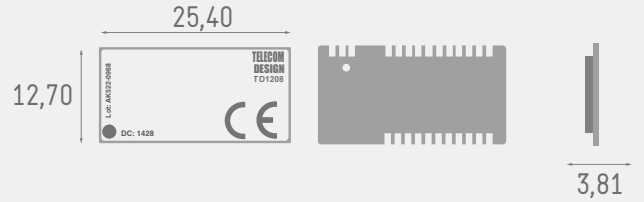


# TD 1208

The high-end module  
for embedded applications!

Because each customer is unique and each business has its own specificities... TD next gives you the ability to integrate your own application into the TD1208 modules.

Through its flexibility, the TD1208 is the ideal module to fit your core business needs!



## Product description

TD next's TD1208 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 TD1208 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 TD1208 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 TD1208 module allows any application to interconnect easily to the SIGFOX™ network.

The LVTTTL lowenergy 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

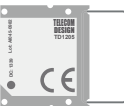
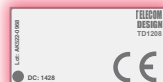
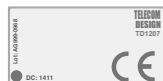
1 2 3 4

4 Integrated antennas

3 GPS + 3D accelerometer

2 SDK

1 Sigfox/LAN



## Sigfox certified Gateway & RF transceiver with antennas

Frequency range = ISM 868 MHz

Receive sensitivity = -126 dBm

Modulation

FSK

FSK

Max output power

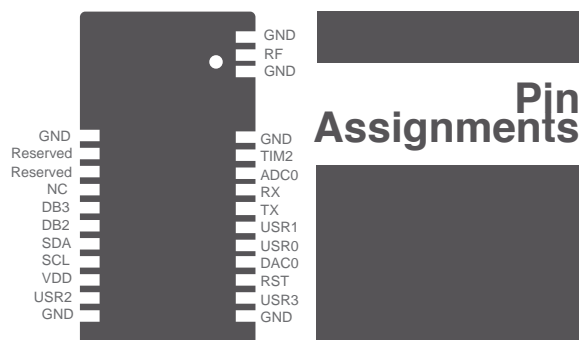
100mW

Low active radio power consumption

## Board characteristics

Power supply = 2.3 to 3.3 V

GPIO



## 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 soldering 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