



DATASHEET

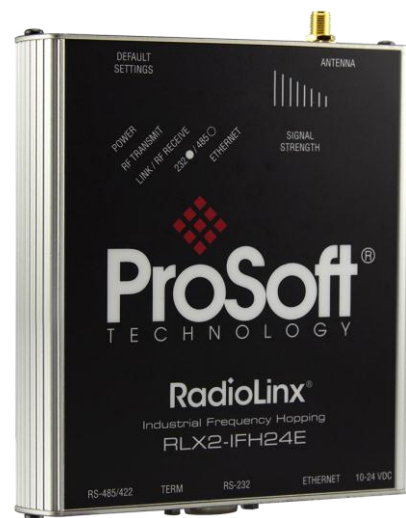
Industrial Frequency Hopping 2.4 GHz Ethernet RLX2-IFH24E

The ProSoft Technology Industrial Frequency Hopping 2.4 GHz series of radios provide powerful and secure wireless Ethernet and serial communications. They are well suited for demanding, long-range (up to 15+ miles) SCADA and other Ethernet applications, including those in harsh or hazardous environments. Operating in the internationally license-free 2.4 GHz band, the RLX2-IFH24E offers an alternative when other wireless technologies cannot be used due to government regulations, band saturation, or customer preference. The RLX2-IFH24E is backwards compatible with ProSoft Technology's RLX-IFH24E.

The RLX2-IFH24E is user configurable as a master, repeater and remote radio. It provides virtual peer-to-peer packet switching and network optimization using advanced Smart Switch technology. Combined with an industry leading high-speed transmitter, the RLX2-IFH24E is ideal for applications requiring fast and reliable communications at long distances.

The RLX2-IFH24E is quickly configured using graphical ControlScape software (included). An OPC server software is also included and allows users to monitor radio network health with any OPC client based HMI software.

The RLX2-IFH24E employs proprietary frequency hopping algorithms and 128 bit AES encryption algorithm approved by most governments for critical networks.



Features

- ◆ 1.1 Mbps RF data rate at up to 15+ miles with line-of-sight (LOS)
- ◆ *Smart Switch* technology provides true peer-to-peer connectivity and optimizes performance
- ◆ Serial device support via serial-to-serial tunneling or serial TCP/UDP encapsulation
- ◆ Internationally unlicensed 2.4 GHz frequency
- ◆ Up to one watt transmit power for long distance
- ◆ Metal enclosure, industrial operating temperatures, vibration and shock resistant
- ◆ Certification for use in hazardous locations
- ◆ Proprietary frequency hopping algorithms (not detectable by Wi-Fi scanners)
- ◆ 128 bit AES Encryption
- ◆ Graphical representation of network for configuration and diagnostics
- ◆ Advanced diagnostics including temperature and signal quality
- ◆ Includes ControlScape software and OPC Server for HMI-based RF network diagnostics

Configuration

The ControlScape FH application provides a graphical representation of your RLX2-IFH radio network, allowing you to easily configure the radios and monitor their performance from anywhere in the network. ControlScape can be used to support configuration and installation, as well as provide long-term monitoring of system performance.

Radio Specifications

Frequency	2.400 to 2.4835 GHz
Protocols	All standard IEEE 802.3 protocols
Security	128 bit AES encryption
Network Topology	Point-to-point, point-to-multipoint, store and forward repeater. Smart Switch packet switching for virtual peer-to-peer communications.
Error Detection	32 bit CRC, ARQ (Automatic Resend Query)
Radio Type	Frequency Hopping Spread Spectrum
Transmit Power	100 mW to 1W (FCC - A model - Programmable) 10 mW to 100 mW (ETSI - E model – Programmable)
Channel Data Rates	1.1 Mbps or 345 kbps (Programmable)
Receiver Sensitivity (Typical)	1.1 Mbps: -97 dBm @ 10 ⁻⁶ BER 345 kbps: -104 dBm @ 10 ⁻⁶ BER
Outdoor Range	15+ miles point-to-point with high gain directional antennas and RF line-of-sight

Hardware Specifications

Enclosure	Extruded aluminum with DIN
Dimensions (H x W x D)	5.78 x 4.64 x 1.48 in 14.7 x 11.8 x 3.8 cm
Ethernet Port	10/100 Base-T connector, shielded RJ45 IEEE 802.3, 802.3u, 802.3x
Serial Port	RS-232, DB9/ RS-422 and RS-485 300 bps to 230 kbps. Supports serial to serial tunneling and serial TCP/UDP encapsulation
Antenna Port	(1) RP-SMA connector
Weight	13 oz (369g)
Operating Temperature	-40°F to 167°F (-40°C to +75°C)
Humidity	Up to 95% RH, with no condensation
Vibration	IEC 60068-2-6 (5g @ 10 to 150 Hz)
Shock	IEC 60068-2-27; 20g @ 11ms, 3-Axis (Operational) IEC 60068-2-27; 30g @ 11ms, 3-Axis (Non-Operational)
External Power	9 to 24 VDC
Power Consumption	4.2 W maximum

Agency Approvals and Certifications

ATEX; Zone 2
CE
cULus; Class 1, Div 2
CB Safety (IEC 60950-1)
FCC/IC



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Ordering Information

To order this product, please use the following:

Industrial Frequency Hopping 2.4 GHz Ethernet Radio

RLX2-IFH24E

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft Technology distributors near you, go to: www.prosoft-technology.com and select *How to Buy* from the menu.