

# GCT IP-Link

## Radio VoIP Gateway System

*Bridge the gap between your Land Mobile Radios, telecom systems, and VoIP networks with the GCT-IP Link, a robust single-channel Radio over IP (RoIP) gateway system.*

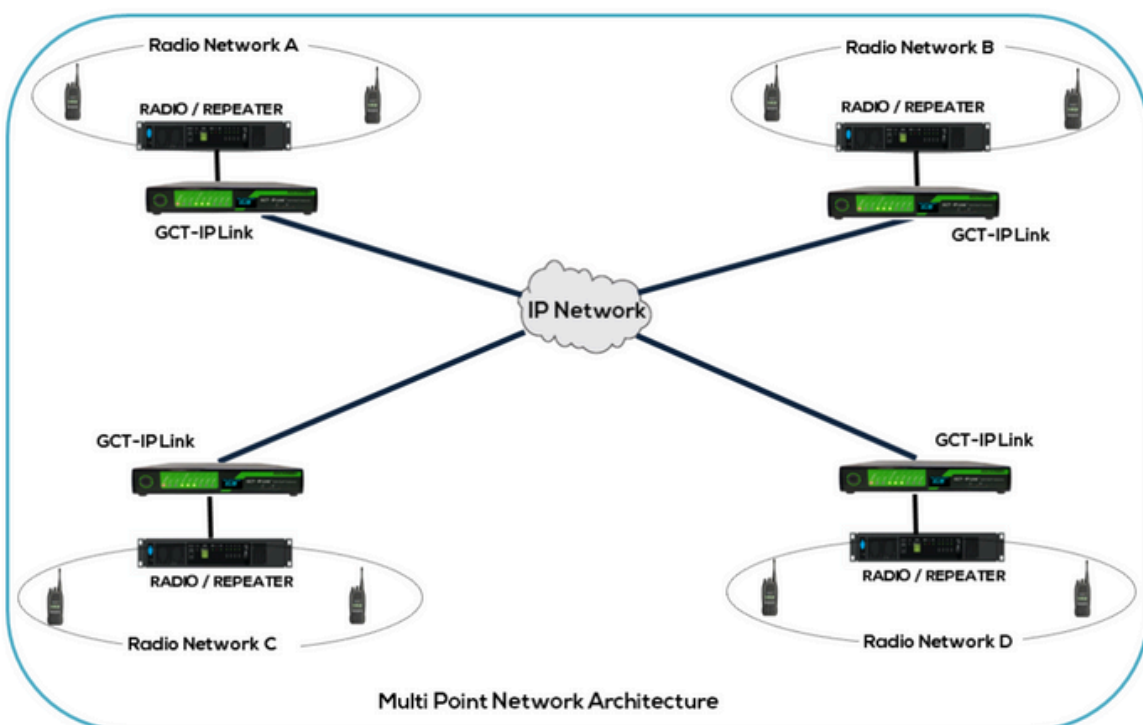
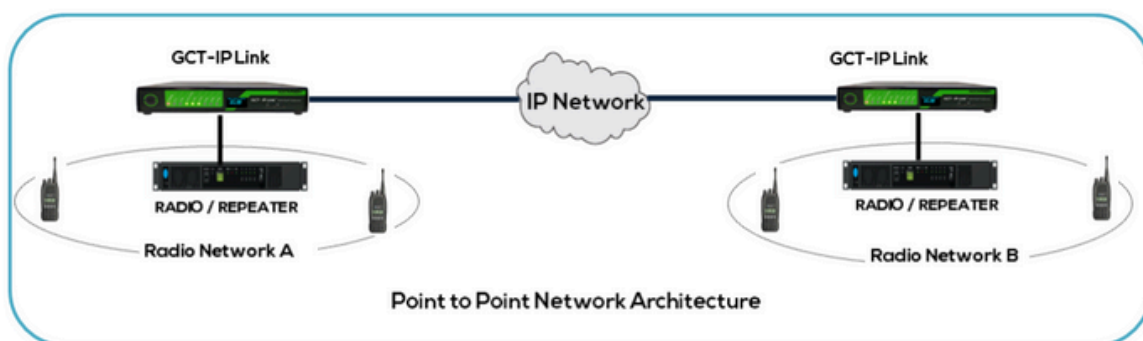


The **GCT-IP Link** is a compact, lightweight, and low-power system that integrates a **radio/audio port, a VoIP gateway, a client-server, and a call manager**. It is designed for seamless network connectivity between radios using open standards Voice over IP technology and operates on an embedded Linux platform. The system is capable of producing exceptional audio quality with very low bandwidth usage, typically **16-64 kbps per channel**.

### Key Features

- **High-Quality Audio:** Employs a low-latency, high-quality Opus codec and includes features like voice activity detection, silence suppression, and noise suppression to ensure clear communication and reduce bandwidth consumption.
- **Dual SIM 3G/4G/5G Modem:** Features an optional built-in dual SIM 3G/4G/5G modem with automatic network changeover and GPS/GNSS for reliable communication, even when wired IP links are unavailable.
- **Automated Call Routing:** The embedded call manager allows for automatic call routing, enabling networked users to dial access to multiple radio networks and create conference calls. The system uses DTMF signaling to connect or disconnect stations.

- **Secure & Reliable:** Data communication over the IP network is highly secured with TLS negotiation and AES encryption. A jitter buffer counters packet "jitter" to ensure a continuous audio play-out.
- **Easy Configuration:** The GCT-IP Link can be configured through its built-in web server. A PC-based Dispatcher application also allows for the configuration, monitoring, and management of various RoIP gateways in a network.
- **Flexible Network Architecture:** Supports both simple point-to-point and complex multi-point network architectures, enabling multi-site connectivity over various links like LAN, WAN, WiFi or the internet/intranet and GSM.



### Technical Specifications

Network Interface	10/100 BaseT Ethernet port, RJ-45 connector
Operating Mode	Point-to-Point and Multipoint communication (without console)
Communication Mode	Half / Full Duplex
Tx/Rx Control	Push to Talk (PTT/COS) / Voice Activated (VAD)
Voice Codec	Low-latency and High-quality Opus codec
Security	TLS negotiation cypher suite with AES 128
User Interface	Web based Graphical User Interface (GUI)
UART / Serial Server (Optional)	1 port / 2 Port Asynchronous RS 232
Digital Input / Output (Optional)	Optically isolated 2 input & 2 output
Network Bandwidth / Channel	16 – 32kbps per channel (Typical) (64 kbps Max)
Number of Radio Channels	1 ( Default) or 2 (Optional)
IP Modes	Static IP/DHCP. LAN/WAN/OFC, Full Duplex
Power Input	12 V DC Typical (10.8 V - 30 V Max) @750mA Max.
Radio Bands	VHF, UHF, HF, Air Band, etc. All Digital/Analog Radios, DMR, Repeaters
Packet Loss	<1% (No performance degradation upto 30% packet loss)
Accessories	User Guide, Programming, Patch cords, Radio Interface and Power Cables



## Technical Specifications

Radio Connection	4 Wire transformers isolated 600 $\Omega$ balanced audio interfaces with PTT & Optically isolated COS Signaling
Display	OLED Graphics Display
USB Port	2 USB 2.0 type A Female ports
Call Recording, GPS, Wi-Fi	Yes (option)
Reset Facility	Factory reset possible
Link Status Indicator	Yes through LEDs
Form Factor	Desktop/Portable
Operating Temperature	0 - 55°C
Humidity	0 - 95% non-condensing
Weight	Approx 450g
Warranty	Standard 36 months

