版本 Version：V1.0
日期 Date：2015.10.23

名称： Zigbee 模块
Name：Zigbee Module

型号 ： CDT-ZBB2530-01
Model：CDT-ZBB2530-01

软件：
Software：

客 户 CUSTOMER	客户承认 APPROVE（请盖印章）	日 期 DATE

深 圳 市 中 龙 通 电 子 科 技 有 限 公 司
CHINA DRAGON TECHNOLOGY LIMITED
工厂地址：深圳市宝安区沙井街道南浦路林坡坑蚝三第一工业园 B4 栋
电话：（86 755）81449957
传真：（86 755）81449967
E-mail: Info@cdtech.com
Http://www.cdtech.cn
技术支持热线： 13902924823
客服专员： 13823632451

DESIGN：_____ CHECK：_____ APPROVAL：_____

CHINA DRAGON Technology

CDT-ZBB2530-01
Zigbee Module

IEEE 802.11.15.4

Revision History

Date	Revision Content	Revised By	Version
2015.10.23	First release		1.0

Table of Contents

1. Introduction

The CDT-ZBB2530-01 module provides solutions for a wide range of applications. In order to help the user to develop these applications, In order to help the user to develop these applications, this specification focuses on the usage of the module CDT-ZBB2530-01.For detailed device descriptions, complete feature lists, and performance numbers the reader is referred to the module-specific data sheet

2. General Descriptions

The CDT-ZBB2530-01 is a true module solution for IEEE 802.15.4, Zigbee and RF4CE applications. Itenables robust network nodes to be built with very low total bill-of-material costs.

The CDT-ZBB2530-01 combines the excellent performance of a leading RF transceiver with an industry-standard enhanced 8051 MCU, in-system programmable flash memory, 8-KB RAM, and many other powerful features.

The CDT-ZBB2530-01 has various operating modes, making it highly suited for systems where ultralow power consumption is required. Short transition times between operating modes further ensure low energy consumption

3. Features

•RF/Layout

– 2.4-GHz IEEE 802.15.4 Compliant RF Transceiver

– Excellent Receiver Sensitivity and Robustness to Interference

–Programmable Output Power Up to 3.5 dBm

– Only a Single Crystal Needed for Mesh Network Systems

–The Outline Dimension is 21mm × 11mm× 0.8mm that is very small

• Low Power

– Active-Mode RX (CPU Idle): 25 mA

– Active Mode TX at 4.5 dBm (CPU Idle):35 mA

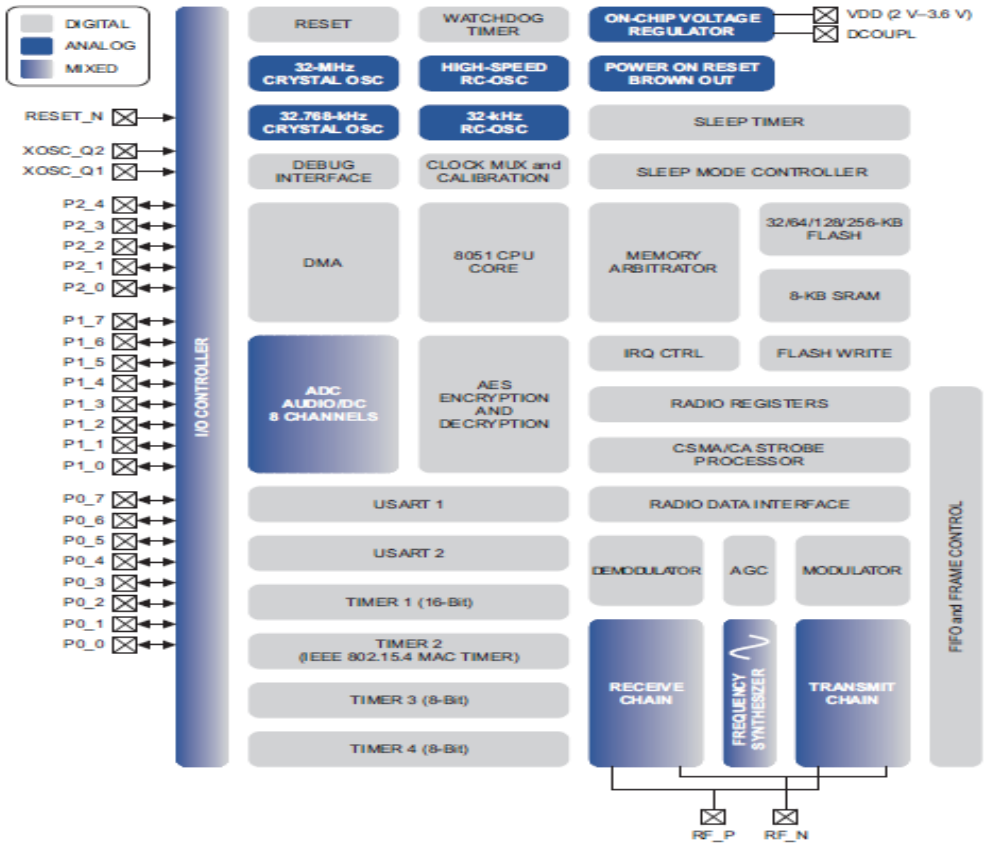
– **Power Mode 1 (4 ms Wake-Up): 1 uA**
– **Power Mode 2 (Sleep Timer Running): 5 uA**
–Power Mode 3 (External Interrupts): 2 uA

