

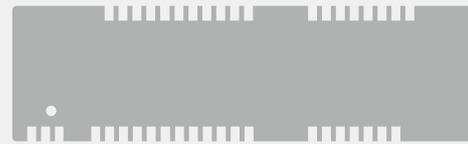
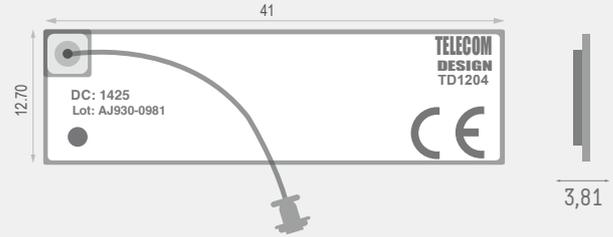
# TD 1204

The high-end module for geolocation!

TD1204 is the best compromise between integration facility and costs.

This is the 1st Sigfox module which embedded GPS and accelerometer sensors for geolocation and tracking applications.

Thank's to the TD1204, you will have the chance to design your own antennas (radio and GPS).



## Product description

TD next's TD1204 devices are high performance, low current SIGFOX™ gateways, RF transceiver and GPS receiver.

The combination of a powerful radio transceiver, a state-of-the-art ARM Cortex M3 baseband processor and a high-efficiency GPS receiver achieves extremely high performance while maintaining ultra-low active and standby current consumption.

The TD1204 device offers an outstanding RF sensitivity of -126 dBm while providing an exceptional output power of up to +14 dBm with unmatched TX efficiency.

The TD1204 device versatility provides the gateway function from a local Narrow Band ISM network to the long-distance Ultra Narrow Band SIGFOX™ network at no additional cost.

Moreover the fully integrated on-board GPS receiver combines outstanding sensitivity with ultra low power which allows you to achieve excellent accuracy and Time-To-First-Fix performance.

Combining the SIGFOX™ network possibilities with accurate geolocation will give you access to a brand new world of embedded applications.

The TD1204 also embeds an ultra-low power 3D accelerometer with motion and free fall detection to further extend application range.

Eventually the broad range of analog and digital interfaces available in the TD1204 module allows any application to interconnect easily to all peripherals.

The LVTTTL low-energy UART, the I2C bus, the multiple timers with pulse count input/PWM output capabilities, the high-resolution/high-speed ADC and DAC, along with the numerous GPIOs can control any kind of external sensors or activators.

Featuring an AES encryption engine and a DMA controller, the powerful 32-bit ARM Cortex-M3 baseband processor can implement highly complex and secure protocols in an efficient environmental and very low consumption way.

## Product range

TD1207

1

TD1208

1 2

TD1204

1 2 3

TD1205

1 2 3 4

4 Integrated antennas

3 GPS + 3D accelerometer

2 SDK

1 Sigfox/LAN



# TD1204 Features

## Sigfox certified Gateway & RF transceiver with antennas

Frequency range = ISM 868 MHz  
Receive sensitivity = -126 dBm

Modulation

- (G)FSK, 4(G)FSK, GMSK
- OOK

Modulation

- + 14 dBm

Low active radio power consumption

- 22  $\mu$ A RX (windowed mode)
- 37 mA TX @ +10 dBm



## Multi-GNSS GPS Receiver

Multi-GNSS support

- GPS/GLONASS
- SBAS augmentation services

Ultra-Low power consumption

- 22 mA Acquisition
- 15  $\mu$ A Backup

High sensitivity

- 56-channel engine
- -162 dBm Tracking
- -148 dBm Cold start

## Board characteristics

Power supply = 2.3 to 3.6 V

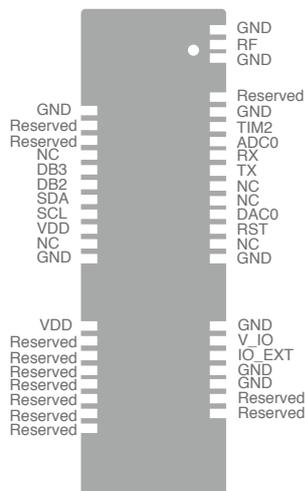
2.5  $\mu$ A idle state consumption

Small form factor: 41.91x12.7x3.81mm

Available in several conditioning methods

## Ultra-low power 3D Accelerometer

Up to +/- 16g full scale



## Pin Assignments