

The Fastest Way to Wireless

Ezurio's PRM240-R2 is a hardware-compatible replacement for our LT1110 and PRM240 proprietary 915 MHz FHSS module. It carries a new set of certifications and provides a continued availability for those already designed in with our previous 915 MHz modules. Based on proprietary FlexRF™ technology, this globally accepted module will exceed most OEM application and performance requirements.

Embedded with Ezurio's robust server-client protocol, the PRM240-R2 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.

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 PRM240-R2 rejects RF noise, excels in multipath scenarios, allows for co-located systems, and provides an extremely reliable communication link.



The PRM240-R2 achieves RF data rates up to three times faster than our previous generation 915 MHz transceivers. The PRM240-R2 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 PRM240-R2 your best solution for power-restrictive or battery-operated applications.

Key Features

- 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 Ezurio'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

Category	Specification
Part Number	453-00418
Interface	UART
Frequency	902-928 MHz
RF Data Rate	230 kbps
Serial Interface Options	3.3V TTL
Serial Interface Data Rate	Up to 460,800 baud
Variable Conducted Output Power	+13 to +23 dBm (200 mW)
Maximum Radiated Power (EIRP)	+29 dBm (800 mW) with a 6-dBi antenna
Current Consumption	
Peak Tx	230 mA
Peak Rx	30 mA
Average Idle	8 mA
Sleep	0.3 μ A
Channels	52
Sensitivity (BER 10 ⁻⁶)	230 kbps RF rate: -89 dBm
Voltage	2.0-3.6 VDC
Approximate Range (Indoor, Outdoor)	800 ft./3.2 mile (with 2-dBi dipole)
Temperature	-40° to +85° C
Dimensions**	25 mm x 30 mm x 4 mm (Pluggable U.FL)
Antenna	U.FL connector
Approvals*	FCC ID: KQL-1110200 IC: 2268C-1110200

**This is only a partial list. Contact your Ezurio representative for a complete list of approvals.*

Ordering Information

Part	Description
453-00418	PRM240-R2 - 915 MHz RF module - Pluggable with U.FL for external antenna