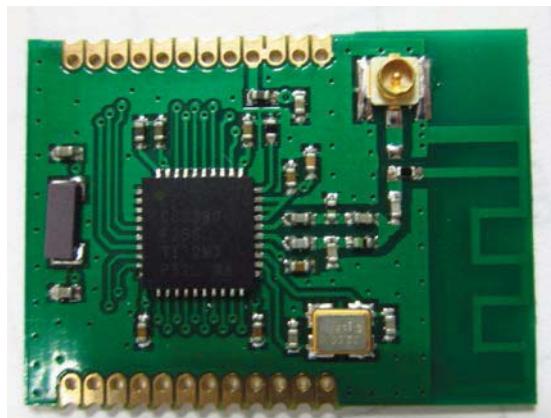


# CC2530 Zigbee Module SZ1



## • General Description

The SZ1 RF Module is a low-power, highly integrated 2.4-GHz transceiver that suitable for systems targeting compliance with worldwide radio-frequency. It's a true system-on-chip solution for 2.4-GHz IEEE802.15.4,ZigBee applications.

## • Electrical Characteristics

T<sub>a</sub> = 25°C, V<sub>CC</sub> = 3.3V

| ITEM                  | PARAMETER  |         |        | UNIT |
|-----------------------|------------|---------|--------|------|
|                       | MIN        | TYPICAL | MAX    |      |
| Voltage supply        | 2. 1       | 3. 3    | 3. 6   | V    |
| Transmitting current  | 36         | 38      | 40     | mA   |
| Receiving current     | 25         | 26      | 27     | mA   |
| Sleep consumption     |            | 0. 3    |        | uA   |
| frequency             | 2. 405     |         | 2. 485 | GHz  |
| Output power          |            | 3.2     |        | dBm  |
| Receiving sensitivity |            | -97     |        | dBm  |
| Data rate             |            | 250     |        | Kbps |
| Transmit distance     |            | 150     |        | m    |
| Operating temperature | -40        |         | 80     | °C   |
| Package size          | 28×20×2 mm |         |        |      |

## Radio

Copyright @2011 ,ShenZhen BTT Network Technology Co.,Ltd

TEL: 0755 82555845 FAX: 0755 23608647

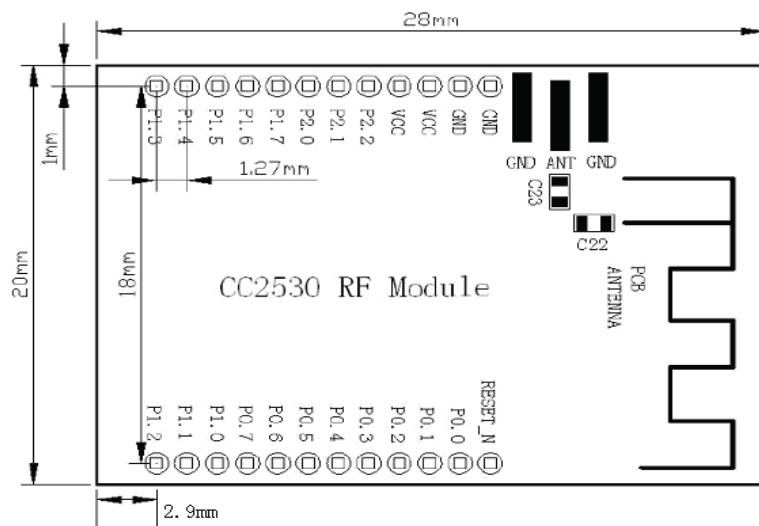
Add: Building 17, Science and Technology Parks of ShangSha, FuTian, ShenZhen,China

- 2.4-GHz IEEE802.15.4 compliant RF transceiver
- Excellent receiver sensitivity and robustness to Interference, receiver sensitivity reach to -97dBm
- Suitable for systems targeting compliance with worldwide radio-frequency
- Accurate digital RSSI/LQI support
- datarate: 250 kbps

## 8051 MCU

- Powerful five-channel DMA
- 128KB in-system programmable flash, customization 32-,64-,256KB
- 8KB RAM with retention in all power modes
- CSMA/CA hardware support
- AES security coprocessor
- Battery monitor and temperature sensor
- 12-Bit ADC with eight channels and configurable resolution
- Two powerful USARTs with support for several serial protocols
- IEEE 802.15.4 MAC timer, general-purpose timers (One 16-Bit, Two 8-Bit)
- 32-kHz sleep timer with capture
- Watchdog timer
- 21 general-purpose I/O pins (19× 4 mA, 2×20 mA)
- Hardware debug support

### • Package Description



### • Pin Description

**Pin name Pin type Description**

| Pin namee | Pin typ           | Description  |
|-----------|-------------------|--------------|
| VCC       | Power             | DC 2.0–3.6V  |
| GND       | Ground            | GND          |
| RESET_N   | reset             | CC2530 RESET |
| P0.0      | Digital I/O       | CC2530 P0.0  |
| P0.1      | Digital I/O       | CC2530 P0.0  |
| P0.2      | Digital I/O       | CC2530 P0.2  |
| P0.3      | Digital I/O       | CC2530 P0.3  |
| P0.4      | Digital I/O       | CC2530 P0.4  |
| P0.5      | Digital I/O       | CC2530 P0.5  |
| P0.6      | Digital I/O       | CC2530 P0.5  |
| P0.7      | Digital I/O       | CC2530 P0.5  |
| P1.0      | Digital I/O       | CC2530 P1.0  |
| P1.1      | Digital I/O       | CC2530 P1.1  |
| P1.2      | Digital I/O       | CC2530 P1.2  |
| P1.3      | Digital I/O       | CC2530 P1.3  |
| P1.4      | Digital I/O       | CC2530 P1.4  |
| P1.5      | Digital I/O       | CC2530 P1.5  |
| P1.6      | Digital I/O       | CC2530 P1.6  |
| P1.7      | Digital I/O       | CC2530 P1.7  |
| P2.0      | Digital I/O       | CC2530 P2.0  |
| P2.1      | Digital I/O       | CC2530 P2.1  |
| P2.2      | Digital I/O       | CC2530 P2.2  |
| ANT       | Antenna interface | 50ohm        |

**Note:**

1. P2.3 and P2.4 connect to a 32768 KHz crystal.
2. Spring Antenna or PCB Antenna can be choice.
3. Read *TI CC2530 datasheet* for detail.

## FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### FCC Radiation Exposure Statement

This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: 2AGZD-SZ1 Or Contains FCC ID: 2AGZD-SZ1"

When the module is installed inside another device, the user manual of the host must contain below warning statements;

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product

Any company of the host device which install this modular with limit modular approval should perform the test of radiated emission

and spurious emission according to FCC part 15C : 15.247 and 15.209 requirement, Only if the test result comply with FCC part 15C : 15.247 and 15.209 requirement, then the host can be sold legally.