– **Supply-Voltage Range (3.0 V–3.6 V)**

4. Applications

- **2.4-GHz IEEE 802.15.4 Systems**
- **ZigBee Systems (256-KB Flash)**
- **Home/Building Automation**
- **Lighting Systems**
- **Industrial Control and Monitoring**
- **Low-Power Wireless Sensor Networks**
- **Consumer Electronics**
- **Health Care**

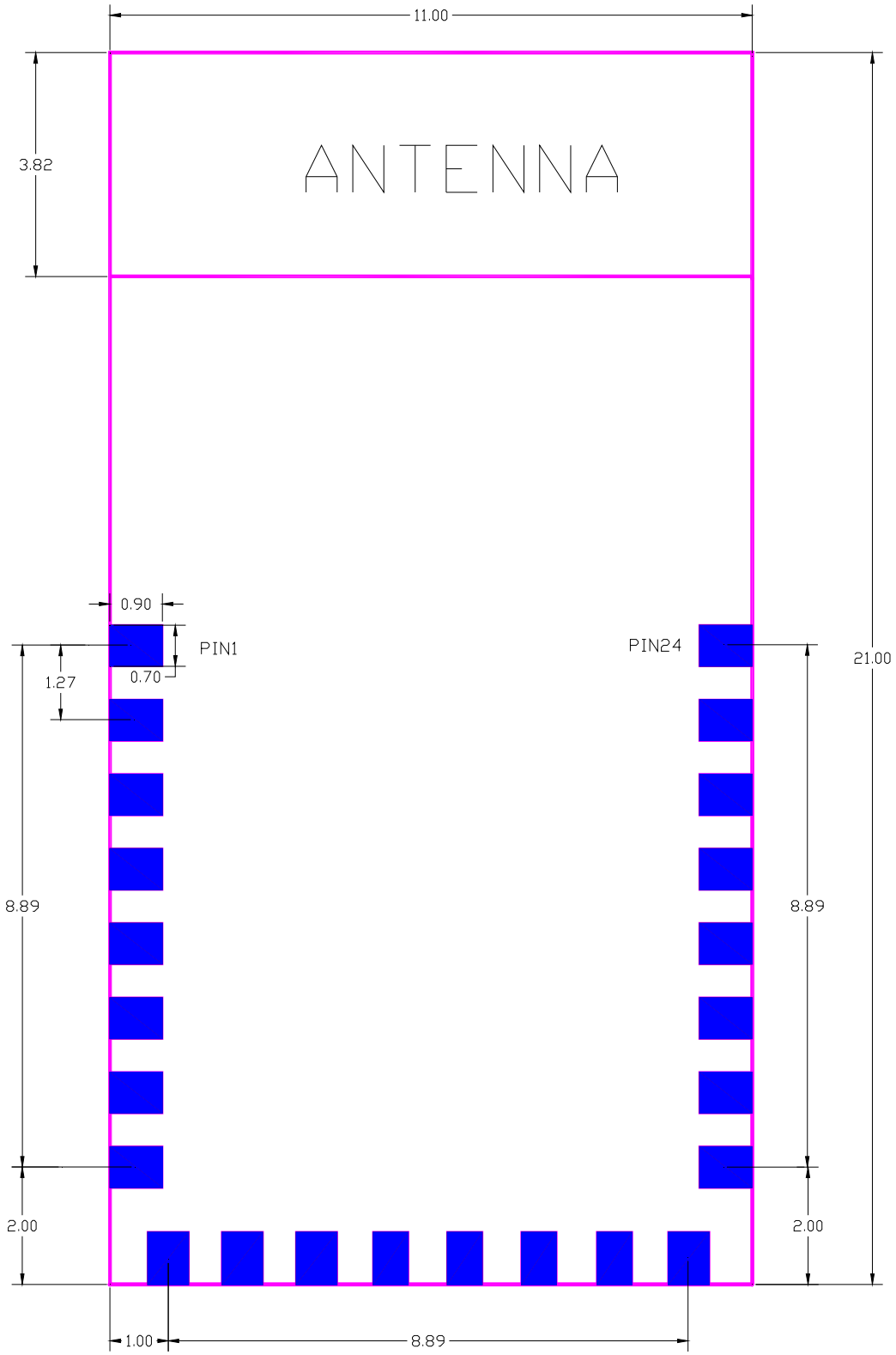
5. CC253X Block Diagram



6. General Specification

Master chip	**CC2530F256**
Supply-Voltage	**3～3.6 V**
RX Current	**25mA(type)**
TX Current	**35mA(type)**
Standby current	**120 uA**
Pin Level	**0～3.3v**
Frequency（Programmable ）	**2400～2483.5 MHz**
Frequency Offset	**15PPm**
Modulation	**Zigbee,ZigbeePRO,ZigbeeRF4CE,6LoWPAN**
Tx Power	**-20～+3.5 dBm**
Rx sensitivity	**-95dBm**
Communication Distance(type，Depends on the antenna and the environment	**50～80 m**
Operating temperature	**-40°C ～ +125°C**
Outline Size	**21 x 11 x 0.8 mm**
Storage Temperature	**-40°C ～ +125°C**

7. Pin assignments



NO	Name	Type	Descriptions
1	GND	Ground	Ground
