

TCE RoIP System

TCE RoIP System offers the ideal RoIP solution for radio users. Primarily consists of the RoIP Gateway and the RoIP Management Software.

Built to operate in harsh radio frequency environments

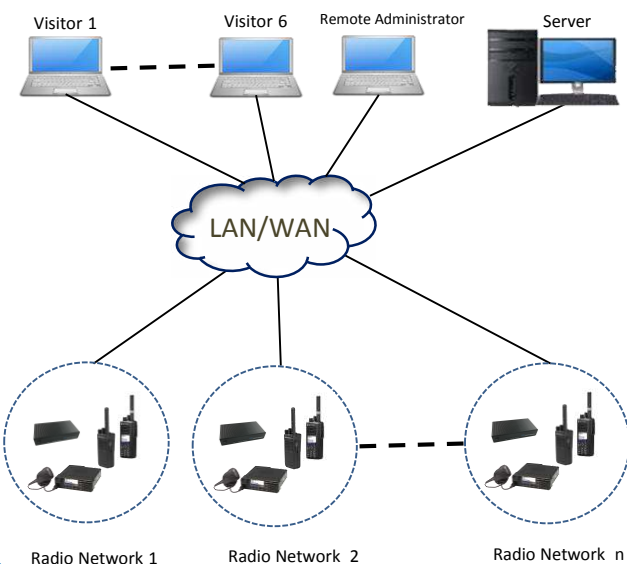
Ideal choice for 24/7 operations

RoIP Gateway

- Equipped with technology that allows conversion of analog audio and radio control signals into digital data.
- Allowing them to be transmitted over the digital network(internet /WAN/LAN) with minimal or no corruption of data during transmission.
- Analog audio is encoded and converted into standard audio codecs such as SPEEX, etc, which are then delivered using UDP (User Datagram Protocol), TCP (Transfer Connection Protocol) or a similar transport layer protocol over the digital network. On the receiving end, the encoded data is then decoded and converted back into analog audio and radio control signals.

RoIP Management Software

- A user-friendly software that utilizes a simple Graphic User Interface (GUI) to manage and monitor the interconnected radio network and various TCE RoIP Gateways from the comforts of a computer console.



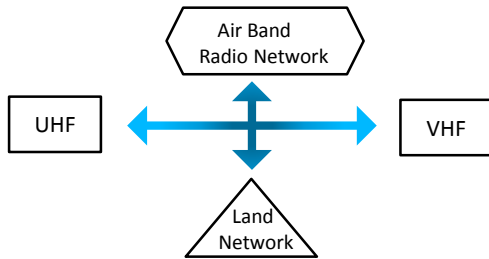
TCE RoIP System Diagram

Advantages & Benefits of RoIP System

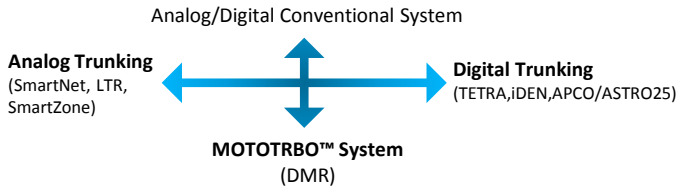
- ✓ **Extend Radio Coverage**
Allows radio communication to reach any distance with internet or wireless networks
- ✓ **Cost Effective Solution**
Cut costs by cutting out the costly and cumbersome repeater links with TCE RoIP Gateway
 - Minimal Installation
 - Minimal maintenance required
- ✓ **Overcome Radio Generation Gaps**
Connecting radio systems that operates on different platforms
E.g. : Digital radio to analog radios – MOTOTRBO to GP328 , etc.
- ✓ **Overcome Geographical Barriers**
Bridge radio networks located in different geographical areas/regions via the internet.
Allows remote access to the radio networks across different geographical regions
- ✓ **Bridge Radio Networks of Different Frequency Bands**
Connecting radio networks operating on different frequency bands. E.g. : Marine VHF radios to Airband radios; HF radios to VHF radios, etc.
- ✓ **Cross-linking Radio Networks of Different Systems**
For instance, linking Analog Conventional system with Trunking System (Analog System with TETRA/ iDEN etc)

TCE RoIP Applications

RoIP Application (1): Cross Frequency Link



RoIP Application (2): Cross System



RoIP Application (3): Live Voice Recording



RoIP Application (4): Remote Channel Selection

RoIP Management software (paired with Base/Repeater) allows user to remotely switch Radio Channels from the comfort of the control room.

When there are a lot of talk groups on different channels, the operator can select and switch to the desired channel through the RoIP Management Software.

(E.g. port operator, transportation company, hotel management).

RoIP Application (5): Movable Repeater system (MRS)

By installing a repeater and a Radio IP Gateway on a vehicle, the MRS becomes the ideal, instant solution for quick deployment communication.

MRS uses the broadband connectivity from the cellular 3G (HSDPA) or VSAT to achieve its mobility. MRS is most suited solution for natural disaster rescue, army training, VIP security and other operations that emphasize connectivity on the move.

RoIP Application (6): Wide Area Network Coverage

Provides wide area coverage via pairing the mobile base radios at different locations with a RoIP Gateway device. The RoIP Gateway devices then interlinks and creates wide network with extended coverage for portable radios. This allows users to overcome the pitfall of relatively low coverage area for portable radios and provides interconnectivity for portable radio users moving from one geographical region to another.

TCE RoIP System Features

Minimal Maintenance Required

- Built to withstand operation in harsh environments

Easy Deployment

- Easy installation ('Plug and Play')
- Minimal Configuration required
- Supports internet, dynamic IP & Broadband /WAN / LAN/ 3G /4G

Linking Different Radio Networks

- Connecting radio networks of different Frequency Bands

Remote Access

- Supports management, control and communication with radio network via remote access

Expandable Features

- Radio Phone Patch – Supports Voice Recordings for up to 30 sites, 24 hours simultaneously

User-friendly RoIP Management Software

- Easily downloadable online
- Multi-level User Option
- Dynamic Grouping

Minimal Computer Requirements

Windows 2000/XP/VISTA/7/8
 Processor Intel Pentium 4, 2.0GHz min
 Memory : 1GB RAM
 Broadband connection : at least 128 Kbps

TECHNICAL SPECIFICATION

NETWORK

Ethernet type: 10/100 Base-TX
 Bandwidth Usage: 8 kbps per Connection
 Clients of Gateway : 30

AUDIO

VOCODER: SPEEX
 Encoded Bandwidth: 8 kbps

DIMENSION & WEIGHT

180mm (L) x 95mm (W) x 38mm (H)
 500g (net)

INTERFACE

Audio IN/OUT
 IO – PTT/COR

POWER

12VDC@0.6A
 Power supply input 100-240 VAC,
 50/60Hz

