioritization	<ul style="list-style-type: none"> <li>• Class-based queueing (up to 8)</li> <li>• Prioritization on IP and port</li> <li>• Prioritization on VoIP protocol</li> <li>• Traffic Shaping</li> <li>• Call Admission Control</li> <li>• Upstream, downstream bandwidth management</li> </ul>
DHCP server	Yes
QoS	Diffserv (DSCP), IP Precedence, policing
VLANs	<ul style="list-style-type: none"> <li>• 802.1Q (up to 16)</li> <li>• Multi-VLAN ALG support</li> </ul>
Network addressing	IPv4, IPv6
<b>System Management</b>	
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	<ul style="list-style-type: none"> <li>• Remote troubleshooting</li> <li>• Proactive management</li> <li>• Inventory management</li> <li>• Configuration management</li> <li>• Reporting and data analytics</li> </ul> (for more information, please see: <a href="https://ribboncommunications.com/products/service-provider-products/management/edgeview-service-control-center-scc">https://ribboncommunications.com/products/service-provider-products/management/edgeview-service-control-center-scc</a> )
<b>Hardware Specifications</b>	
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
Hardware Warranty	5 years
Software support and maintenance	First year included

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