

# ISM Transceiver PAN2350



## [ OUTLINES - ENW59604N ]

The PAN2350 module is a low power UHF narrowband transceiver, specially designed for ISM (Industrial, Scientific and Medical) and SRD (Short Range Device) band frequencies, it can be easily programmed for operation at other frequencies. This small module offers a low cost fully integrated solution for many ISM-applications.

Our model PAN2350 is specially made for all applications where a **narrow band** bidirectional data transfer function is needed but can also be used in **wide band** bidirectional applications.

## [ FEATURES ]

- Maximum data rate up to 153.6 kBaud (NRZ mode)
- Low power consumption
- Frequency range 804 - 940 MHz or 402 - 470 MHz
- High sensitivity (up to 121 dBm for a 12.5 kHz channel)
- Programmable output power up to 10 dBm
- Low supply voltage (2.3 V to 3.6 V)
- Small size (14.8mm x 20.3mm x 4.2mm)
- Operating temperature range -40°C to +85°C
- Digital RSSI and carrier sense indicator
- Suitable for frequency hopping systems
- Single port antenna connection
- Complies with EN 300 220 and FCC CFR47 part 15

## [ APPLICATIONS ]

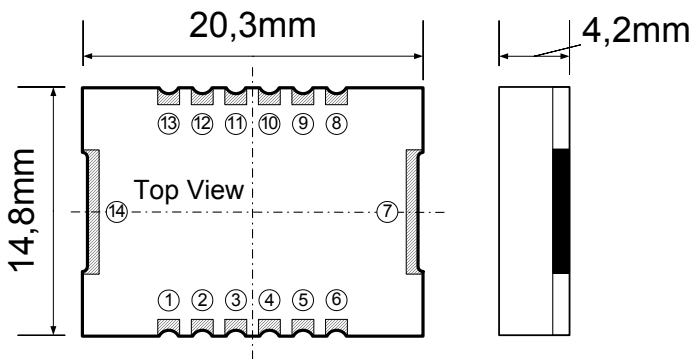
- Wireless Alarm and Security Systems
- RKE - Two-way Remote Keyless Entry
- Home Automation Systems
- AMR - Automatic Meter Reading
- Low Power Telemetry & Toys

## [ ORDERING CODE ]

- Narrow Band 868 MHz up to 4.8kbaud ENW59604NC1
- Wide Band 868 MHz up to 156.8 kbaud ENW59604NC2
- Narrow Band 433 MHz up to 4.8kbaud ENW59604NC3
- Wide Band 433 MHz up to 156.8 kbaud ENW59604NC4

MODULES  
WIRELESS

**DIMENSIONS**



Pin no.	Pin name
1	LOCK
2,4,5,7,14	GND
3	ANT
6	VCC
8	PSEL
9	PCLK
10	PDI
11	PDO
12	DCLK
13	DIO

**TECHNICAL CHARACTERISTICS**

Parameter	Value	Condition / Note
Receiver Sensitivity (BER=10 <sup>-3</sup> ) 433 MHz 868 MHz	-117 dBm -116 dBm	12,5kHz channel width, FSK@2kHz, 2,4kBaud, Man- chester coded
Output Power 433 MHz 868 MHz	-20 to +10 dBm -20 to +5 dBm	Delivered to 50 Ω load. The output power is program- mable.
RSSI dynamic range	63 dBm range	digital output
PLL lock time (Rx /Tx turn time) 12.5 kHz channel width, 433 MHz 25 kHz channel width, 868 MHz	1,3 ms 1,1 ms	Up to 1MHz frequency step to within ±1kHz.
PLL turn-on time From power down mode with crystal oscillator running 12.5 kHz channel width, 433 MHz 25 kHz channel width, 868 MHz	4,8 ms 2,5 ms	Time from writing to regis- ters to PLL lock.
Power Down Mode	0.2 μA typ.	Oscillator core off
Current Consumption receive mode 433 / 868 MHz	16,9 / 17,6 mA typ.	25 kHz channel width. Lower current can be achieved at other settings.
Current Consumption transmit mode 433 / 868 MHz P=3mW (5dBm)	16,8 / 33,0 mA typ.	Delivered to 50 Ω load. The output power is program- mable.

Note:  
All parameter belongs to V<sub>cc</sub> = 3V and T<sub>amb</sub> = 25°C.  
Chipcons CC1020 is used in this module.