2	VBAT	Power	3.3V digital power-supply connection
3	P2_4	Digital，Analog I/O，XOSC32K_Q1	32.768 kHz XOSC
4	P2_3	Digital，Analog I/O ，XOSC32K_Q2	32.768 kHz XOSC
5	P2_2	IDigital I/O	DC
6	P2_1	Digital I/O	DD
7	P2_0	Digital I/O	General Digital I/O
8	P1_7	Digital I/O	General Digital I/O
9	GND	Ground	Ground
10	P1_6	Digital I/O	General Digital I/O
11	P1_5	Digital I/O	General Digital I/O
12	P1_3	Digital I/O	General Digital I/O
13	P1_2	Digital I/O	General Digital I/O
14	P1_0	Digital I/O	General Digital I/O
15	P0_7	Digital I/O	General Digital I/O
16	P0_6	Digital I/O	General Digital I/O
17	P0_5	Digital I/O	General Digital I/O
18	P0_4	Digital I/O	General Digital I/O
19	P0_3	Digital I/O	UART_TX
20	P0_2	Digital I/O	UART_RX
21	P0_1	Digital I/O	General Digital I/O
22	P0_0	Digital I/O	General Digital I/O
23	RESET	Digital input	Reset, active-low
24	GND	Ground	Ground

8. Application Notes

1. 模块下面的地尽量保持完整,天线区域下面的PCB需要搂空。
2. 供电滤波电路，及数据线匹配电阻尽量靠近模块。
3. 模块摆放尽量远离干扰源:如WIFI天线，GSM天线，DDR CLK，LCD排线等等。