

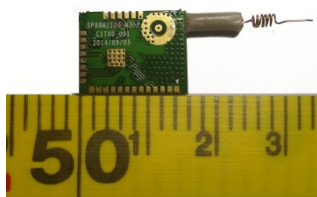
ZigBee module User Manual

Model: EF-CDT-ZB100B-00

Outlook



Top View



Bottom View

EF-CDT-ZB100B-00 is built on the Marvell 88MZ100 chip, can be used as an advanced SoC solution for IEEE 802.15.4 and Zigbee application systems. Based on the advanced RF transceiver, through a co-axial coil antenna, it can be used to construct a wireless network node with powerful performance and very low BOM cost. This modular design has attractive features: small size, easy operation, low PCB cost, high RF performance, all IO pins available, no more complex RF regulation, easily integrating into an embedded system, cutting off the time-to-market of production.

Tech Specifications

Performance	Parameter
Certification	FCC
Size	15.8mm(L) x 12.37mm(W) x 0.9mm(H)
Chip Model	88MZ100
Wireless Standard	802.15.4
RF rx current	14mA(type)
RF tx current	26mA(type)
Standby current	200 uA
Frequency	2405 ~ 2480 MHz(Programmable)
Wireless Data rate	250Kbps@2.4GHz
Modulation Mode	DSSS QPSK
Coiled Antenna Gain	2.0 dBi
Protocol Application	Zigbee, ZigbeePRO, ZigbeeRF4CE, 6LoWPAN
Conducted Output Power	11dBm
Voltage Range	3~3.6 V
Rx sensitivity	-104dBm

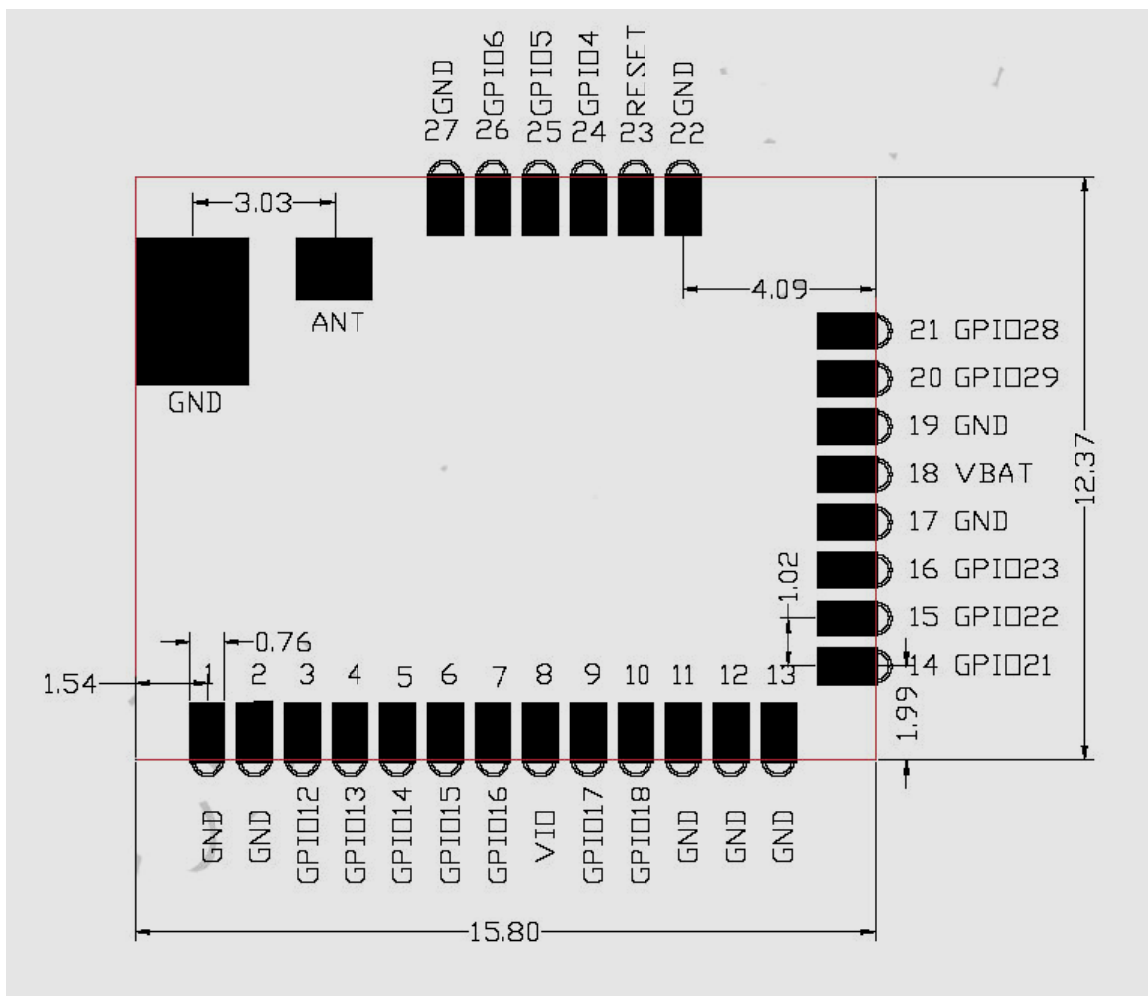
Communication Range (Sight of Direct)	500 m
Work Temperature	-40°C ~ +120°C
IO Pin Voltage	2.0-3.3V
Storage Temperature	-40~125 °C
Ambient	Work humidity:10% ~ 90%, no condensation Storage humidity:10% ~ 90%, no condensation
	Work Temperature -40°C ~ +120°C
	Storage Temperature -40~125 °C

