SZ1 Zigbee Module

1. Features

1. Transmit power 2.5mW (4dBm); Receiver sensitivity -97dBm (BER=10-2)
2. Open frequency band, no need to apply for frequency, carrier frequency 2.4GHz.
3. Over-the-air transfer rate up to 250kbps, providing 16 channels, automatically selecting reliable channel communication depending on the environment. .
4. In the case of sight distance, the reliable transmission distance can reach 150 meters.
5. Power consumption: receiving current ≤ 27mA, emission current ≤ 40mA.
6. Small size, light weight, size 28×21mm.
7. With SoC, fewer peripheral circuits, all-chip high quality crystal oscillator, high reliability and low failure rate.
8. Connect with the user's PCB to provide pin and patch dual-use connection, PCB antenna and IPEX external dual antenna connection.

2. Technical specifications

name	parameter			unit
	Min	Typical value	Maximum	
Electrical performance (25℃)				
Supply voltage	3.0	3.3	3.6	V
Interface level	-0.3 ≤	VCC+0.3	3.6	V
Emission current	36	38	40	mA
Receive current	25	26	27	mA
Sleep current		0.4		uA
Wireless performance (25℃)				
working frequency	2.405		2.485	GHz
Transmit power	3.5	3.8	4.3	dBm
sensitivity		-97		dBm
Wireless transmission rate		250		Kbps
General performance				
Interface speed	2400	9600	115200	bps
temperature	-20		80	℃
Dimensions	28×21×4.0 mm			

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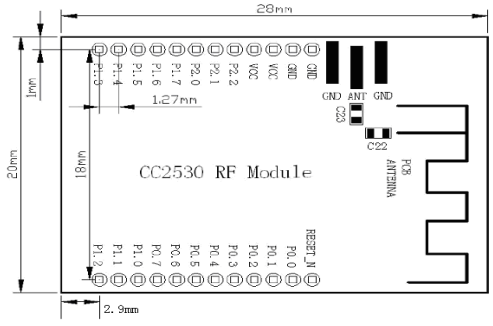
3. Pin description

Pin name	Pin type	Instructions
VCC	Power	DC 3.3V
GND	Ground	GND
RESET_N	reset	CC2530 RESET
P0.0	Digital I/O	CC2530 P0.0
P0.1	Digital I/O	CC2530 P0.1
P0.2	Digital I/O	Serial portRX
P0.3	Digital I/O	Serial portTX
P0.4	Digital I/O	Serial flow controlCT
P0.5	Digital I/O	Serial flow controlRT
P0.6	Digital I/O	CC2530 P0.6
P0.7	Digital I/O	CC2530 P0.7
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

Instructions:

1. Optional PCB antenna or external IPEX-SMA antenna;
2. The function of the IO pin in the description column is defined by the software;
3. There are pin signal marks on the back of the module;

