MM002-xx-EU Module

The **MM002-xx-EU** is a family of long-range and low power wireless modules operating on ISM 868Mhz unlicensed band. With interferers' robustness and low power consumption, it is the best solution for applications requiring long range, maximum battery lifetime and secure radio link. This module integrates a SX1272 LoRa™ transceiver from Semtech and a low power ARM Cortex M3 controller.

Key product features

- ✓ Size 14,4mm x 26,4mm x 2,5mm
- ✓ Modulation : LoRa™ / SIGFOX™/ FSK
- ✓ Maximum output power +14 dBm (+20dBm as option)
- ✓ Power efficient :
  - o IDLE : < 2uA
  - o Tx : 39,5mA / Rx : 11,7mA
- ✓ Good buildings penetration
- ✓ Long Range protocol stack software (SIGFOX™ / LoRa WAN 1.0 EU Class A & C)
- ✓ Soldered like a SMD component
- ✓ Usable as Modem companion or with embedded customer application software (option)
- ✓ RoHS conform / Pre-Certified EN 300-220
- ✓ Shield ready (option)

Applications

- ✓ Automated Meter Reading
- ✓ Home and Building Automation
- ✓ Industrial Monitoring and Control
- ✓ IoT (Internet of Things)
- ✓ Smart Cities

Module software content

The module software is based on Contiki OS.

Versions

MM002-L-EU	A LoRa™ WAN 1.0 EU Class A & C bidirectional protocol stack version
MM002-S-EU	A SIGFOX™ bidirectional protocol stack version
MM002-LS-EU	A Full bimode bidirectional LoRa™/SIGFOX™ protocol stack version

All LoRa™ versions give possibility to skip LoRa WAN protocol stack and access directly LoRa™ and FSK physical layers.

Extra-protocol or application software can be developed on request.

Interoperability

MM002-xx-EU module interoperability has been confirmed with :

- **SIGFOX™ Network**
- **Bouygues Telecom LoRa** Network
- **Orange LoRa** Network
- **Actility** Network server solutions
- **Orbiwise** Network server solutions