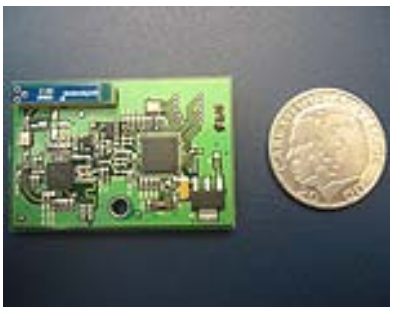
Datasheet

ZigBee Ready Module with both Power and Low Noise Amplifiers

with integrated antenna as well as connector for external antenna
Version 2.0



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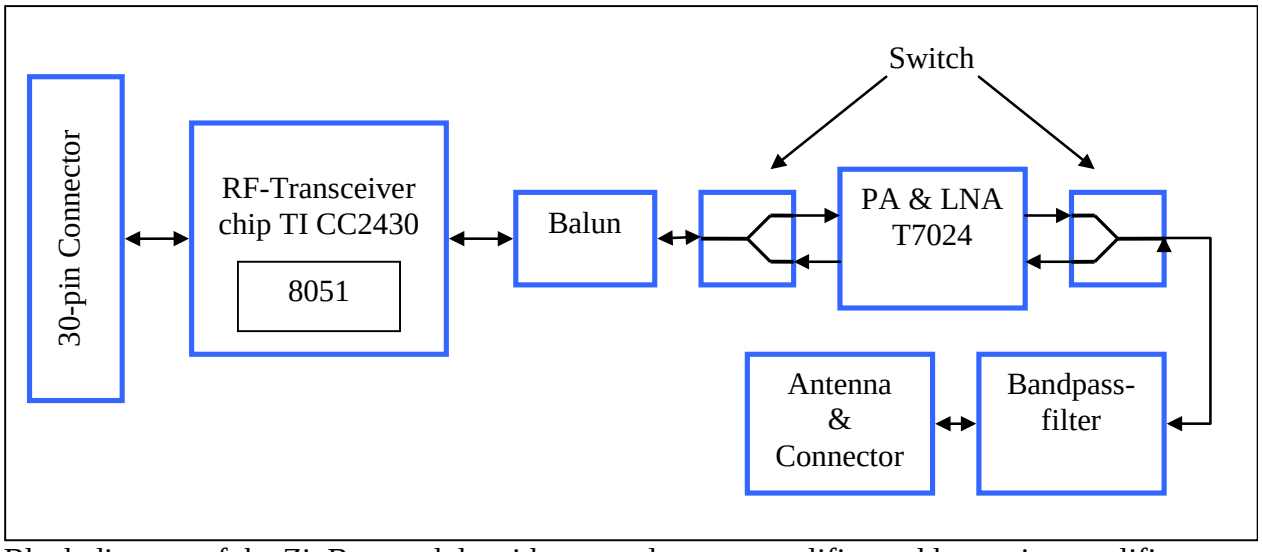
Key Features

- IEEE 802.15.4 compliant
- Low power 8051 microcontroller core
- 128 kB programmable flash memory,
- 8 kB RAM, 4 kB with data retention in all power modes
- Increased output power (max: +20 dBm)
- Increased receiver sensitivity (min: TBD)
- Power consumption Rx: 55 mA, Tx: 184 mA
- Full Function Device (FFD) capability
- Reduced Function Device (RFD) capability
- Standard 2x2x5-pin connector (1.27 mm pitch)
- Several programmable IO-pins
- 2 UARTs interface
- ADC with up to eight inputs and configurable resolution
- On-board 32.76 kHz Real Time Clock (RTC)
- Direct Sequense Spread Spectrum (DSSS)
- Integrated antenna
- Additional external antenna connector
- 16 channels in the 2.4 GHz ISM-band
- 3.6-6.0V power supply
- 6 interupt driven I/O´s
- Size: 45x30 mm

