Radio Interoperability Gateway

Model RIG-4

MADE-IN-INDIA

Unifying Radios, Smartphones, and IP Systems into One Seamless Communication Platform

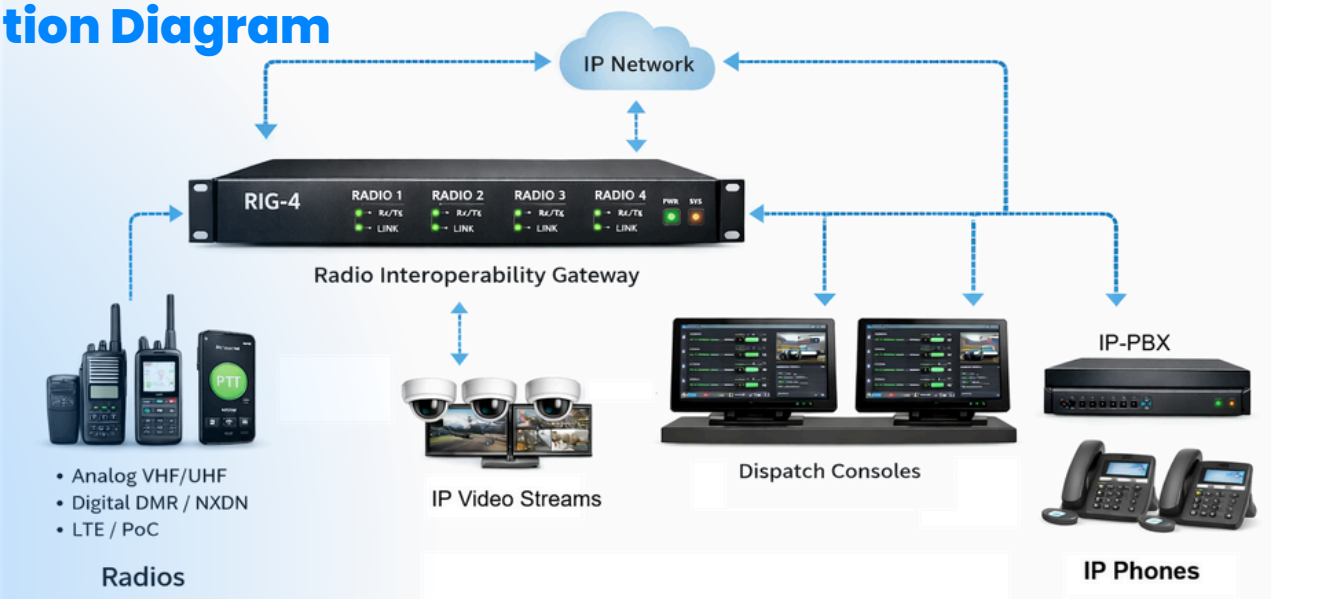
The StackIOT Radio Interoperability Gateway (RIG-4 Series) is a professional-grade communication integration platform designed to interconnect legacy radios, IP networks, smartphones, video systems, and computers into a single, unified environment.

It enables real-time voice, data, and situational awareness sharing between heterogeneous communication systems, making it ideal for public safety, industrial operations, logistics, utilities, transportation, and disaster response.

Key Capabilities

- Connect analog & digital radios (VHF/UHF/DMR/NXDN)
- Interoperate with Smartphones, Cellular Calls, IP Phones
- Integrate IP video streams
- Dispatcher & Operator Console
- Create cross-network voice patches & talk groups
- Real-time chat groups
- Centralized monitoring & control
- Modular and scalable architecture
- Audio Recording and Playback
- Remote Radio Control
- Remote Control Tone Signalling

Solution Diagram



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Dispatcher & User Console

- One-click PTT & channel patching
- Drag-and-drop talk group creation
- Visual channel activity & alarms
- Integrated IP video window
- Chat group & text coordination
- Call logs, recording & playback
- Permission-based user access

System Components

The Radio Interoperability System is built on a robust two-component architecture to ensure reliability, scalability, and seamless integration across multiple communication platforms. The system consists of:

1. Master Control Unit (MCU):
The Master Control Unit hosts the complete system application, including the core interoperability software, call routing logic, user management, logging, and security services. The MCU operates as an independent control layer, ensuring uninterrupted system management and centralized coordination.

2. Radio Gateway Unit (RGU):
The Radio Gateway Unit is the hardware interface between the system and field radios. It handles real-time audio, PTT signaling, tone remote control, and radio channel keying. Multiple RGU can be connected to MCU for scalability

Standard Configuration

Radio Interfaces	4 ports (expandable)
Radio Types	Analog, DMR, NXDN, P25 (VHF, UHF, HF)
Cellular/ Smartphones	PTT App (optional)
IP-PBX Integration	4 SIP Extensions (expandable)
Video Integration	1 Video Stream (RTSP/ ONVIF/ Web RTC)
Network	Ethernet LAN/WAN
Power Input	220V AC
Form Factor	19" Rack Mountable

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