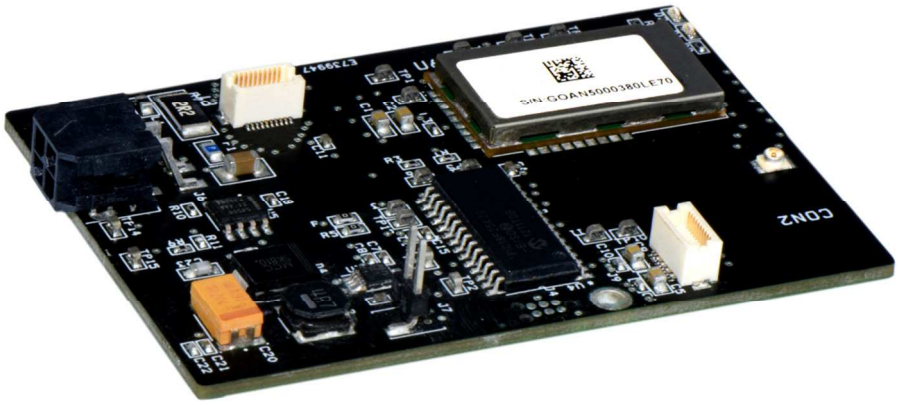
PingPong

RF/ISM Board

(868 – 915 MHz)



Product Description

The ISM Board is an extension board for the PingPong and can also be used as a standalone product without the need of having the PingPong base board. It provides additional ISM/RF functionality just by plugging it onto the PingPong. The extension can be very easily controlled in the development environment.
The ISM Board has an own microcontroller for a higher performance output and extension connectors to add one or more extension boards to the Wi-Fi/Bluetooth board. The ISM Board reduces development time and cost while providing highly reliable communications because it can be easily integrated into applications like energy monitoring, irrigation, watering and energy monitoring.

Key Benefits

- Easy installation on the PingPong base board: Plug'n'Play
- Increased connectivity performance with ISM
- No cellular infrastructure needed
- Own microcontroller on board for higher performance output and standalone possibility
- On-Board connectors for multiple extension boards

Product Features

- Temperature Range from -40°C to +85°C
- Operating Voltage in standalone mode: 9-60V DC
- Dimensions: 71 x 49mm
- Interfaces:
  - 1x RF antenna port U.FL
  - 2x extension board connectors
    These connectors feature:
    - UART
    - SPI
    - CAN
    - I²C

Software

- RTOS uses C/C++
- Available as open source software
- Compatible with Microchip code configurator MCC

ISM

- Telit LE70 series RF-Module
- Output Power: 15 dBm to 27 dBm
- Distance up to 10.000m (line of sight)
- Serial Data Rate: Up to 115.2 kbps
- Radio Data Rate: from 4.8 kbps to 57.6 kbps
- Sensitivity [PER <0,8]: -115 to -117 dBm
- 128 kB Flash, 8kB RAM, 2kB EEPROM
- Frequencies:
  863 – 870 MHz (EXT-PP-RF-868);
  902 – 928 MHz (EXT-PP-RF-915)
- Modulation: GFSK
- Point to point, star network
- ACK
- Addressed Mode
- Listen Before Talk
- Analog RSSI
- Cyclic wake up
- Remote CTS/RTS control
- Hayes Mode
- I/O Copy
- Download Over-the-Air

Microcontroller

- Microchip PIC18F25K20
- Program Memory: 32 KB Flash
- CPU Speed: 16 MIPS
- RAM: 1,536 bytes
- Data EEPROM: 256 bytes
- Digital Communication Peripherals: 1-UART, 1-A/E/USART, 1-SPI, 1-I2C1-MSSP(SPI/I2C)
- Capture/Compare/PWM Peripherals: 1 CCP, 1 ECCP
- Timers: 1 x 8-bit, 3 x 16-bit
- ADC: 10 ch, 10-bit
- Comparators: 2

Order Code

- **EXT-PP-RF-868**
- **EXT-PP-RF-915**

Extension Boards

- Wi-Fi/Bluetooth
- I/O & Serial Board
- Iridium Satellite
- ISM/RF
- NFC/RFID
- LoRa
- Sigfox

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