Radio Over IP GSM/LTE Gateway
ROIP-300GL

Features and Specifications

Radio over IP GSM/LTE Gateway has been designed as a gateway between the Conventional Analog or Digital Two Way Radios with the Internet (IP Protocol) over Ethernet Media and 3G/4G LTE Data Network. It is an advanced version of ROIP with added feature of LTE Data Connectivity. It provides interconnectivity of Wireless Radio over both LTE Data Network/ Ethernet Network with redundant failure/ auto switching/ parallel connection mechanism. It is very useful for emergency communication over the LTE Data Network in case of Ethernet Failure.

APPLICATIONS:

- Radio Over IP Interface for Connecting different Radio Networks together over the IP Network.
- Interconnect between different Communication Platforms *(Radio Network, Ethernet Network and LTE Data Network)* on a Single Unit.
- Point to Point and Multi Point Connectivity of the Radio Networks over IP Network.
- ROIP Server Monitoring / Dispatch Console for managing different Radio Networks at the Control Room.
- Redundant Radio Network Communication Setup over Ethernet Network and LTE Data Network *(Auto Redundancy LTE Data Connectivity to the Remote ROIP/ ROIP Server Console in case of Ethernet Link Failure).*
- Simultaneous Connectivity to Single or Multiple Server over Ethernet and LTE Data Both.
- Radio Connectivity with Radios at Other Locations in Server Configuration in Uni-cast, Multi-cast and Broadcast Mode.
- Multi Point Configuration Server Configuration Connectivity
- Monitoring Configuration over Laptop/ Desktop
- ROIP Server Console Dispatcher Facility in Server Configuration
- Provision for Communication Recording Facility in Server Configuration

FEATURES:-

- Auto Link Establish between ROIP and ROIP/ ROIP Server over GSM Call on IP Link Failure
- DHCP Enabled IP Configuration
- Web Based Configuration
- Inbuilt Repeater Mode for Radio Interface
- Vox Operated Radio Interface
- CSQ Priority Feature over Transmission
- DTMF Enabled Configuration from Radio
- RSSI Level Indication on ROIP Server Console*
- Channel Change Locally from Man Pack Sets through DTMF Commands*
- Remote Channel Change from ROIP Server Console*
- Audio Codec Selection (ALAW 64 kbps/ ADPCM 32 kbps)
- Accessory Input and Output Pins Control
- Programmable Radio PTT/ Transmission Delay
- Auto-Connection over the IP Network
- SIM Network Detection LED Indication
- Communication from Laptop/ Desktop on any Radio Channel
- DTMF Controlled Manual/ Auto Call Setup with the other ROIP
- DTMF Controlled Manual/ Auto Call Setup with ROIP Server Console System

CONFIGURATION DIAGRAM:-

SPECIFICATIONS

IP Network Requirements
- Device Payload: *1kbps idle, 32Kbps(ADPCM)/ 64kbps(ALAW) active per user*
- Network Loading: *Minimum 128kbps Network Bandwidth*
- Packet Loss: *<1%*
- Packet Delay: *<100ms (Programmable depending upon net speed)*
- Network Type: *Fully switched Ethernet, full duplex.*
- SIM Network: **LTE Bands** (*LTE TDD:* B38/B39/B40/B41,
  LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28)
  WCDMA Bands (B1/B2/B4/B5/B6/B8/B19)   **GSM Bands** (B2/B3/B5/B8)

General
- Dimensions: *1.75 x 8.2 x 4.3 inches (H x W x D)*
- Weight: *730g*
- Operation Temperature Range: *-10 to +55 Celsius*
- Power: *9V DC, 850mA*
- Network Connection: *10/100 Base-T Ethernet connection using RJ-45*
- SIM Card Slot with Ext. Antenna.

Radio Signals Used
- PTT
- Carrier Sense (CSQ)
- Receive Audio
- Transmit Audio
- Ground
- *RSSI Level Indication**
- *4 Channel Select Out Pins **

Other Signals Used
- *Accessory Relay Control Output Pin**
- *Accessory Voltage/Relay Sense Input Pin**

Compatible Radio *for Interfacing*
- All VHF/UHF Band Analog Conventional Mobile Base Radios
- VHF/UHF Band Analog Repeater Stations
- VHF/UHF Band Man Pack Sets
- VHF/UHF Band Digital Mobile Base Radios

(Only Audio Communication, Digital Features not extended over the IP Network)
***RSSI Signal Strength, Channel Change Features are subjected to availability of these pins on the Radio Accessory Port.**

TECHNICAL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT OBLIGATION OR NOTICE