

# PingPong

## Industrial Machinery

IoT Gateway for MODBUS Applications



### Product Description

Create and implement **IoT and M2M applications** fast with the *PingPong Industrial Machinery Gateway* of Round Solutions. It requires minimal configuration and is perfectly suitable for applications where **wireless data transmission of industrial machines** is needed. The gateway uses an integrated cellular module to send and receive data over the mobile network. PingPong is available with a 3G or **4G cellular module**.

With its Ethernet and RS485 interface, *PingPong Industrial Machinery* supports **MODBUS over RS485 and TCP**. It has a **full duplex mode and a half duplex mode** providing maximum flexibility for integration.

*PingPong* has also two SIM slots, three antenna connectors for Mobile Network and GPS, a USB mini-B connector and many I/Os.

Simply connect PingPong to any industrial machine, set up your application and send the data to your cloud. With Real Time Monitoring, data can be read and transmitted wirelessly for critical value alerting and downtime of machines can be reduced to a minimum by automatic fault detection and alarm messaging.

*PingPong* can be used in nearly all businesses for machinery such as industrial automation, the food industry, automotive, chemical, consumer goods and security to name a few.

### Key Benefits

- Easy to integrate with other devices & sensors using USB HS, UART, Ethernet and user definable GPIOs
- Increased connectivity performance with 3G/4G (optional with Wi-Fi and Bluetooth)
- Real Time Monitoring your machinery in the field to detect faults and eliminate downtime

- Ideal for m2m applications and mobile data and computing devices with ultra-compact design and extended operating temperature range
- Combines high-speed wireless connectivity with embedded multi-constellation high-sensitivity positioning GPS + GLONASS receiver
- Internet friendly with integrated TCP/IP and UDP/IP stacks
- Simple drop-in migration and technology design reuse path to 2G, 3G and 4G with any Telit xE910 cellular module
- Over-the-Air firmware update
- Wide range power supply input 9-60 V DC

### Additional Services

The collected data can easily be sent to any IoT Cloud you want to work with. Connecting PingPong with a Cloud offers many ways for monitoring, visualising, remote maintaining and remote control of *PingPong*.

Round Solutions offers **out of the box integration** for two of the global leading IoT Clouds: **Telit IoT Portal** and **Cumulocity Cloud**.

The graphical user interface of both IoT Clouds is available through any web browser or mobile through smartphones and tablets.

With the **Telit IoT SIM cards** the stable data transfer between *PingPong* and Cloud is guaranteed. Through automatically Roaming in both international and at home, it's always the strongest network active with the best performance.

Also **firmware development and software customisation** are other offerings of Round Solutions and our experienced Software Engineering Team customises according to your needs. Just contact us.

### Available for

- EMEA
- North America
- Latin America\*
- APAC\*
- Korea
- Australia

### Optional with additional technologies

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

### Complete, Ready to Use Access to the Internet of Things



\* 4G soon available

# PingPong

## Product Features

- IoT Gateway with wired and wireless communication channels and interfaces
- Wireless communication: Telit xE910 cellular family
  - 2G, 3G and 4G
- High Performance GNSS: Telit SL869
  - GPS, Glonass, Galileo
  - For Tracking, Timing and Dead Reckoning
- 2x SIM card holder and SIM on chip
- Hardware Watchdog for the microcontroller
- Configurable over Ethernet, USB and/or SMS
- Out of the box connectivity with
  - Cumulocity IoT Cloud Platform
  - Telit IoT Portal
- TCP and UDP Data Protocols
- Accelerometer on board
- Magnetometer on board (for the detection of geographically north)

## Interfaces

- 2 x Connectors for:
  - UART
  - SPI
  - CAN
  - I<sup>2</sup>C
- 1 x Ethernet interface
- 1 x RS485 interface (full/half duplex)
- 1 x USB interface
- 1 x CAN interface
- 2 x Frequency inputs
- 2 x Analog inputs
- 4 x Three state logic inputs (Dig.Inputs)
- 4 x NMOSFET outputs (Dig.Outputs)
- 2 x Current measurement inputs (24 bits resolution with galvanic isolation)
- 1 x 1-Wire interface
- Antenna Connectors
  - GSM: SMA/F Connector
  - GNSS: SMA/F Connector

## Data

### LTE

- Uplink up to 50 Mbps
- Downlink up to 100 Mbps

### HSPA+

- Uplink up to 5.75 Mbps
- Downlink up to 42.0 Mbps

### UMTS

- Uplink/Downlink up to 384 kbps

### GSM/GPRS

- Uplink/Downlink up to 9.6 kbps

## Environmental

- Extended temperature range -40°C to +85°C
- Optional enclosures
  - IP53
  - IP67



- Power Management
  - 9-60V DC input
  - 3.6V AUX output
- Max. current consumption
  - 900mA
- Approvals
  - CE

## Order Code

- 3G Version: **TER-PP-IM3-KIT**
- 4G Version: **TER-PP-IM4-KIT**