



User Manual

ZigBee Module MTEK-ZT001

User's Manual

Rev.1.0

Indemnification

- Manufacturer, importer, or agency shall not bear any responsibility with respect to accidental damage including injury or other damage caused by improper use or operation of this product.
- The information of the user guide is written based on the product specification. Our company is adding new functions and will continuously apply new technologies.

All specifications may be changed without notice to an individual user.

Caution

Before using this product, a user should well understand the cautions and use it properly.

As the cautions displayed are important for safety, a user must be well aware of them.

This describes the requirements and proposals of operation. Read the items carefully to properly operate a product not to be damaged

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The above information describes the damage that may occur when this device is wrongly used.

- Connect the product power according to the user manual. If not, the product may be damaged.
- Do not spill water over the product and expose to the moisture. The product may be damaged.
- Do not place a metal object on the product. The product may be damaged.
- Do not remodel this product arbitrarily.
- DO not touch this product with wet hands.

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.

- These limits are designed to provide reasonable protection against harmful interference in a residential installation.
- This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
- If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

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

- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .
- This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.
- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

LABELING REQUIREMENTS:

The Original Equipment Manufacturer (OEM) must ensure that FCC labelling requirements are met. This includes a clearly visible label on the outside of the OEM enclosure specifying the appropriate MTEK C&K., Ltd. FCC identifier for this product as well as the FCC Notice above. The FCC identifier is FCC ID: 2AIORMTEK-ZT001.

In any case the end product must be labeled exterior with
 "Contains FCC ID: 2AIORMTEK-ZT001"

1. Overview

This manual describes the ZigBee Module developed by MTEK C&K Co., Ltd.

The main functions of ZigBee Module are set, and the data of the device connected is exchanged to UART.

2. Spec

Flash size (KB)	256
RAM size (KB)	8
Frequency (Min) (MHz)	2405
Frequency (Max) (MHz)	2480
Standby Current (uA)	1
Operating Voltage (Min) (V)	2.3
Operating Voltage (Max) (V)	3.6
Modulation Techniques	DSSS
Operating Temperature Range (°C)	-40 to 125
Current Consumption (RX) (mA)	24
Current Consumption (TX) (mA)	35.5 @ 0 dBm
Frequency Resolution (MHz)	128 byte RX and TX
Frequency Range	2.4GHz
TX Power (dBm)	4.5
RX Current (Lowest) (mA)	20.5
Sensitivity (Best) (dBm)	-97
Wakeup Time (uS)	600
Data Rate (Max) (kbps)	250

3. Function Setting

A. UART

Baud rate : 115200bps

Data bit : 8bit

Parity bit : none

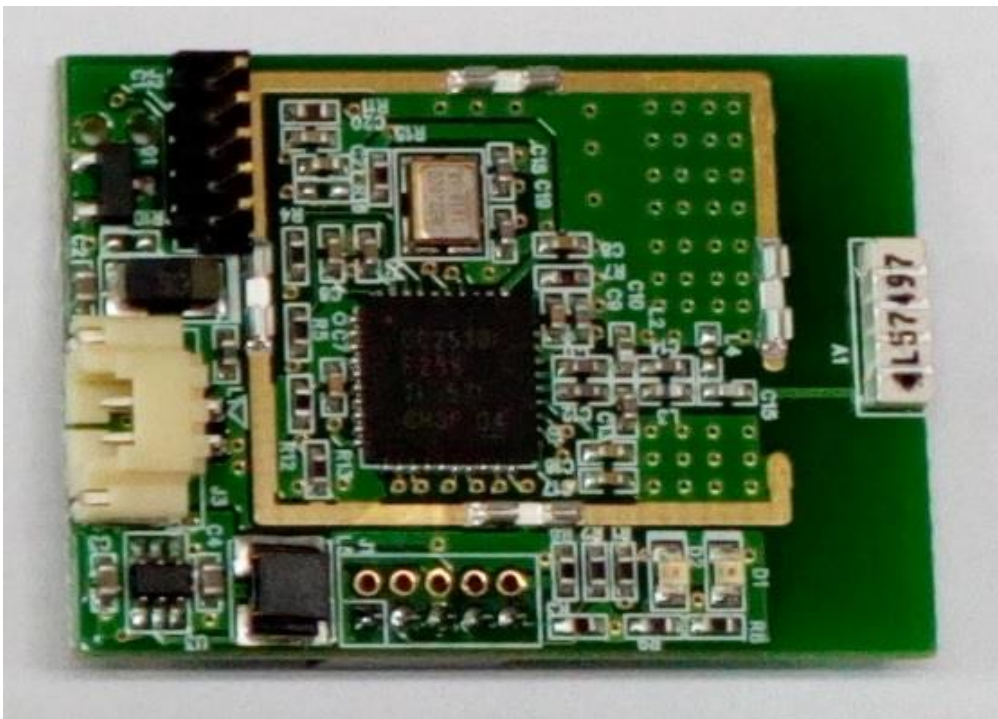
Stop bit : 1 bit

Flow control : none

4. Function

- A. This module analyzes the data sent between ZigBees and converts it to the MTEK C&K setting format to send to UART.

5. MTEK-ZT001 Connector



A. J1 UART and power supply terminal.

J1 Pin Structure

Pin No.	Pin Function
1	UART RX0
2	UART RX1
3	UART Tx0
4	UART Tx1
5	VIN
6	VIN
7	GPIO7
8	GPIO1
9	GND
10	GND

B. J2 Connector for MTEK C&K development and debug

C. J3 Power Connector