

DATASHEET

RadioLinx[®] Industrial Frequency Hopping 2.4GHz Ethernet RLX-IFH24E

The RadioLinx[®] Industrial Frequency Hopping 2.4GHz 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 RLX-IFH24E offers an alternative when other wireless technologies cannot be used due to government regulations, band saturation, or customer preference.

The RLX-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 RLX-IFH24E is ideal for applications requiring fast and reliable communications at long distances.

The RLX-IFH24E is quickly configured using the included, graphical ControlScope software. An OPC server software is also included and allows users to monitor radio network health with any OPC client based HMI software.

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



Features	Benefits
Powerful and Versatile 2.4 GHz Frequency Hopping Ethernet	<ul style="list-style-type: none"> ◆ 1.1 Mbps RF data rate at up to 15+ miles line-of-sight (LOS) ◆ <i>Smart Switch</i> 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
Rugged and Powerful	<ul style="list-style-type: none"> ◆ Up to one watt transmit power for long distance ◆ Programmable frequencies to co-exist with other wireless networks or avoid interference ◆ Metal enclosure, industrial operating temperatures, vibration and shock resistant ◆ Certification for use in hazardous locations (ISA 12.12.01 Class I Div 2)
Strong Data and Network Security	<ul style="list-style-type: none"> ◆ Proprietary frequency hopping algorithms (not detectable by Wi-Fi scanners) ◆ 128 bit AES Encryption
Easy to Configure and Monitor	<ul style="list-style-type: none"> ◆ Graphical representation of network for configuration and diagnostics ◆ Advanced diagnostics including temperature and signal quality ◆ Included OPC Server for HMI-based RF network diagnostics

Configuration

The RadioLinx[®] ControlScope FH application provides a graphical representation of your RLX-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	2.400 GHz 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: -98 dBm @ 10-6 BER 345 kbps: -106 dBm @ 10-6 BER
Outdoor Range	15+ miles pt-pt with high gain directional antennas and RF line-of-sight (Americas version)

Hardware Specifications

Enclosure	Extruded aluminum with DIN and panel mount
Size	117 x 112 x 41 mm / 4.6 x 4.4 x 1.6 inches (W x H x D)
Ethernet Port	10/100 Base-T connector, shielded RJ45 IEEE 802.3, 802.3u, 802.3x
Serial Data 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 Ports	(1) RP-SMA connector
Weight	1.0 lbs (454 g)
Operating Temp	-40°F to 149°F (-40°C to +65°C)
Humidity	Up to 100% RH, with no condensation
Vibration	IEC 60068-2-6 (20g, 3-axis)
Shock	IEC 60068-2-27 (5g, 10 Hz to 150 Hz)
External Power	9 Vdc to 24 Vdc
Power Consumption	12 W peak

Agency Approvals & Certifications

ATEX

cULus

FCC

Gost-R

IC

UL/cUL: Class 1, Div 2



Industry
Canada



Where Automation Connects™ Global Distribution

ProSoft Technology® products are distributed and supported worldwide through a network of over 500 distributors in over 50 countries. Our knowledgeable distributors are familiar with your application needs. For a complete list of distributors, go to our web site at:
www.prosoft-technology.com

Ordering Information

To order this product, please use the following:

RadioLinx® Industrial Frequency Hopping 2.4GHz Ethernet

RLX-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.

Copyright © 2013 ProSoft Technology, Inc., all rights reserved. 11/5/2013

Specifications subject to change without notice.