Radio Over IP GSM Gateway

ROIP-300G

Features and Specifications

Radio over IP GSM Gateway has been designed as a gateway between the Conventional Analog or Digital Two Way Radios with the IP Protocol and the GSM 2G/3G Network (Audio Call). It is an advanced version of ROIP with added feature of GSM Call Connectivity. It provides interconnectivity of Wireless Radio over GSM Network/ IP Network with auto switch over mechanism. It is very useful for emergency communication over the GSM Network in case of IP Failure. It can also be used as a GSM Mobile Call Patch with the Wireless Radio Network or can be used as Radio Over IP Interface or both simultaneously.

APPLICATIONS:

- Authorized Access from your GSM Mobile from anywhere to your Radio Network (Analog/ Digital Radios) in your Office/ Home/ Factory/ Area.
- Monitoring of your Radio Communication Network from your Mobile.
- Communication Extension of your Personnel in the field with Man Pack Sets to the Control Room or Senior Officials over the GSM Call.
- Radio Over IP Interface for Connecting different Radio Networks together over the IP Network.
- Interconnect between different Communication Platforms *(Radio Network, IP Network and GSM 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 IP Network and GSM Network *(Auto GSM Call Setup to the Remote ROIP/ ROIP Server Console in case of IP Link Failure).*
- Emergency Radio Communication Setup with Control Room or other Senior Official over the GSM Call in case of Remote Location without IP Connectivity/ Operation in Progress *(Last Mile Communication)*
- Wide Area Radio Network Connectivity.

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FEATURES:-

Features/ Application	Radio GSM Gateway without IP Module	Radio IP GSM Gateway With IP Module
GSM To Radio Patch (Incoming Call)	Yes	Yes
Radio to GSM Patch (Outgoing Call)	Yes	Yes
Radio Over IP Interface for Connectivity of Radio with Remote ROIP Unit/ ROIP Server over IP Network	No	Yes
GSM Call Patch to ROIP Server/ Remote ROIP over IP Network	No	Yes
GSM Incoming Call Authorized Phone Number Access (White List)	Yes	Yes
GSM Outgoing Facility Access Control Feature	Yes	Yes
Password Enabled Access for Outgoing GSM Call	Yes	Yes
GSM Speed Dialing to Pre-defined Phone Number	Yes	Yes
Outgoing GSM Call Facility from ROIP Server via GSM	No	Yes
Auto Link Establish between ROIP and ROIP/ ROIP Server over GSM Call on IP Link Failure	No	Yes
DHCP Enabled IP Configuration	Yes	Yes
Web Based Configuration	Yes	Yes
GSM Call Disconnect on Mobile Activity Timer	Yes	Yes
Vox Operated Transmission from GSM	Yes	Yes
Inbuilt Repeater Mode for Radio Interface	Yes	Yes
Vox Operated Radio Interface	Yes	Yes
CSQ Priority Feature over Transmission	Yes	Yes
DTMF Enabled Configuration from Radio	Yes	Yes
RSSI Level Indication on ROIP Server Console*	No	Yes
Channel Change Locally from Man Pack Sets through DTMF Commands*	Yes	Yes
Remote Channel Change from ROIP Server Console*	No	Yes
Audio Codec Selection (ALAW 64 kbps/ ADPCM 32 kbps)	No	Yes
Accessory Input and Output Pins Control	No	Yes
Adjustable GSM Call Vox Delay	Yes	Yes
Programmable Radio PTT/ Transmission Delay	No	Yes
Auto-Connection over the IP Network	No	Yes
GSM SIM Network Detection LED Indication	Yes	Yes

Point to Point Configuration over IP Backbone/ Lan Cable	No	Yes
Point to Point Configuration over GSM Network	Yes	Yes
Multi Point Configuration	No	Yes
Monitoring Configuration over Laptop/ Desktop	No	Yes
Monitoring Configuration over GSM	Yes	Yes
Communication from Laptop/ Desktop on any Radio Channel	No	Yes
DTMF Enabled Dialing to other ROIP Users/ Group in Multi Point Configuration	No	Yes
ROIP Server Console Configuration Connectivity	No	Yes
ROIP Server Console Dispatcher Configuration Connectivity	No	Yes
Provision for Recording Facility on Desktop/ Computer with ROIP Server Console Software	No	Yes
DTMF Controlled Manual/ Auto Call Setup with the other ROIP	Yes	Yes
DTMF Controlled Manual/ Auto Call Setup with ROIP Server Console System	No	Yes

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.*

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, 500mA*
- Network Connection: *10/100 Base-T Ethernet connection using RJ-45*
- GSM SIM Card Slot with Ext. Antenna. (850 Mhz/ 900 Mhz/ 1800 Mhz/ 1900 Mhz Band)

Radio Signals Used

- PTT
- Carrier
- Receive Audio
- Transmit Audio
- Ground
- *RSSI Level Indication**
- *Channel Select Out Pin 1**
- *Channel Select Out Pin 2**
- *Channel Select Out Pin 3**
- *Channel Select Out Pin 4**

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 to the other IP/GSM Network)

**If these Radio Signal Pins Connections are available on the Radio Accessory Pins, then only RSSI Signal Strength, Channel Change Features could be used.*

TECHNICAL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT OBLIGATION OR NOTICE

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