



# DATASHEET

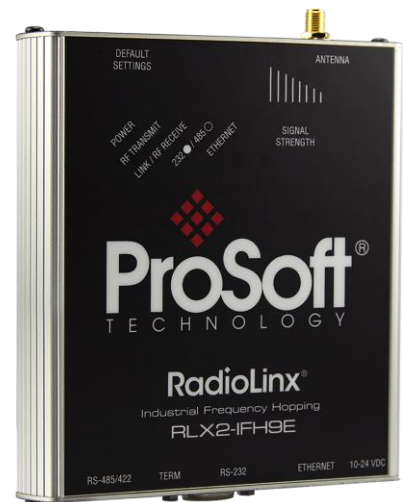
## Industrial Frequency Hopping 900 MHz Ethernet RLX2-IFH9E

The ProSoft Technology Industrial Frequency Hopping 900 MHz series of radios provide powerful and secure wireless Ethernet and serial communications. They are well suited for demanding, long-range (up to 30+ miles) SCADA and other Ethernet applications, including those in harsh or hazardous environments. The RLX2-IFH9E is backwards compatible with ProSoft Technology's RLX-IFH9E.

The RLX2-IFH9E 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-IFH9E is ideal for applications requiring fast and reliable communications at long distances.

The RLX2-IFH9E is quickly configured using graphical ControlScope 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-IFH9E 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 30+ 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
- ◆ Longer wavelength of unlicensed 900 MHz for superior wireless signal propagation
- ◆ 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 ControlScope software and OPC Server for HMI-based RF network diagnostics

### Configuration

The ControlScope 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. ControlScope can be used to support configuration and installation, as well as provide long-term monitoring of system performance.

## Radio Specifications

Frequency	902 to 928 MHz
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 (Programmable) 20 dBm to 30dBm (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	30+ miles pt-pt 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 900 MHz Ethernet Radio

RLX2-IFH9E

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