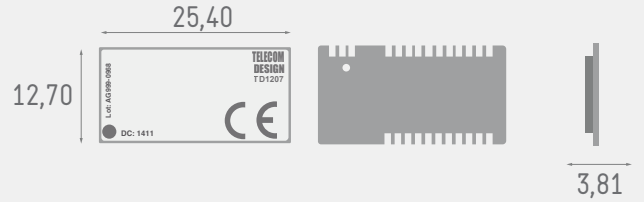


# TD 1207

The best time to market and the best cost effective solution!

The TD1207 is the entry level TD next RF module that brings the highest performance at the lowest price.

This module is the best way to enter in the Sigfox world easily!



## Product description

TD next's TD1207 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 TD1207 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 TD1207 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 TD1207 module allows any application to interconnect easily to the SIGFOX™ network.

The LVTTTL lowenergy UART, 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

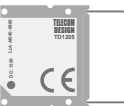
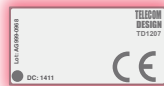
1 2 3 4

4 Integrated antennas

3 GPS + 3D accelerometer

2 SDK

1 Sigfox/LAN



# TD1207 Features

## Sigfox certified Gateway & RF transceiver with antennas

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

Modulation  
 2FSK

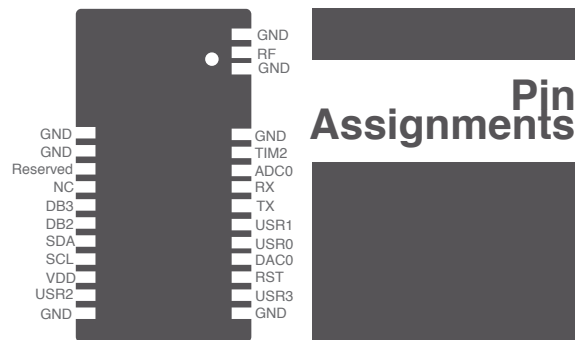
6

Max output power

Low active radio power consumption

## Board characteristics

Power supply = 2.3 to 3.3 V  
 500000



## Absolute maximum ratings

Parameter	Value	Units
$V_{DD}$ to GND	0 to +3.3	V
Instantaneous $V_{RF-PEAK}$ to GND on RF Pin	-0.3 to +8.0	V
Sustained $V_{RF-PEAK}$ to GND on RF Pin	-0.3 to +6.5	V
Voltage on Digital Inputs	0 to $V_{DD}$	V
Voltage on Analog Inputs	0 to $V_{DD}$	V
RX Input Power	+10	dBm
Operating Ambient Temperature Range $T_A$	-30 to +75	°C
Storage Temperature Range $T_{STG}$	-40 to +125	°C
Maximum soldeing Temperature	260	°C

## DC power supply characteristics

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Supply Voltage Range	$V_{DD}$		2.3	3.0	3.3	V
Power Saving Mode	$I_{Sleep}$	Sleep current using the 32 kHz crystal @ 25°C	1.5	1.8	3.5	µA
Active CPU Mode	$I_{Active}$	CPU performing active loop @ 14 MHz	2.55	3.0	3.45	mA
Active CPU Mode + RX Mode Current	$I_{RX}$		-	13	16	mA
Active CPU Mode + TX Mode Current	$I_{TX} + 14$	+14 dBm output power, 868 MHz, 3.3 V	-	49	-	mA
	$I_{TX} + 10$	+10 dBm output power, 868 MHz, 3.3 V	-	37	-	mA