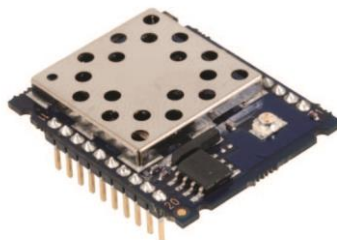


## THE FASTEST WAY TO WIRELESS



Laird Connectivity's third generation 915 MHz FHSS module sets yet another standard for industrial RF communication. Based on proprietary FlexRF<sup>™</sup> technology, this globally-accepted module will exceed most OEM application and performance requirements.

Embedded with Laird Connectivity's robust server-client protocol, the LT1110 permits an unlimited number of clients to synchronize to a single server for low latency communications. The server and all clients in a network can communicate with any radio in range via either addressed or broadcast packets. The configuration and test software allow OEMs to design and test networks to suit their applications.

From the OEM integrator's point of view, the LT1110's interface (API, configuration, etc) is 100% compatible with the RM024 allowing the OEM to choose either 915 MHz or 2.4 GHz. The enhanced API commands provide packet routing control and network intelligence. With its field-proven proprietary FHSS RF protocol and increased penetration at 915 MHz, the LT1110 rejects RF noise, excels in multipath scenarios, allows for co-located systems, and provides an extremely reliable communication link.

The LT1110 achieves RF data rates up to three times faster than our previous generation 915 MHz transceivers. The LT1110 has up to 23dBm of conducted output power and is configurable down to 13dBm. Line of sight communication up to 3.2 miles, is possible. It also comes with a modular approval allowing higher gain antennae to greatly increase the effective range. At the same time, a range of ultra-low power modes make the LT1110 your best solution for power-restrictive or battery-operated applications.

A pluggable version with two single row headers is offered for ease of integration.

### FEATURES AT A GLANCE

- Very robust in the presence of interference
- 915 MHz for improved RF penetration
- High throughput
- Ultra-low power consumption
- Long-range capability
- Integrated battery monitor, temperature sensor, GPIOs, and ADC
- Simple integration

### APPLICATION AREAS

- Commercial buildings
- Field surveillance
- Utility management
- Recreation
- Fleet telemetry

### FLEXIBLE RF PROTOCOL

Embedded into Laird Connectivity's 900 MHz and 2.4 GHz FHSS modules, FlexRF technology supports unrivaled flexibility in industrial wireless applications. OEMs have the ability to control and optimize both the radio module and the network, allowing them to develop a highly reliable system for their specific application.

Numerous "software hooks" empower, control, and provide flexibility. They allow designers to mold the communication link around applications, as opposed to squeezing the application into a fixed communication technology or standard. Each transceiver is designed to provide OEMs with a feature-rich, high-performance, configurable, secure, compatible, integrated solution, allowing OEMs to build the most optimized network possible.

## RF PROTOCOL MODES

- Communication
  - Unicast (one-to-one addressing)
  - Broadcast (one-to-multiple addressing)
- Fast sync time
- Random back-off
- Dynamic radio data table:
- Retains data from up to 32 radio modules
- Configurable retries
- Auto channel

## INTERFACE PROTOCOL

- On-the-fly radio module configuration:
  - Full API control
  - Destination address
  - RF transmit power
  - RF channel
  - Broadcast/addressed
- Raw data or transmit/receive API
- Battery monitor
- A/D, PWM Output and Generic I/Os
- Variable baud rate
- Configurable RF packet size, timeout control
- Onboard temperature sensor
- Handshaking, CTS/RTS
- In-range indicator
- Error detection, onboard CRC, duplicate packet filtering

## SECURITY

- Frequency hopping air interface
- System IDs
- Unique IEEE MAC Addresses
- Proprietary hardware
- Proprietary protocol

## SPECIFICATIONS

Feature	Specification
<b>Part Number</b>	PRM240
<b>Interface</b>	UART
<b>Frequency</b>	902-928 MHz
<b>RF Data Rate</b>	230 kbps
<b>Serial Interface Options</b>	3.3V TTL
<b>Serial Interface Data Rate</b>	Up to 460,800 baud
<b>Variable Conducted Output Power</b>	+13 to +23 dBm (200 mW)
<b>Maximum Radiated Power (EIRP)</b>	+29 dBm (800 mW) with a 6-dBi antenna
<b>Current Consumption</b>	
Peak Tx	230 mA
Peak Rx	30 mA
Average Idle	8 mA
Sleep	0.3 $\mu$ A
<b>Channels</b>	52
<b>Sensitivity (BER 10<sup>-6</sup>)</b>	230 kbps RF rate: -89 dBm
<b>Voltage</b>	2.0-3.6 VDC
<b>Approximate Range (Indoor, Outdoor)</b>	800 ft./3.2 mile (with 2-dBi dipole)
<b>Temperature</b>	-40° to +85° C
<b>Dimensions**</b>	25 mm x 30 mm x 4 mm (Pluggable U.FL)
<b>Antenna</b>	U.FL connector
<b>Approvals*</b>	FCC ID: KQL-1110200 IC: 2268C-1110200

\*This is only a partial list, contact your Laird Connectivity representative for a complete list of approvals.

## ORDERING INFORMATION

Part	Description
PRM240	915 MHz RF module – Pluggable with U.FL for external antenna