

Konnex-Modem PAN3550



OUTLINES

The PAN3550 is manufactured in a 20.3 x 26.0 x 3.0 mm³ SMD package with an integrated pcb low cost antenna.

Ready for use in the 868 MHz and 915 MHz ISM (Industrial Scientific and Medical) Bands, upon special request variations for 315MHz and 433 MHz are available.

The freely programmable data rate up to 500 kbps guarantee a frequency resolution of 400 Hz (very high resolution) and that is the reason why this module is so singular.

This module complies to EN300220 and FCC CFR Part15 and is prepared also for the industrial RF Konnex™ standard.

FEATURES

- High speed data transfer up to 500 kbps
- Synchronous and asynchronous transmission modes
- Small size (20.3 x 26.0 x 3.0 mm³) with internal antenna
- Ultra low power Microcontroller with a variety of different memory configurations (16k, 32k or 60k Flash)
- Programmable carrier sense, link-quality and digital RSSI indicators
- Programmable RF output power of up to 10 dBm at all frequencies
- Efficient SPI interface
- 14 configurable GPIO pins with additional functionality: 2 x UART, I2C-Bus, 4 A/D-Ports with external reference voltage inputs, 3 Keyboard Interrupt
- Fully software configurable processor clock, from 135 kHz up to 26 MHz, for optimal choice between speed and power consumption.

APPLICATIONS

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

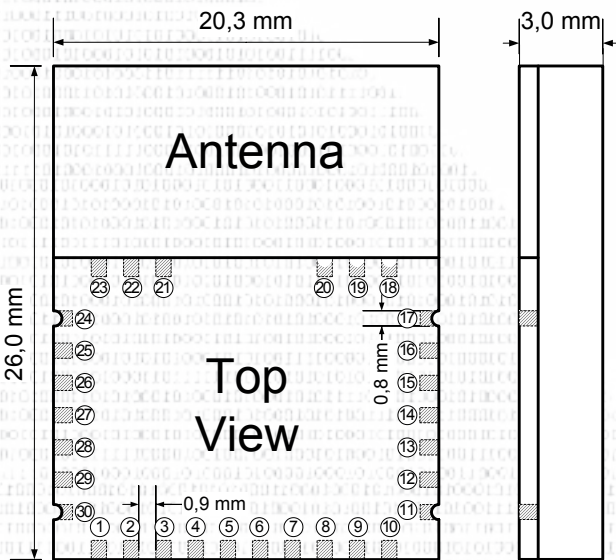
MODULES
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DIMENSIONS



Pin	Pin name	Pin	Pin name
1	AD Port 0 / GPIO 0	12	BKGD / GPIO 7
2	AD Port 1 / GPIO 1	13	µC Reset
3	AD Port 2 / GPIO 2	14	Uart2 TXD2 / GPIO 8
4	AD Port 3 / GPIO 3	15	Uart2 RXD2 / GPIO 9
5	3 V Reg. Out	16	Vcc
6	AD Reference Input H	22	RF/ NC
7	AD Reference Input L	25	I2C SDA / GPIO 10
8	Keyb. Int P0 / GPIO 4	26	I2C SCL / GPIO 11
9	Keyb. Int P1 / GPIO 5	28	Uart1 TXD1 / GPIO 12
10	Keyb. Int P2 / GPIO 6	29	Uart1 RXD1 / GPIO 13

Note:
 Not named pins are ground (GND).

TECHNICAL CHARACTERISTICS

Parameter	Value	Condition / Note
Receiver Sensitivity	-110 dBm	@BER=10 ⁻³ @2.4 kbps
Output Power	10 dBm	@all frequencies
Power Control Range	30 db	in 8 steps
Maximum Data Rate	500 kbps	also lower data rates are possible
Power Supply	1.8 V to 3.6 V	all supply pins must have the same voltage
Current Consumption		
Receive mode (high speed)	20 mA typ.	@500 kbps
Transmit mode (high speed)	34 mA typ.	@10 dBm @500 kbps ⁽¹⁾
	20 mA typ.	@ 0 dBm @500 kbps ⁽¹⁾
	17 mA typ.	@-10 dBm @500 kbps ⁽¹⁾
Standby mode	2.7 µA	
Sleep mode	1.0 µA	
Operating Temperature Range	-40°C to 85°C	

Notes:

All parameter belongs to V_{CC} = 3V and T_{amb} = 25°C.

Freescale's µC MC9S08GT60 and a brand new transceiver from a well known company are used in this module.

(1) Microcontroller speed can be software configured.