ESD: 2 KV (All liners are based on human body model JEDECSTD22 method A114)
500 V (According to the charged device model JEDECSTD22 method C101)

(1) The range beyond the listed limits may cause permanent damage to the device.
Listed here are just the limits of the parameters.If beyond the recommended operating conditions of the functional operation or time specified here, it may influence on the reliability of the equipment.

(2) **Warning:**ESD-sensitive device,the protect measures must be taken to prevent such equipment from permanent damage.

Outline Dimension



Design Note

1. GND under module should be kept into integrity.
2. Power Filter circuitry and matched resistance should be close to module.
3. The placement of the module should be kept away from the interfering source, such as WiFi Antenna, GSM Antenna, DDR CLK, and LCD line bundle, etc.
4. After SMT main board of the module on the base board, and the coaxial coiled antenna is allowed to solder on the module.

Quality Guarantee

EF-CDT-ZB100B-00 has been certificated with FCC and IC. FCC certification number: 2AFE6ZB100B. To ensure the quality, every single device has to pass through testing and must be scrupulously checked for imperfections (Defect detection, frequency spectrum test, power consumption test, stability test, etc.).

Model No: EF-CDT-ZB100B-00.

FCC ID: 2AFE6ZB100B

Note Trade mark:

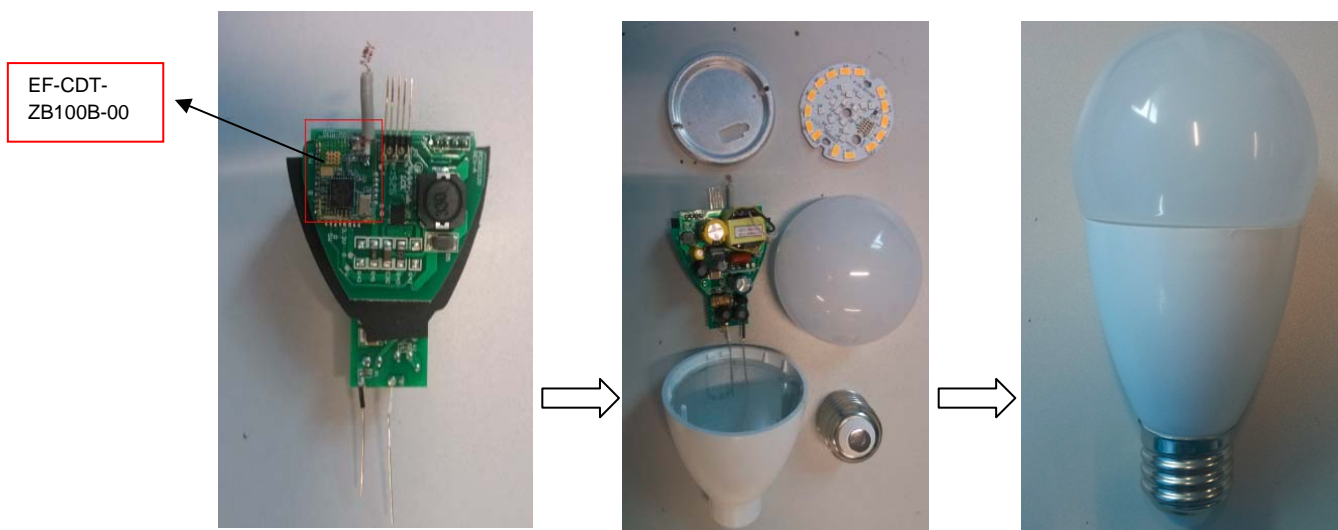
eastfield

Product Name: ZigBee module

Model No: EF-CDT-ZB100B-00

Installation method

EF-CDT-ZB100B-00 only used in LED lighting bulbs, SMD on LED driver, you can refer the product photo as below.



Manual and Product Labeling Information To the End User

The end user manual shall include all required regulate or information/warning as shown in this manual. And when this module is installed in the host product, you must include a "Contains FCC ID:2AFE6ZB100B" in the label of the host product.

FCC Caution:

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

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.

FCC Radiation Exposure Statement:

This equipment complies with FCC 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.

This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.