

Description

The ZB2530UPA-A module is based on CC2530 of TI company.

The CC2530 is a true system-on-chip (SoC) solution for IEEE 802.15.4, Zigbee and RF4CE applications. It enables robust network nodes to be built with very low total bill-of-material costs. The CC2530 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 CC2530 comes in four different flash versions: CC2530F32/64/128/256, with 32/64/128/256 KB of flash memory, respectively. The CC2530 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.



Key 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 4.5 dBm

Applications

- Home/Building Automation and Security
- RF4CE Remote Control Systems
- Lighting Systems
- Industrial Control and Monitoring
- Low-Power Wireless Sensor Networks
- Internet Things

Low Power

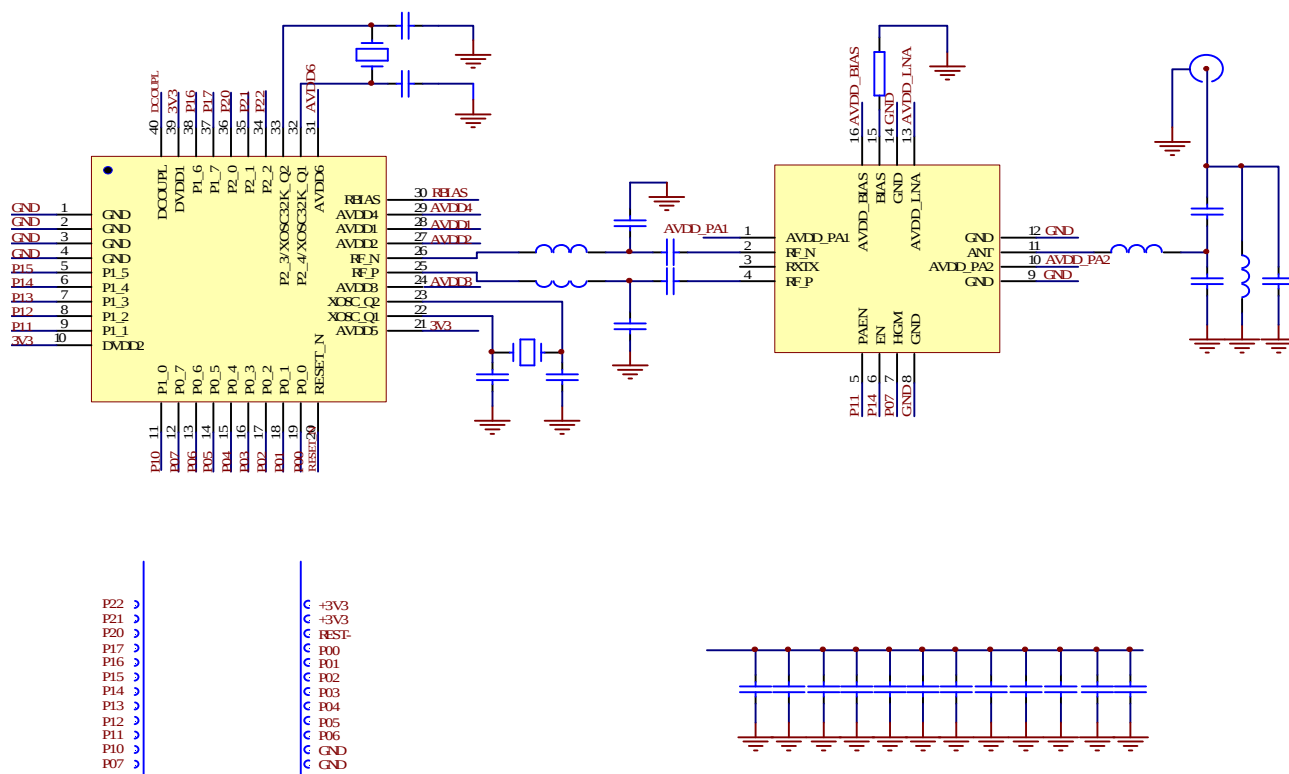
Active-Mode RX (CPU Idle): 24 mA
Active Mode TX at 1 dBm (CPU Idle): 29 mA
Power Mode 1 (4 μ s Wake-Up): 0.2 mA
Power Mode 2 (Sleep Timer Running): 1 μ A
Power Mode 3 (External Interrupts): 0.4 μ A
Wide Supply-Voltage Range (2 V~3.6 V)

Please check www.ti.com to get more information.

Microcontroller

- High-Performance and Low-Power 8051 Microcontroller Core With Code Prefetch
- 32-, 64-, 128-, or 256-KB
- In-System-Programmable Flash
- 8-KB RAM With Retention in All Power Modes
- Hardware Debug Support

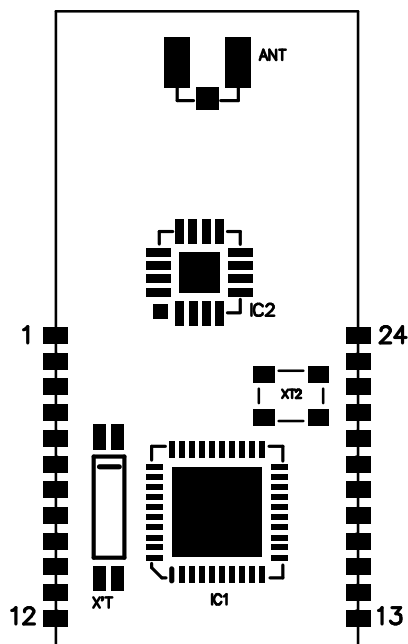
Electrical Characteristics



Radio Characteristics

Radio Characteristics Parameter	Specifications
Power Supply	2~3.6VDC
Frequency range	2.405GHz $\pm$ 24K
Current Consumption	Tx: 140mA max @output power max
Rx Sensitivity	-94dBm
Output Power	20dBm max
Operating Temperature	-20°C ~ +80°C

Pin Description



Pad Number	Pin Name	Description
1	P22	Port 2.2
2	P21	Port 2.1
3	P20	Port 2.0
4	P17	Port 1.7
5	P16	Port 1.6
6	P15	Port 1.5
7	P14	Port 1.4
8	P13	Port 1.3
9	P12	Port 1.2
10	P11	Port 1.1 ~ 20-mA drive capability
11	P10	Port 1.0 ~ 20-mA drive capability
12	P07	Port 0.7
13	GND	Connect to GND
14	GND	
15	P06	
16	P05	Port 0.5
17	P04	Port 0.4
18	P03	Port 0.3
19	P02	Port 0.2
20	P01	Port 0.1
21	P00	Port 0.0
22	REST_N	Reset, active-low
23	3.3V	2-V~3.6-V analog power-supply connection
24	3.3V	

Recommended PCB Land Pattern

