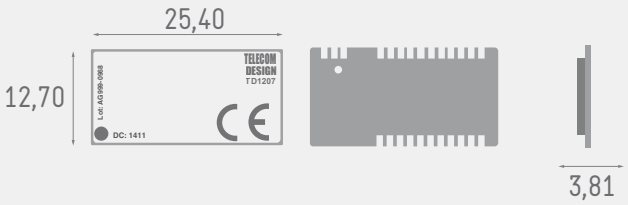
TD'1207

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.

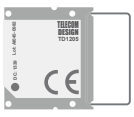
The broad range of analog and digital interfaces available in the TD1207 module allows any application to interconnect easily to the SIGFOX™ network.

The LVTTL 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	TD1208	TD1204	TD1205
❹ Integrated antennas				❶❷❸❹
❸ GPS + 3D accelerometer			❶❷❸	
❷ SDK		❶❷		
❶ Sigfox/LAN	❶			



TD1207 Features

Sigfox certified Gateway & RF transceiver with antennas

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

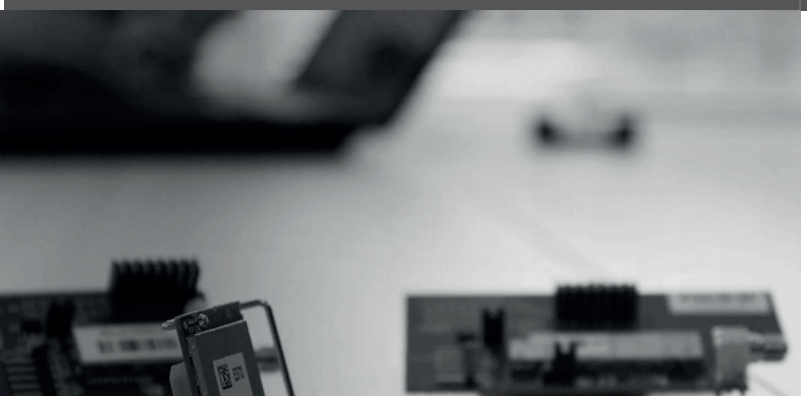
Modulation
22
8

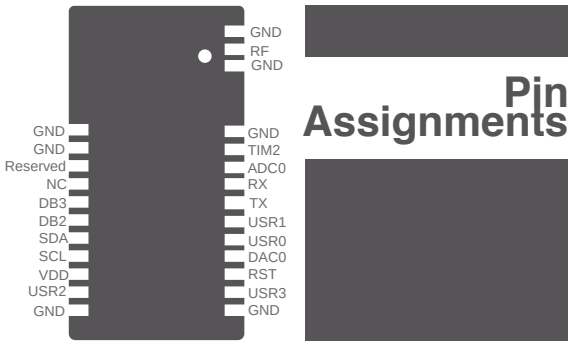
Max output power
K

Low active radio power consumption

Board characteristics

Power supply = 2.3 to 3.3 V





Pin Assignments

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

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