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LoRa Remote Control and Data Modem

A Peer-to-Peer (P2P) Private LoRa communication allows Direct Bidirectional Communication between any two devices without any Gateway infrastructure or uplink/downlink restrictions imposed by LoRaWAN protocol on end devices. Higher LoRa receive sensitivity extends operating range in applications where FSK transmit power cannot be increased above unlicensed band ERP limit.

Figure 1: LRM3-869-11

Features

- Point-to-Point, Point-to-Multipoint with Addressing
- Customisable 150-960MHz
- RF Power: +20dBm (100mW)
- 8 Volt Free Digital Inputs for Remote Controller
- 8 Digital Outputs for Actuator
- 4 Digital Inputs, 4 Digital Outputs for Bidirectional Remote Control
- Wakes up from sleep mode to transmit input status change
- 250-byte buffer 3.3V TTL UART Serial Data Modem
- Channel Activity Detection (CAD)
- Packet Acknowledgement
- Learn Pairing Addresses for Remote Control

Applications

- Industrial/Commercial Telemetry and Telecommand or Non-specific SRD usage
- In-building environmental monitoring and control
- Security & Alarm
- Automated Irrigation System

Technical Summary

- Size: 33 x 25 x 8mm
- 779-787MHz (China), 865-867MHz (India), 863-870MHz (EU), 902-928MHz (US)
- 32MHz TCXO Reference with ±2.0ppm frequency stability over -30˚C +85˚C
- SAW front end filter
- Supply Voltage range: 4V-16V DC
- User baud rate: 9600bps (default), 38400, 57600,115200
- Modulation Bandwidth (BW): 7, 15, 31, 62, 125, 250, 500kHz
- Spreading Factor (SF): 7, 8, 9, 10, 11, 12
- Coding Rate: 4/5, 4/6, 4/7
- 32MHz TCXO Reference with ±2.0ppm frequency stability over -30˚C +85˚C
- SAW front end filter