Model 6300 RoIP Gateway

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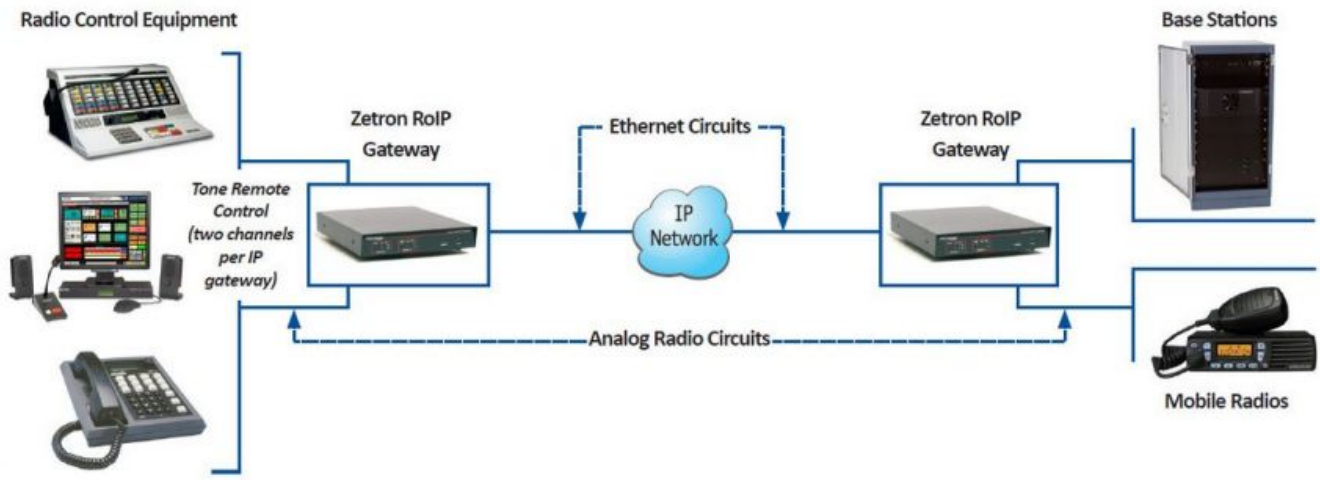
Zetron's RoIP (Radio-over-IP) Gateway is designed to transport analog wireline two-way radio control circuits over IP networks. Each RoIP Gateway connects to one (Model 6301) or two (Model 6302) radio circuits, and each circuit support analog audio, binary control (PTT & COR) as well as RS-232 serial data. The analog audio is field selectable between a balanced 4-wire connection suitable for most fixed station radios, and unbalanced transmit and receive audio suitable for direct connection to most mobile radios. In many cases, a mobile radio's programming and/or control head serial data car be transported over IP as well (contact Zetron for radio serial data compatibility). A pair of RoIP Gateways are thus able t transport one or two analog radio circuits across an IP network.

Product Features and Configuration

- Transports voice (3-wire unbalanced or 4-wire balanced), I/O (PTT & COR) and Data (RS-232) for up to two radio circuits.
- Handles Tone Remote Control (TRC) and Local/E&M radio circuits.
- Remote PTT operation controlled by VOX or COR.
- Use of TCP and Unicast UDP allows operation over standard IP networks.
- Compatible with many IP-based RTP voice recorders.
- Field-selectable voice compression includes PCM (64 kbps) and ADPCM (16-32 kbps).
- Fully configurable via web browser, including all audio levels.
- Embedded operating system, and no moving parts. Designed for harsh, unattended radio site environments.
- Optional 1U x 19" rack mount for two units.
- Operates from 12 Volts DC.
- Optional direct, built-in support for the Department of Homeland Security (DHS).

Radio-over-IP using Model 6300 RoIP Gateway



AT *Radio dispatch console or desktop remote (up to two positions) extended over IP.*

SPECIFICATIONS

NETWORK REQUIREMENTS		***RADIO CIRCUIT AUDIO***	
Device Payload:	1 Kbps idle, 104 Kbps active (136Kbps Ethernet) using G.711 per channel	Frequency Response:	300 Hz to 3400 Hz +1/-3 dB
Network Loading:	< 40% (< 30% mission critical). Bandwidth Ratio of IP bearer should be 2 to 3 times actual payload to ensure optimum voice quality	Hum, Noise & Cross-Talk:	45 dB below full rated output
		Distortion:	3% or less
		Line Balance:	60 dB @ 1004Hz
		Line Impedance:	Nominal 600 ohms for Tx and Rx pairs with alternate setting of 5000 ohms
Packet Loss:	< 0.1%		
Packet Error:	< 0.01%	Line Pairs:	4-Wire (separate transmit and receive) or 2-Wire (combined transmit & receive), half or full duplex
Packet Delay:	< 400 ms (< 40 ms mission critical)		
Packet Jitter:	< 50 ms (< 20 ms mission critical)		
Network Type:	Fully switched Ethernet, full-duplex, capable of passing unicast UDP. Sharing the network with other IP traffic may negatively impact voice quality and therefore should not be considered for mission-critical applications	Line Receive Input Level:	-35 dBm to +10 dBm
		Line VOX Sensitivity:	-35 dBm to 0 dBm
		Local Receive Input:	50K ohm impedance ground referenced, 40 mVpp to 5 Vpp
GENERAL		Local Transmit Output:	50 ohm impedance ground referenced, 40 mVpp to 3.6 Vpp
Dimensions:	1.5 x 7.75 x 10.25 inches, 1.75 x 19.0 x 10.25 inches optional rack panel (H x W x D)	***RADIO CIRCUIT CONTROL***	
Weight:	1.9 lbs	PTT/M-Lead Signal:	50 mA maximum to ground, 24 volts open circuit max
Operation Temperature Range:	0°C to +60°C	COR/E-Lead Signal:	Active < 0.8V, Inactive > 2.0V 10 pull-up to 5V
Power Input:	10.6 to 16 VDC, 0.5A max. (initial power-on surge exceeds 2A)	***RADIO CIRCUIT DATA***	
Network	10-Base-T Ethernet connection using	Format:	7-bit or 8-bit, serial, asynchronous

Connection:	RJ45. HTTP compatible with Microsoft Internet Explorer 6 or later		data
		Electrical:	RS-232 or TTL compatible
		Data Rate, Parity & Stop Bits:	300 to 38.4k bps, odd-even-no parity, and 1 or 2 stop bits
Vocoder Support:	G.711 (64 kbps) and G.726 (32-24-16 kbps) & GSM (13 kbps)		

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