

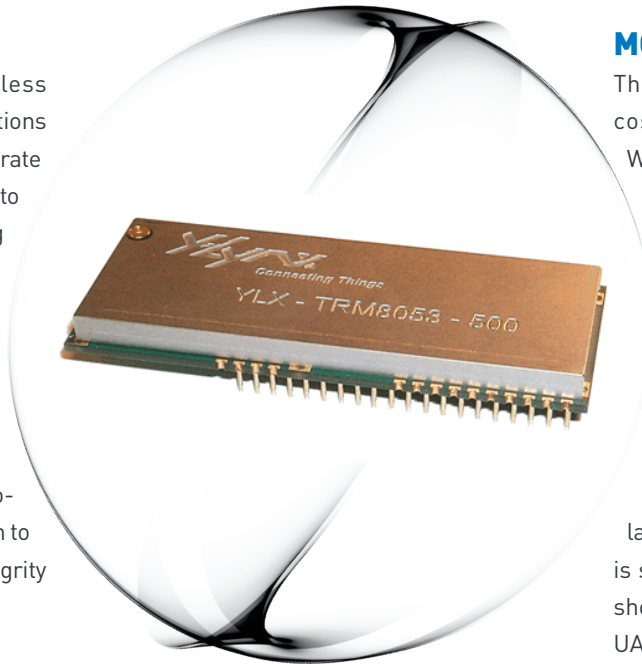
# LONG RANGE WIRELESS MODULE

## TRM8053-500-05



### 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.



## TRM8053-500-05 SPECIFICATIONS

### KEY FEATURES

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

### TYPICAL APPLICATIONS

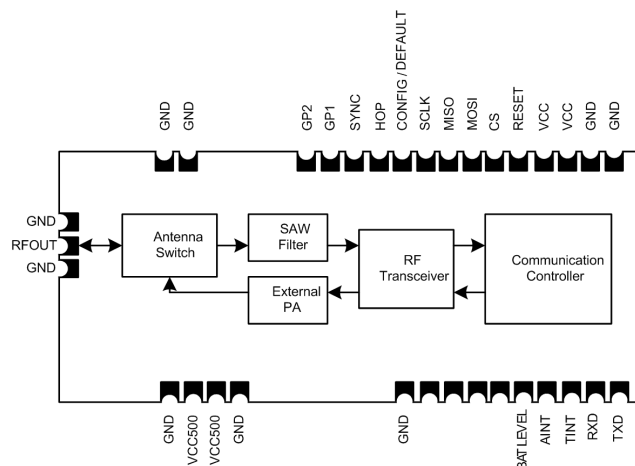
- Electricity, gas and water meter reading
- Rural and urban telemetry
- Wireless GPS
- Fleet management

### DIGITAL INTERFACE

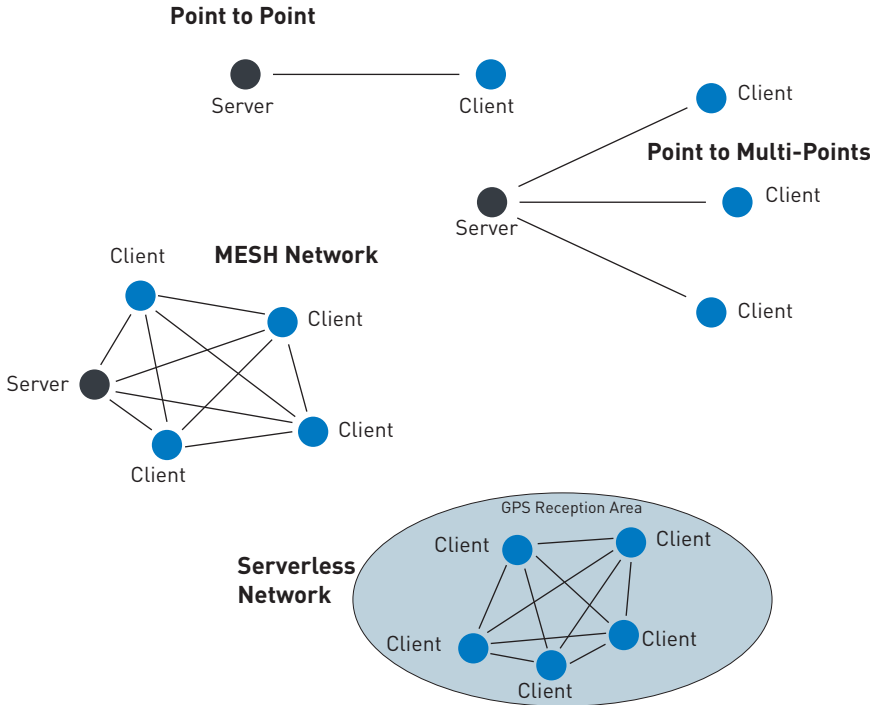
- Hop / Sync indicator
- 2 General purpose I/Os
- Battery-level detector
- Configuration / Default mode
- SPI / UART

### HARDWARE DESCRITPION

The YLX-TRM8053-500-05 is an easy-to-use radio communication module for the 868-870Mhz ISM band. The wirelessmodule 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 spécifications 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 choosen configuration.



TYPICAL NETWORK TOPOLOGIES



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

QUICK REFERENCE DATA

PARAMETERS	YLX-TRM8053-500-05	UNITS
Frequency band	868 – 870	Mhz
Supply voltage	2.4 – 3.6	V
RF data rate	4.8 – 152.3	Kbps
Maximum output power @3.3V	+27	dBm
RF sensitivity @4.8kbps	-114	dBm
RF sensitivity @76.8kbps	-105	dBm
Current consumption (in receiver mode)	25	mA
Current consumption (in transmitter mode)	650	mA
Application interface	UART/SPI	
Range (open space)	20'000	Meters
Physical		
Antenna connector	MMCX and pad	
Size	74.7x29.1x6.5	mm

© Y-LYNX 2010

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the Publisher for any consequence of its use. Publication thereof does not convey nor imply any licence Under patent or other industrial or intellectual property rights.

ORDERING INFORMATION

ORDERING INFORMATION	DESCRIPTION
YLX-TRM8053-500-05SIT	40 pins socket radio modem, 868-870Mhz, 500mW
YLX-TRM8053-500-05DIT	Drop-in radio modem, 868-870Mhz, 500mW

DEVELOPMENT TOOLS

DEVELOPMENT TOOLS	DESCRIPTION
YLX-RMSK8053-500-05	Starter kit radio modem, 868-870Mhz, 500mW



Rue Galilée 15  
CH-1400 Yverdon  
Switzerland  
[www.y-lynx.com](http://www.y-lynx.com)  
[info@y-lynx.com](mailto:info@y-lynx.com)