DATASHEET

RadioLinx® Industrial Frequency Hopping 2.4 GHz Serial, non-CE
RLX-IFH24S

The RLX-IFH24S provides powerful and secure wireless serial communications and is well suited for demanding, long-range (up to 15+ miles) SCADA and other serial applications in tough environments. Operating in the internationally license-free 2.4 GHz band, the RLX-IFH24S offers an alternative when 900 MHz radios cannot be used due to government regulations, band saturation, or customer preference. With both RS-232 and RS-485 serial ports, serial protocols such as Modbus RTU, DF1, ASCII and DNP3 are supported. The RLX-IFH24S is user configurable as a master, repeater and remote radio and employs the 128 bit AES encryption algorithm approved by the United States government for top secret information.

RLX-IFH24S radios are quickly and easily configured using the included, graphical ControlScape software. An OPC server software is also included and allows users to monitor radio network health with any OPC client based HMI software.

Features	Benefits
Powerful 2.4 GHz Frequency Hopping Serial	♦ 230 kbps RF data rate at up to 15+ miles ♦ Internationally unlicensed 2.4 GHz frequency
Rugged and Powerful	♦ 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	♦ 128 bit AES Encryption ♦ Proprietary FHSS not detected by 802.11 wireless
Easy to Configure and Monitor	♦ Graphical representation of network for configuration and diagnostics ♦ Advanced diagnostics including temperature and signal quality ♦ Included OPC Server for HMI-based RF network diagnostics
Backed by ProSoft Technology®	♦ Industrial data communications experts who understand your protocols, devices, and applications ♦ Indoor/outdoor radio network design assistance – accessory selection, path studies, and site survey ♦ Three year standard warranty

Configuration

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

General Specifications

Radio

Frequency	2.400 to 2.4835 GHz
Security	128 bit AES encryption
Network Topology	Point-to-point, point-to-multipoint, store and forward repeater
Error Detection	32 bit CRC, ARQ (Automatic Resend Query)
Radio Type	Frequency Hopping Spread Spectrum
Transmit Power (Programmable)	10 mW to 1 W (FCC - A model) 10 mW to 100 mW (ETSI - E model)
Channel data rates (Programmable)	230, 172, 115 or 19.2 kbps
Receiver Sensitivity (Typical)	230 kbps: -106 dBm @ 10-6 BER 172 kbps: -108 dBm @ 10-6 BER 19.2 kbps: -116 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 (W x H x D)	104 x 94 x 53 mm 4.1 x 3.7 x 2.1 in
Serial Data Port	DB9, RS-232 RS-422 / RS-485 300 bps to 230 kbps
Configuration Port	DB9, RS-232
Antenna Ports	(1) RP-SMA connector
Weight	1.0 lbs (454 g)

Environmental

Operating Temperature	–40° C to +75° C
Humidity	Up to 100% RH, with no condensation
Shock	IEC 60068-2-6 (20g, 3-axis)
Vibration	IEC 60068-2-27 (5g, 10 to 150Hz)
External Power	10 to 24 Vdc
Power Consumption	12 W peak

Agency Approvals & Certifications

UL	ISA 12.12.01 Class I Div 2 Groups A, B, C & D, T5. Must be installed inside an IP54 enclosure that requires tool access.
CSA/cUL	C22.2 No. 213-1987
⟨Ex⟩	ATEX Category 3, Zone 2 II 3 G Ex nA IIC T5 X -30 C <= Ta <= +60 C