



## **ZigBee RF MODULE OPERATIONAL DESCRIPTION**

SPZB250 is a ZigBee module optimized for embedded applications. It enables OEMs to easily add short-range radio link between electronic devices.

The module is based on SN250 ZigBee Network Processor which integrates a 2.4GHz, IEEE 802.15.4-compliant transceiver as well as IEEE 802.15.4 PHY and MAC.

A 24 MHz high stability Xtal is present on board to guarantee the required timing imposed by ZigBee specifications; additionally a 32.768kHz Xtal is provided for low power operation.

A 128kB of embedded flash memory and 5kB of RAM is available for data and program storage.

To support user defined applications, a number of peripherals such as GPIO,UART,I2C, ADC and general purpose timers are available and user selectable.

A single supply voltage is foreseen; an internal voltage regulator supply the different block of the system; the voltage supply fixes also the I/O ports levels allowing an easy interface with the host system.

The deep sleep mode with power consumption of less than 1 uA allows applications where the battery life is a key point.

## **APPLICATIONS**

- Industrial controls
- Sensor Networking
- Monitoring of remote systems
- Home applications
- Security systems
- Lighting controls

## **FEATURES**

- Integrated 2.4GHz ,IEEE 802,15,4-compliant transceiver
- Integrated IEEE 802.15.4 PHY and MAC
- 128kB Embedded flash and 5kB integrated RAM for program and data storage
- 17 GPIO with alternate functions (GPIOs, UART, I2C, SPI, ADC)
- 2 16-bit general purpose timers; one 16-bit sleep timer
- ADC , sigma-delta converter with 12 bit resolution
- On board 24 MHz stable Xtal
- Selectable Integrated RC oscillator ( typ 10KHz) or 32.768kHz Xtal for low power operation
- 1 uA power consumption in Deep sleep mode
- Watchdog timer and power on reset
- Pins available for Non-intrusive debug interface (SIF)
- Single voltage supply