

High-Performance, Low-Current US SIGFOX™ Gateway



GENERAL DESCRIPTION

TD next's TD1508 devices are high performance, low current SIGFOX™ gateways. The combination of a powerful radio transceiver and a state-of-the-art ARM Cortex M3 baseband processor achieves extremely high performance while maintaining ultra-low active and standby current consumption.

The TD1508 device offers an outstanding RF sensitivity of -127 dBm while providing an exceptional output power of up to +23 dBm with unmatched TX efficiency. The TD1508 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.

The broad range of analog and digital interfaces available in the TD1508 module allows any application to interconnect easily to the SIGFOX™ network. The LVTTTL low-energy UART, the I2C and SPI buses, the multiple timers with pulse count input/quadrature decoding/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.

Key FEATURES

- SIGFOX™ P0 certified
- FCC part 15.247 compliant
- Pin to pin compatible with TD1207 / TD1208
- SDK

BOARD FEATURES

- 2.3V to 3.6V Power supply
- 1.8 μ A sleep mode consumption
- LGA25 (25.4×12.7×3.81mm) Land Grid Array package

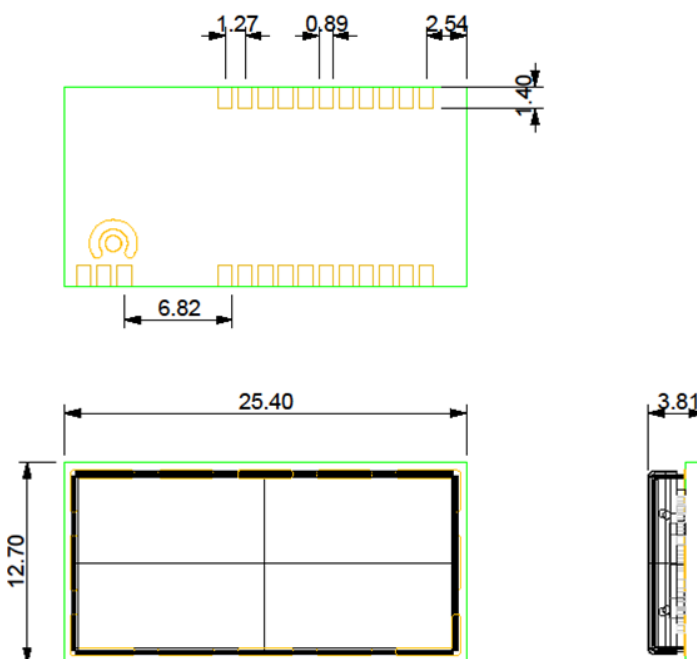
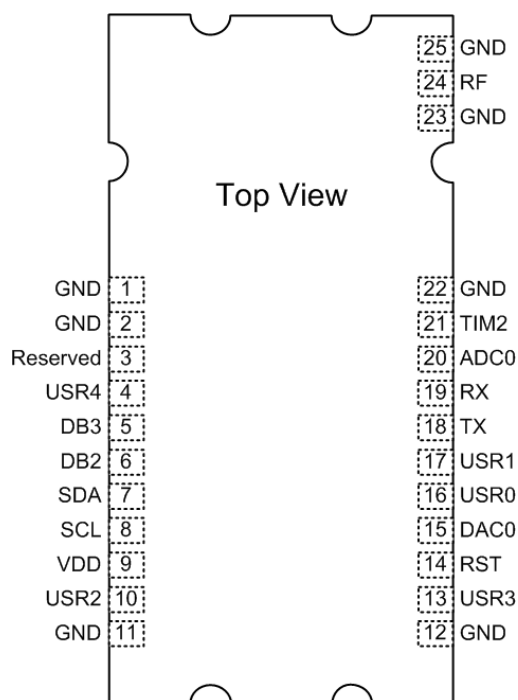
RF FEATURES

- SIGFOX™ transceiver certified
- 162 dB maximum link budget
- (G)FSK, 4(G)FSK, GMSK, OOK modulation
- Receive sensitivity = -127 dBm
- +28 dBm EIRP @ 3.3V with 2.7dBi antenna gain
- Frequency range = ITU Region 2 ISM Band (Americas, 902~928 MHz)
- Low active radio power consumption (3.3V)
 - 21 mA RX
 - 230mA Tx @ +23 dBm

APPLICATIONS

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

Pin Assignments



Block Diagram