4. Package size



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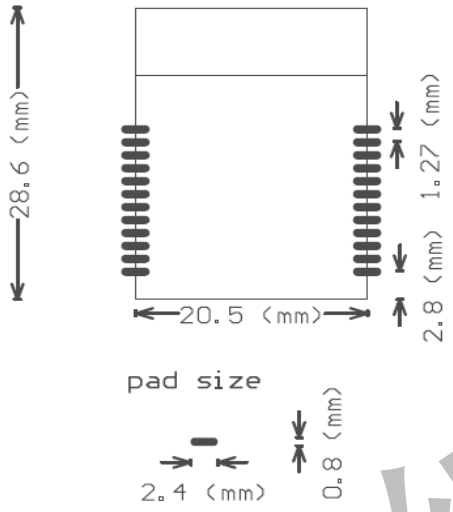
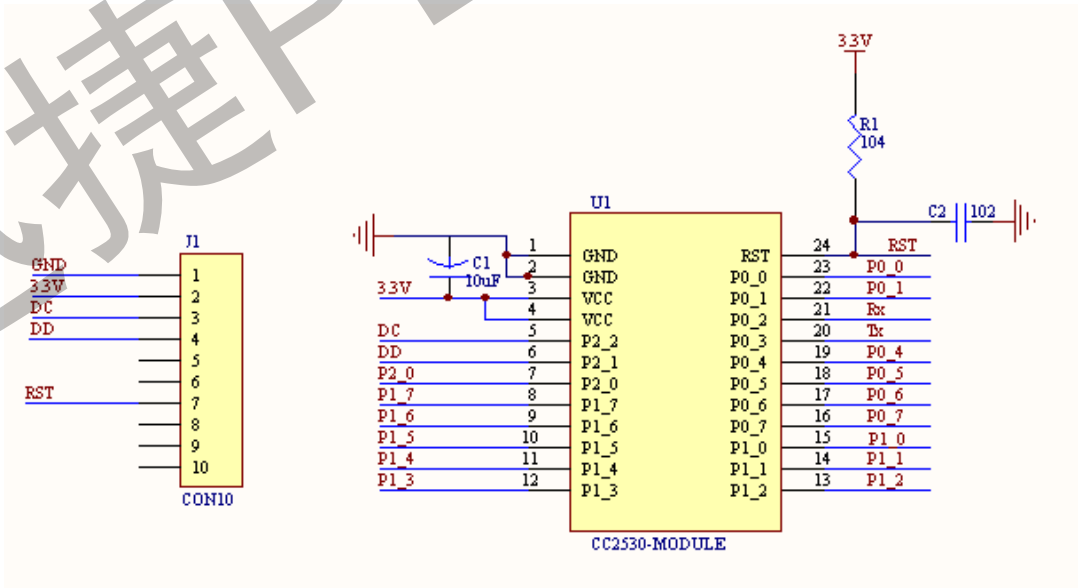
5. PCB package



6. User guides

6. 1 Module using circuit



J1 is the standard programming emulation interface. The chipcon simulator is used as the reference in the figure. If CC-Debugger is used, the 9-pin is the power source.

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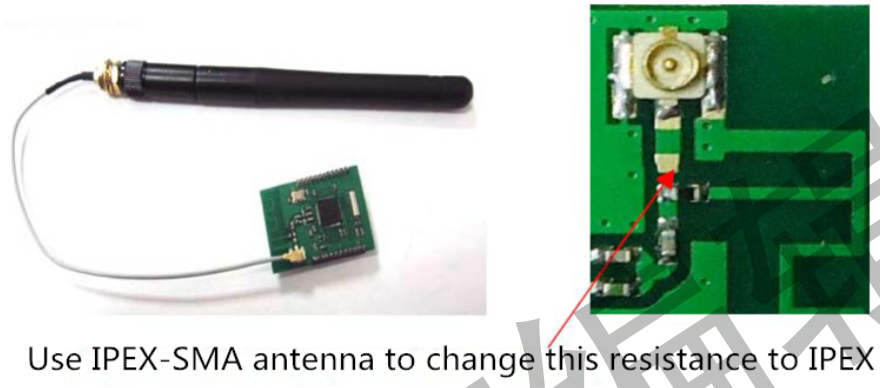
6.2 The module can be pinned or soldered directly to the product's PCB. If a PCB antenna is used, there must be no traces or copper underneath the PCB antenna. There must be no metal or magnet material around the PCB antenna.

6.3 The standard SZ1 module comes with a PCB PCB antenna and includes an IPX antenna mount. The default transmit antenna is the PCB antenna. Users can choose IPEX-SMA double-ended feeder, external SMA antenna, this mode is suitable for installing the module in the strong shielding of the shell, the antenna is placed outside the shell. Use this mode, you need to disconnect the PCB antenna Connect, direct RF signal to IPEX mount.



6.4 The distance of the module is measured under the condition of visible light, but it is recommended to be outdoors 100m, indoor 30m range in actual use.

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