

High-Performance, Low-Current SIGFOX™ Gateway And GPS Receiver With Integrated Antennas



GENERAL DESCRIPTION

TD1205P Tracker module feature the SIGFOX™ high efficiency Gateway which offer high interference immunity performances on ISM band. It includes GNSS, Accelerometer and Hall-Effect sensors in order to provide a high efficiency tracking solution in 30x28x10.5mm size including antennas.

The TD1205P device offers an outstanding RF sensitivity of -126 dBm while providing an exceptional output power of up to $+16$ dBm radiated output power with only 50mA consumption.

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.

Key FEATURES

- SIGFOX™/LAN
- GNSS, Accelerometer, Hall effect
- SDK

BOARD FEATURES

- 2.3V to 3.6V Power supply
- 2.8 μ A standby consumption
- 30x38x10.5mm size with antenna
- Green and Red LED indications
- High CAF Resistance

RF FEATURES

- SIGFOX™ transceiver certified
- 145 dB maximum link budget
- (G)FSK, 4(G)FSK, GMSK, OOK modulation
- Receive sensitivity $= -126$ dBm
- $+16$ dBm maximum radiated output power
- Frequency range = ISM 868 MHz
- Low active radio power consumption (3.3V)
 - 13/16 mA RX
 - 50mA Tx @ $+16$ dBm

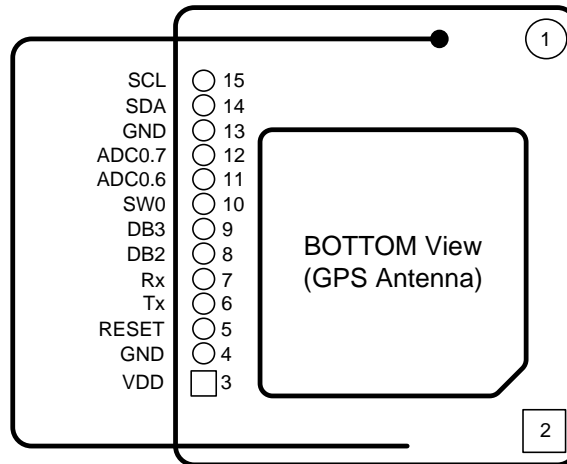
KEY SENSORS FEATURES

- **GNSS Receiver with active antenna**
 - Multi-GNSS supported: GPS/GLONASS
 - SBAS augmentation services
 - 12 μ A Backup / 29 mA Acquisition
 - 56-channels engine with high sensitivity
 - -162 dBm Tracking / -148 dBm Cold start
- **Ultra-low power 3D Accelerometer**
 - Up to ± 16 g full scale
- **Ultrasensitive Hall-Effect**
 - Magnet pole independence
 - Operation point down to 20 Gauss
 - 2.8 μ A consumption

APPLICATIONS

- SIGFOX™ transceiver (fully certified)
- Sensor network
- Health monitors
- Remote control
- Home security and alarm
- Telemetry
- Industrial control

Pin Assignments



Block Diagram

