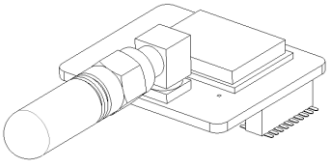
TM-8258 VER 100

ZigBee Module

INSTRUCTION

This radio module will be embedded on the TMT ENGINEERING CO.,LTD.
weighing scale, and therefore there is no user's manual



1. Features

This specification is applied to IEEE802.15.4 & RF4CE Module. This module is embedded with Amplifier and Single chip.

1.1. Description

- Bluetooth 5 Compliant, 1Mbps
- IEEE802.15.4 compliant, 250kbps
- 2.4GHz proprietary 1Mbps/250kbps mode with Adaptive Frequency Hopping feature support
- 64kB on-chip SRAM with up to up to 32kB retention
- 512kB internal Flash
- ➢ Rx sensitivity: -98dBm@BLE 1Mbps, -100dBm@ IEEE802.15.4 250kbps
- Tx output power: Typ. +10dBm
- RSSI monitoring with +/-1dB resolution
- Power supply: 1.8V~3.6V

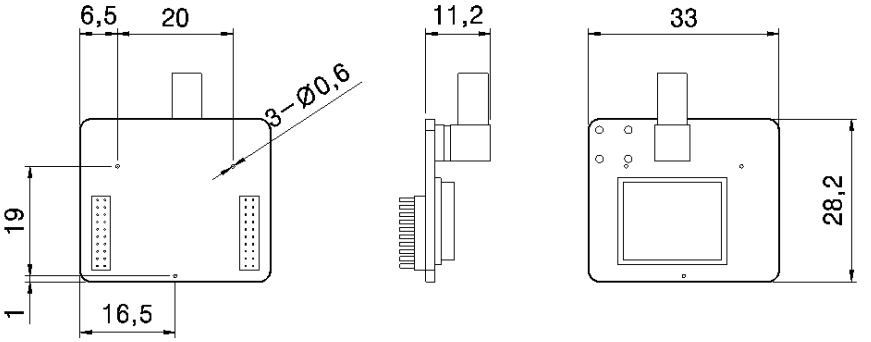
2. Recommended operating condition

Item	Sym.	Min	Typ.	Max	Unit	Condition
Power-supply voltage	VDD	1.8	3.3	3.6	V	power supply
Operating Temperature Range	TOpr	-10	45	℃		

3. RF TX Characteristics(+25℃)

Item		Spec.	Remark
Frequency Range		2400~2483.5MHz	
Frequency Tolerance		<±20ppm	
Occupied B.W		<2.2MHz	
Output Power (Max)		10dBm (+0/-2dB)	
VSWR		<2.0 : 1	
Flatness		<2dB	
Spurious Emissions 1GHz Under 1GHz ~ 2.4GHz ~ 12GHz		 <-70dBm <-70dBm <-70dBm	
2nd Harmonic		<-60dBm	
3rd Harmonic		<-60dBm	
PSD	±3.5MHz	>30dBc	20dBc over
Secondary Radiated Emission		<-70dBm	Limit of secondary radiated emissions.

4. Dimensions



5. Protocol(38400 bps , N, 8, 1)

7.1 Send Data

Header : 0x21 + Data

Ex> Data 3byte 0x30, 0x31, 0x32
0x21 + 0x30 + 0x31 + 0x32

7.2 Pan ID Set

Header : 0x12 + PAN ID(2byte) + Sum(PAN ID 2byte)
Ex> Pan ID : 0x31, 0x43
0x12 + 0x31 + 0x 43 + 0x74(0x31+ 0x43)

FCC approval

This device complies with Part 15 of the FCC`s 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 undesirable operation.
To satisfy FCC exterior labeling requirements, the following text must be placed on the exterior of the end product.
Contains Transmitter module FCC ID: YTZ-TM8258

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of
the FCC Rules. 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.
−The OEM integrator is responsible for ensuring the end-user has no manual instruction to remove or install module.
−The module is limited to installation in mobile or fixed applications.

IMPORTANT NOTE

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and must not be co-located or operating in conjunction with any other antenna or transmitter.

This device is intended only for OEM integrators under the following conditions:
1) This module may not be co-located with any other transmitters or antennas.
2) The antenna must be installed such that 20cm is maintained between the antenna and users.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements with this module installed.
In the event that these conditions cannot be met, then the FCC authorizations are no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product including this module and obtaining separate FCC authorizations.

[MEMO]