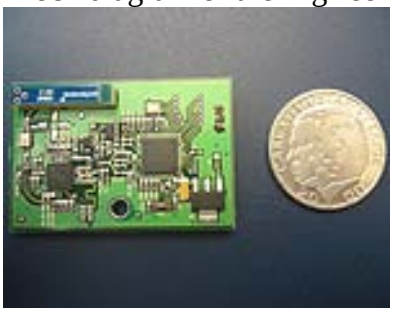
Applications

- Stand alone sensors
- Industrial control and maintenance
- Home or building automation
- OEM equipment
- Education
- Security systems

Block Diagram and Photograph



Block diagram of the ZigBee module with external power amplifier and low noise amplifier

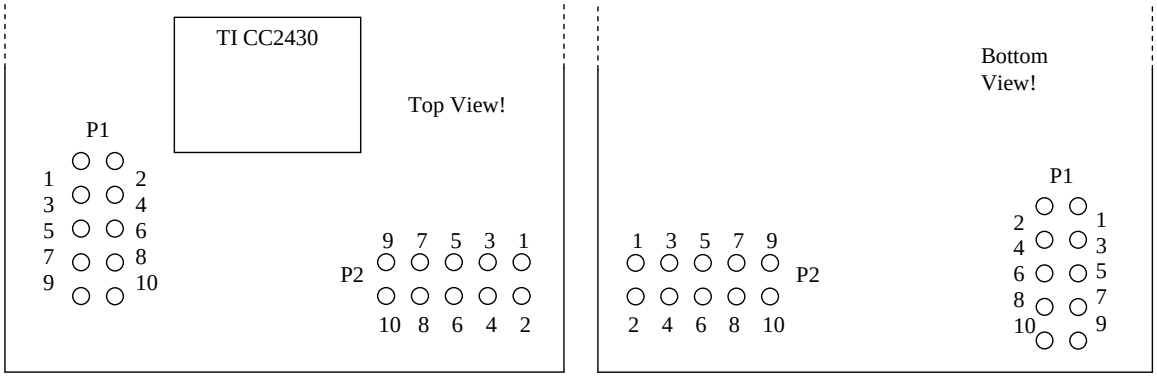


Photograph of the ZigBee module with external power amplifier and low noise amplifier

General Description

The ZigBee module with external power amplifier and low noise amplifier module is specially designed for fast developing of applications aiming at low data rate, up to 250kbps, and extended radio range. The module is fully capable of operating the ZigBee software stack, supporting in-system programming and debugging via the JTAG interface. The microcontroller can be communicated via two standard pieces 10-pins connectors.

Pin Configuration



Top and bottom view pin configuration of the module

Pin configuration of the connector

Connector	Pin	Description	CC2430	Description
P1	1	DBG_CLK	Port 2.2	Digital I/O
	2	VDD		Power
	3	DBG_DATA	Port 2.1	Digital I/O
	4	GPIO	Port 1.5	Digital I/O
	5	GND		Ground
	6	IO	Port 1.4	Digital I/O
	7	Vin		Power Supply
	8	GPIO	Port 1.3	
	9	RESET_n		Active low
	10	GPIO	Port 1.2	Digital I/O
P2	1	GPIO	Port 0.7	Digital I/O
	2	GPIO	Port 0.2	Digital I/O
	3	GPIO	Port 0.6	Digital I/O
	4	GPIO	Port 0.1	Digital I/O
	5	GPIO	Port 0.5	Digital I/O
	6	GPIO	Port 0.0	Digital I/O
	7	GPIO	Port 0.4	Digital I/O
	8	GPIO	Port 1.0	Digital I/O
	9	GPIO	Port 0.3	Digital I/O
	10	GPIO	Port 1.1	Digital I/O

Electrical Characteristics

Parameter	Min	Typ	Max	Unit	Condition
Suppy voltage		5.0	7.5	V	

RF frequency	2400		2483	MHz	
Radio bit rate		250		kbps	
Current consumption Rx mode		55		mA	
Current consumption Tx mode		184		mA	20 dBm output power

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