**PRODUCT OVERVIEW**

The YLX-TRM8053-500-05 Wireless Module is designed for OEM applications and offers a complete ready-to-integrate connectivity module that enables you to enhance your product while focusing on developing its core features. Its dynamic model replaces miles of cable and is ideally suited for cable industry applications. Thanks to its powerful communication protocol, the YLX-TRM8053-500-05 resists radio interference and enables co-located client and network operation to function without disturbing data integrity and range performance.

**MODULE CONFIGURATION**

The YLX-TRM series offers a simple, cost-effective way of realizing any Wireless application. The built-in YLX firmware contains a mac layer with TDMA, CSMA, FDMA or FHSS protocol. The Wireless Module offers two different levels of entry: Management Entity and Data Entity. With the Management Entity, three classes of commands are available: (Network Layer commands, Data Link layer commands and Physical layer commands). The Wireless Module is simple to use – a matter of only two short steps: wiring the module to the UART-enabled or SPI-enabled system, and adding an antenna – your Wireless Module is now ready to use.

**KEY FEATURES**

- No RF knowledge required
- Fully assembled and tested
- Advanced configuration available
- Up to 500mW output power
- High sensitivity: -114dBm @ 4.8kbps

**TYPICAL APPLICATIONS**

- Electricity, gas and water meter reading
- Rural and urban telemetry
- Wireless GPS
- Fleet management

**HARDWARE DESCRIPTION**

The YLX-TRM8053-500-05 is an easy-to-use radio communication module for the 868-870MHz ISM band. The wireless module contains a communication controller with the embedded Y-Lynx radio communication protocol, and a High performance RF transceiver. The 128dB link budget at the maximum data rate offers a pair of modules capable of communicating over distances greater than 20 kilometers. Other key specifications are 152.3kbit/s maximum RF data rate, 25mA receive and 650mA transmit current consumption. The Config mode gives access to more than 50 commands allowing to set the module in the chosen configuration.

**TYPICAL APPLICATIONS**

- Electricity, gas and water meter reading
- Rural and urban telemetry
- Wireless GPS
- Fleet management

**DIGITAL INTERFACE**

- Hop / Sync indicator
- 2 General purpose I/Os
- Battery-level detector
- Configuration / Default mode
- SPI / UART
**TYPICAL NETWORK TOPOLOGIES**

The Y-Lynx TRM8053-500-05 is ETSI pre-certified according to EN 300-220 regulation.

**QUICK REFERENCE DATA**

<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>YLX-TRM8053-500-05</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency band</td>
<td>868 – 870</td>
<td>Mhz</td>
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<tr>
<td>Supply voltage</td>
<td>2.4 – 3.6</td>
<td>V</td>
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<tr>
<td>RF data rate</td>
<td>4.8 – 152.3</td>
<td>Kbps</td>
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<td>Maximum output power @3.3V</td>
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<td>dBm</td>
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<td>RF sensitivity @4.8kbps</td>
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<td>dBm</td>
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<td>RF sensitivity @76.8kbps</td>
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<td>dBm</td>
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<td>Current consumption (in receiver mode)</td>
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<td>Current consumption (in transmitter mode)</td>
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<td>Application interface</td>
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<td>Range [open space]</td>
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<td>Meters</td>
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<td>Physical</td>
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<td>Antenna connector</td>
<td>MMCX and pad</td>
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<td>Size</td>
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</tr>
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</table>

**ORDERING INFORMATION**

- **YLX-TRM8053-500-05IT**: 40 pins socket radio modem, 868-870Mhz, 500mW
- **YLX-TRM8053-500-05DIT**: Drop-in radio modem, 868-870Mhz, 500mW

**DEVELOPMENT TOOLS**

- **YLX-RM5K8053-500-05**: Starter kit radio modem, 868-870Mhz, 500mW

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