RadioLinx Frequency Hopping Serial

RLX-FHS

Use the RLX-FHS in applications where high-power/long-range, secure, high-speed, un-tethered 2.4 GHz Frequency Hopping Serial connectivity is required.

- *Connect to moving or remote industrial devices*
- *Combine voice, video and data on a single, high speed industrial wireless network*
- *Use for applications generating many packets per second or with high aggregate data requirements such as I/O messaging and client/server based HMI*

How to Contact Us: Sales and Support

All ProSoft Technology® products are backed with unlimited technical support. Contact our worldwide Technical Support team directly by phone or email:

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The RadioLinx Frequency Hopping Serial radio allows you to design multiple device networks to share the same RF network (channel) allowing different protocols to share a common repeater. A remote RLX-FHS can be programmed to operate as a store and forward repeater to extend network range.

The RLX-FHS operates in point-to-point, point-multipoint, or peer-to-peer modes. Addressable multi-drop RS-485 operation is built into the module. The RF output levels are user-configurable and 64 data channels allow multiple networks to operate in the same area.

Features and Benefits

- Supports up to 1000 addressed devices with 2000 radios and 78 repeaters per network
- 64 user-selectable data channels for multiple network operation
- Active antenna diversity
- 2.4 GHz frequency hopping spread spectrum (FHSS) technology
- Secure wireless communications with data encryption, proprietary radio protocol, and 2.4 GHz FHSS physical layer
- Industrial temperature range
- 15+ (24 km) mile range with high-gain antennas (longer with repeaters)
- Remote diagnostics without interrupting data communications
- Over air user programmability (after initial configuration) using Windows-based software
- Three year standard warranty

Specifications

Radio	
Frequency	2400 to 2483.5 MHz (varies by country)
Protocols	All standard IEEE 802.3 protocols
Encryption	ARC4 (40 or 128 bit)
Network Topology	Peer-to-Peer, store and forward repeater, Point-to-Point, Point-to-Multipoint
Hop Patterns	64 independent, non-interfacing networks
Error Detection	32-bit CRC and ARQ (Automatic Re-Send Query)
Radio Type	Frequency Hopping Spread Spectrum
Output power	1mW to 250mW, programmable (varies by country)
Channel data rates	250 Kbps
Receiver sensitivity	-96 dBm @ 10^{-6} BER
Channels - user selectable	64 North America (varies by country)

Radio	
Adjacent Channel Rejection	> 40 dB
Spurious Rejection	> 50 dB
Typical indoor range	500 to 1500 ft (150 to 450 meters)
Outdoor range	15 + miles line of sight with high-gain antennas
Security	ARC4 (40 or 128 bit)
Physical	
Enclosure	Extruded aluminum with DIN and panel mount
Size	4.10 in. x 3.71 in. x 2.05 in. (104.1 mm x 94.23 mm x 52.07 mm)
Vibration Shock	IEC 60068-2-6 IEC 60068-2-27
Ports	RS-232, DB-9 RS-422 and RS-485 Asynchronous half-duplex/full-duplex 2400 bps to 115.2 Kbps full duplex
Antenna ports	Two RP-SMA connectors, automatic antenna diversity
Weight	1 lbs /454g
Environmental	
Operating temperature	-40°C to +75°C (-40°F to 167°F)
Humidity	To 90% RH, non-condensing
External power	10 to 24 VDC
Average power	< 4W

Regulatory Approvals

Type Approvals	
FCC	FCC Part 15.247
Industry Canada	RSS 210
Europe / CE	LVD EN 50850-2000 RF Safety EN 50364-2001 EMC EN 301 489-1, EN 301 489-17 Spectrum EN 300 328 v1.4.1
Mexico	Nom 121 SCT1 2 or 1
Australia	AS/NZS 4771
Brazil	365 / 2004 e 238 / 2000
Malaysia	SIRIM
Hazardous Locations	
UL	UL 1604 Class 1 Division 2, Groups A, B, C, D Temp Code T4A
CSA/cUL	C22.2 No. 213-1987
ATEX Zone 2	ATEX II 3 G EEx nC IIC

Visit our web site for the latest certification information.

Additional Products

ProSoft Technology® offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms.

Visit our web site at http://www.prosoft-technology.com for a complete list of products.

Ordering Information

Use the following Ordering Information to identify the radio product needed for your region. If you are unsure which radio to select, please contact your local distributor.

RadioLinx 2.4 GHz Frequency Hopping Radios

Country	Catalog #	Frequency	RF Power	Pwr Sply
Australia	RLX-FHS-AU	2400 to 2483.5 MHz	4W	AU
Brazil	RLX-FHS-US	2400 to 2483.5 MHz	4W	US
China	RLX-FHS-CN	2400 to 2483.5 MHz	500 mW EIRP	EU
Europe	RLX-FHS-EU	2400 to 2483.5 MHz	100 mW EIRP	EU
France	RLX-FHS-FR	2400 to 2454 MHz	100 mW EIRP	EU
India	RLX-FHS-UK	2400 to 2483.5 MHz	4 W EIRP @ 6dBi antenna gain	UK
Malaysia	RLX-FHS-UK	2400 to 2483.5 MHz	100 mW EIRP	UK
Mexico	RLX-FHS-MX	2450 to 2483.5 MHz	650 mW EIRP	US
Saudi Arabia	RLX-FHS-SA	2413 to 2439 MHz	100 mW EIRP	US
Singapore	RLX-FHS-SG	2400 to 2483.5 MHz	100 mW EIRP	UK
South Africa	RLX-FHS-EU	2400 to 2483.5 MHz	100 mW EIRP	EU
South Korea	RLX-FHS-EU	2400 to 2483.5 MHz	100 mW EIRP	EU
United Kingdom	RLX-FHS-UK	2400 to 2483.5 MHz	100 mW EIRP	UK
USA	RLX-FHS-US	2400 to 2483.5 MHz	4W	US
Venezuela	RLX-FHS-VE	2400 to 2483.5 MHz	4W	US

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft Technology distributors near you, go to http://www.prosoft-technology.com

Distributors:
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