

## ZT-2015

Wireless 6-channel RTD Input Module with 3-wire RTD Lead Resistance Elimination

### Introduction

The ZT-2015 offers 6 wireless input channels, each of which can be connected to different kinds of RTD sensors. It features automatic compensation for 3-wire RTD, with long-distance measurement capabilities so that it can measure accurately regardless of the length of the wires. Also the ZT-2015 is fully RoHS-compliant and has qualification for 4 kV ESD protection as well as 3000 V<sub>DC</sub> intra-module isolation. Users can easily configure the module address, protocol, checksum, ZB-PID, ZB-channel and type code settings using a combination of rotary and DIP switches.

### System Specifications

Communication Interface	
Wireless Standards	ZigBee 2007 Pro
Transmission Power	11 dBm (FCC Certified)
2.4 GHz Antenna	5 dBi Omni directional
Transmission range (LOS)	700 m(Typical)
Certification	CE/FCC, FCC ID
Max. Slaves in a ZigBee Network	255
ZB-100R/ZB-100T Support	Yes
Protocols	Supports DCON and Modbus RTU Protocols
Hot Swap	Rotary and DIP switch
LED Indicators	
Power	1 LED, red
ZigBee Communication	1 LED, green
Isolation	
Intra-module Isolated, Field-to-Logic	3000 V <sub>DC</sub>
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for Power Line, Communication Line and each Channel, ±8 kV Air for Random Point
EFT (IEC 61000-4-4)	±4 kV for Power Line
Surge ( IEC 61000-4-5)	±3 kV for Power Line
Power	
Consumption	1.5 W Max.
Mechanical	
Flammability	Fire Retardant Materials (UL94-V0 Level)
Dimensions (W x L x H)	33 mm x 87 mm x 110 mm
Installation	DIN-Rail
Environment	
Operating Temperature	-25 °C ~ +75 °C
Storage Temperature	-30 °C ~ +80 °C
Relative Humidity	10 ~ 90% RH, Non-condensing

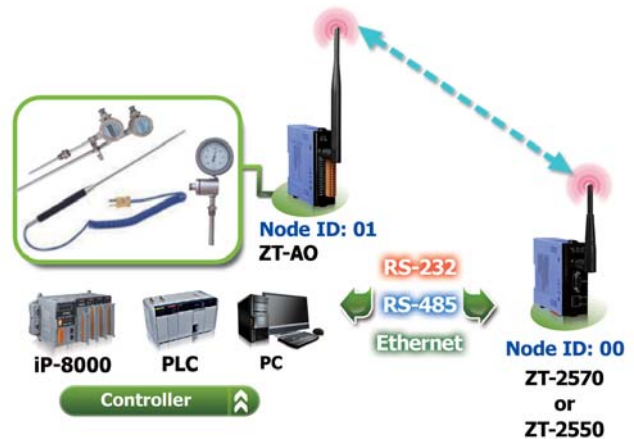
### Features

- ISM 2.4 GHz Operating Frequency
- Fully Compliant with 2.4G /ZigBee Specifications
- Wireless Transmission Range up to 700 m
- GUI Configuration Software (Windows Version)
- 3-wire RTD Input with Lead Resistance Elimination
- Individual Channel Configuration
- Open Wire Detection
- Overvoltage Protection
- DIN-Rail Mounting



### Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment.



### I/O Specifications

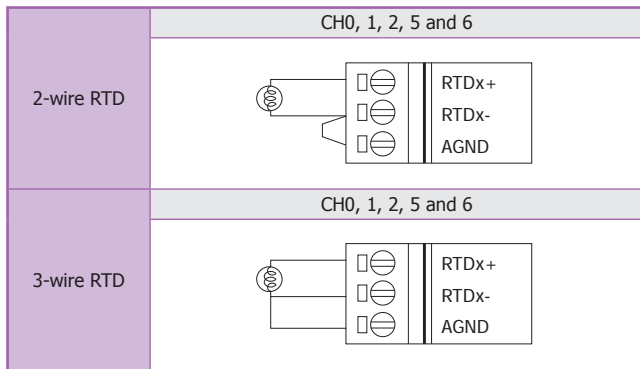
Analog Input	
Input Channels	6
Input Type	2/3-wire RTD
RTD Types	Pt100, Pt1000, Ni120, Cu100, Cu1000
Resolution	16-bit
Sampling Rate	12 Samples/Sec. (Total)
Accuracy	+/-0.05%
Zero Drift	+/-0.5 μV/°C
Span Drift	+/-20 μV/°C
Common Mode Rejection	150 dB
Normal Mode Rejection	100 dB
Open Wire Detection	Yes
Overvoltage Protection	120 V <sub>DC</sub> /110 V <sub>AC</sub>
Individual Channel Configuration	Yes
3-wire RTD Lead Resistance Elimination	Yes

