THE FASTEST WAY TO WIRELESS

Laird Technologies’ fifth generation 2.4GHz FHSS module sets the standard for industrial RF communication. Based on proprietary FlexRF™ technology, this globally-accepted module will exceed most OEM application and performance requirements.

Embedded with Laird Technologies’ robust server-client protocol, the LT2510 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 allows OEMs to design and test networks to suit their applications.

Enhanced API commands provide packet routing control and network intelligence. With its field-proven FHSS air interface protocol, the LT2510 rejects RF noise, excels in multipath scenarios, allows for co-located systems, and provides an extremely reliable communication link. It also provides a more robust, but simpler, link than ZigBee for RF applications that do not require a mesh topology.

With a throughput of up to 280 Kbps, LT2510 delivers speedy data rates. In addition, variable output power options (up to +21 dBm) enable communication over distances that aren’t achievable with competing technologies. At the same time, a range of ultra-low power modes plus low Tx/Rx power consumption make the LT2510 ideal for power-restrictive or battery-operated applications. The mini SMT package is well-suited for space-constrained designs and is available in pick-and-place packaging for volume manufacturing. A pluggable version with two single row headers is also available for ease of integration.

FEATURES
• Very robust in the presence of interference
• High throughput
• Ultra-low power consumption
• Long range capability
• Miniature SMT form factor
• Global acceptance
• Integrated battery monitor, temperature sensor, GPIOs and ADC
• Simple integration

MARKETS
• Commercial buildings
• Field surveillance
• Utility management
• Recreation
• Fleet telemetry

global solutions: local support
USA: +1.800.492.2320
Europe: +44.1628.858.940
Asia: +852.2268.6567
wirelessinfo@lairdtech.com
www.lairdtech.com/wireless
2.4 GHz Wireless Module
LT2510

FLEXIBLE RF PROTOCOL
Embedded into Laird Technologies’ 900MHz and 2.4GHz 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.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>PRM110/111/112/1121</th>
<th>PRM112/113/112/1123</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td>UART</td>
<td>UART</td>
</tr>
<tr>
<td>Frequency</td>
<td>2400-2483.5 MHz</td>
<td>2400-2483.5 MHz</td>
</tr>
<tr>
<td>RF Data Rate</td>
<td>280 / 500 kbps</td>
<td>280 / 500 kbps</td>
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<tr>
<td>Serial Interface Options</td>
<td>3.3V TTL</td>
<td>3.3V TTL</td>
</tr>
<tr>
<td>Serial Interface Data Rate</td>
<td>Up to 460,800 baud</td>
<td>Up to 460,800 baud</td>
</tr>
<tr>
<td>Variable Conducted Output Power</td>
<td>+4 to +21dBm (125 mW)</td>
<td>+4 to +17dBm (50 mW)</td>
</tr>
<tr>
<td>Maximum Radiated Power (E.I.R.P)</td>
<td>+30dBm</td>
<td>+20dBm</td>
</tr>
<tr>
<td>Current Consumption</td>
<td>&lt;10mA</td>
<td>&lt;10mA</td>
</tr>
<tr>
<td>Voltage</td>
<td>3.3VDC</td>
<td>3.3VDC</td>
</tr>
<tr>
<td>Range (Indoor, Outdoor)</td>
<td>400m/4km</td>
<td>240m/2.4km</td>
</tr>
<tr>
<td>Temperature</td>
<td>-40° to +85° C</td>
<td>-40° to +85° C</td>
</tr>
<tr>
<td>Dimensions **</td>
<td>26mm x 33mm x 4mm</td>
<td>26mm x 33mm x 4mm</td>
</tr>
<tr>
<td>Antenna</td>
<td>U.FL connector (PRM111/121)</td>
<td>U.FL connector (PRM112/122)</td>
</tr>
<tr>
<td></td>
<td>Integrated chip antenna (PRM111/121)</td>
<td>Integrated chip antenna (PRM112/122)</td>
</tr>
<tr>
<td>Approvals*</td>
<td>FCC/CE for the United States and Canada.</td>
<td>CE-approved for European use, FCC/CE for the United States and Canada. PRM112/113 also approved for use in Japan.</td>
</tr>
</tbody>
</table>

ORDERING INFORMATION

- **PRM110**: 2.4GHz RF Module – 125mW with external antenna
- **PRM112**: 2.4GHz RF Module – 250mW with external antenna
- **PRM120**: 2.4GHz RF Module – 125mW with integrated antenna
- **PRM121**: 2.4GHz RF Module – 250mW with integrated antenna
- **DVK-PRM110**: Development Kit for PRM110 with module
- **DVK-PRM112**: Development Kit for PRM112 with module
- **DVK-PRM120**: Development Kit for PRM120 with module
- **DVK-PRM121**: Development Kit for PRM121 with module
- **DVK-PRM112**: Development Kit for PRM112 with module
- **DVK-PRM122**: Development Kit for PRM122 with module
- **DVK-PRM123**: Development Kit for PRM123 with module

The details contained within the document are subject to change. Download the product specification from www.lairdtech.com/wireless for the most current specification.