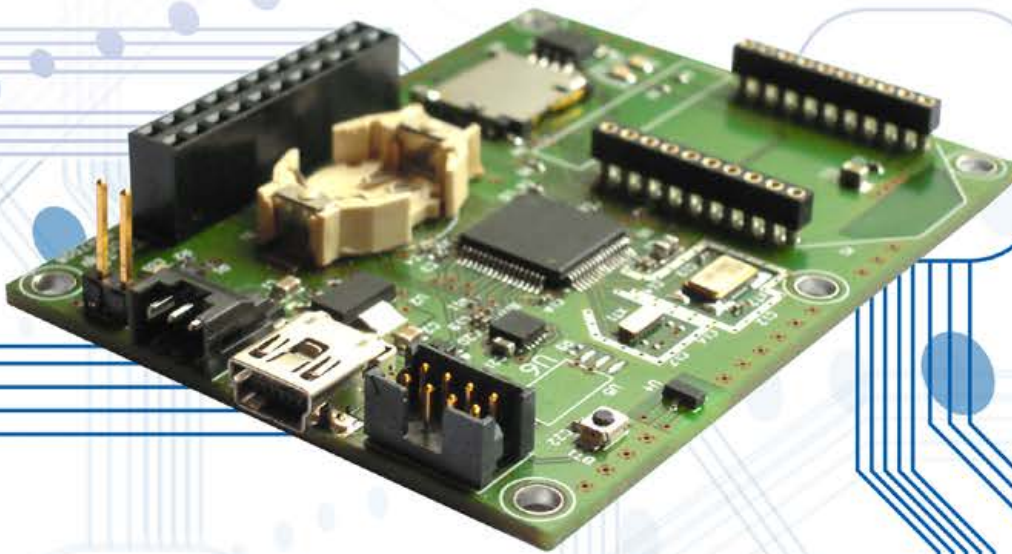# TSmoTe

# DEVELOPMENT TOOL FOR WIRELESS MONITORING, REMOTE CONTROL AND M2M APPLICATIONS



The TSmoTe is an embedded system that enables a fast and simple development of wireless applications and reduces the time-to-market.

It consists on a low-power 32 bit microcontroller with an ARM Cortex-M3 core at 72 MHz with 96 KB RAM and 1 MB Flash memory. Sensors, actuators and other devices can be connected to the TSmoTe through I/Os and serial ports. There are multiple expansion modules available for the TSmoTe: ZigBee, Wi-Fi, GPRS, RFID/NFC, GPS, RS485.

At software level, the TSmoTe includes TCP/IP, HTTP and Modbus stacks, as well as the drivers for the expansion modules. Everything runs on top of a real time operating system.

Due to its modular design it is possible to combine the communication technologies needed for a certain application. Thanks to the software libraries and API provided by TST, programming the user application is extremely simple.

## KEY FEATURES

Fast development of wireless applications.

Support of multiple communication technologies.

Direct connection to sensors and actuators.

Simple programming with TST software libraries.

| ELECTRICAL | |
|---|---|
| Input voltage | 4.5 - 12 VDC |
| Internal voltage | 3.3 VDC |
| Current MCU On | 40 mA |
| Current MCU stand-by | 23 uA |
| Coin cell | CR1225 |

| MECHANICAL | |
|---|---|
| Dimensions | 70 x 52 mm |
| Connectors | 22 pins female slot for expansion modules |
| | Double row female slot for expansion modules |
| | 8 pin JTAG connector |
| | Mini USB |

| MCU | |
|---|---|
| Microcontroller | 32 bits STM with ARM Cortex-M3 core |
| Clock | 72 MHz |
| Flash | 1 MB |
| RAM | 96 KB |
| SD card | Slot for microSD cards up to 2 GB |
| Serial interfaces | 3 UART, 2 I2C, 1 SPI |
| I/Os | Up to 6 analog, up to 20 digital |

| EXPANSION MODULE | |
|---|---|
| ZigBee, Wi-Fi, IEEE802.15.4, GPRS, NFC/RFID, GPS, RS485, Industrial sensor adapter | |

| EMBEDDED SOFTWARE |
|---|
| TCP/IP, HTTP, Modbus stacks |
| FreeRTOS operating system |
| TST software libraries |

| ENVIRONMENTAL | |
|---|---|
| Operation temperature | -20ºC / +70ºC |
| Storage temperature | -40ºC / +85ºC |
| Certifications | CE, RoHS |