## RTD Type Setting (TT)

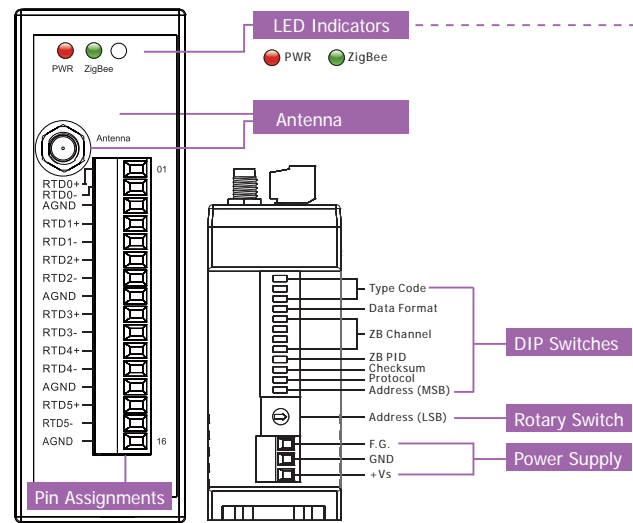
Type Code	RTD Type	Temperature Range
20	Platinum 100, $\alpha=0.00385$	-100 ~ +100°C
21	Platinum 100, $\alpha= 0.00385$	0 ~ +100°C
22	Platinum 100, $\alpha= 0.00385$	0 ~ +200°C
23	Platinum 100, $\alpha= 0.00385$	0 ~ +600°C
24	Platinum 100, $\alpha= 0.003916$	-100 ~ +100°C
25	Platinum 100, $\alpha= 0.003916$	0 ~ +100°C
26	Platinum 100, $\alpha= 0.003916$	0 ~ +200°C
27	Platinum 100, $\alpha= 0.003916$	0 ~ +600°C

Type Code	RTD Type	Temperature Range
28	Nickel 120	-80 ~ +100°C
29	Nickel 120	0 ~ +100°C
2A	Platinum 1000, $\alpha= 0.00385$	-200 ~ +600°C
2E	PT 100, $\alpha= 0.00385$	-200 ~ +200°C
2F	PT 100, $\alpha= 0.003916$	-200 ~ +200°C
80	PT 100, $\alpha= 0.00385$	-200 ~ +600°C
81	PT 100, $\alpha= 0.003916$	-200 ~ +600°C

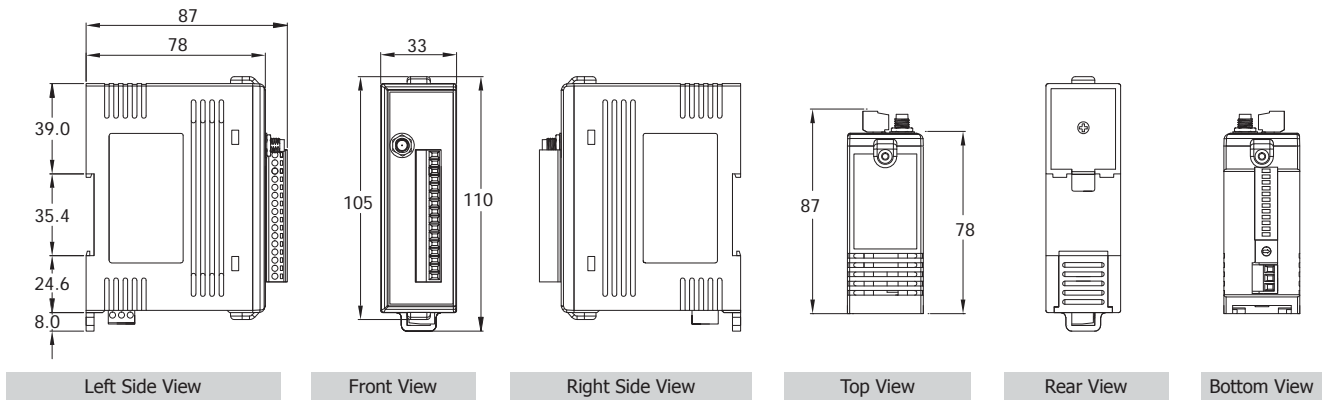
## Wiring



## Appearance



## Dimensions (Units: mm)



## Ordering Information

ZT-2015 CR	Wireless 6-channel RTD Input Module with 3-wire RTD Lead Resistance Elimination (RoHS) (Long Range)
<b>Important Note:</b> Zigbee Data Acquisition modules need a Zigbee host converter to coordinate the data transmission route. Please remember to order a ZT-2550, ZT-2570 ZigBee host converter when you purchase Zigbee Data Acquisition products.	

## Accessories

MDR-20-24	24 VDC/1.0 A, 24 W Power Supply with DIN-Rail Mounting
ZT-2510 CR	ZigBee Repeater (RoHS)
ZT-2550 CR	RS-485/RS-232 to ZigBee Converter (Host)
ZT-2570 CR	Ethernet/RS-485/RS-232 to ZigBee Converter (Host) (RoHS)