Logicbus
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ZT-2053
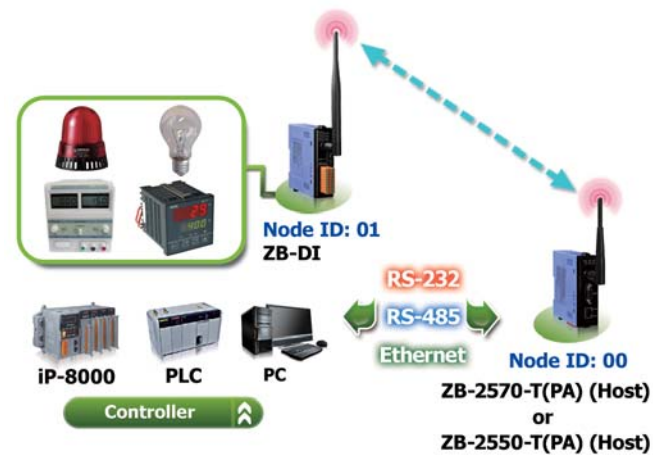### Wireless 14-channel Isolated Digital Input Module

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)
- ■ 14 Dry or Wet Contact Digital Input Channels
- ■ Supports 16-bit Counters for Digital Input Channels
- ■ Surge and ESD Protection
- ■ DIN-Rail Mountable

CE   FC   RoHS

Introduction

The ZT-2053 offers 14 digital input channels which can be used for either dry or wet contact. Its effective distance for dry contact is up to 500 meters. All channels are able to be used as 16-bit counters. The ZT-2053 includes 14 LED indicators to display the channel status as well as 4 kV ESD protection and 3750 V$_{rms}$ intra-module isolation. Users can easily to configure the module address, protocol, checksum, ZB-PID and ZB-channel settings using a combination of rotary and DIP switches.

System Specifications

Communication Interface	
Wireless Standards	ZigBee 2007 Pro
Transmission Power	11 dBm (FCC Certificated) (Max 19 dBm)
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	-
Protocols	Supports DCON and Modbus RTU Protocols
Hot Swap	Rotary and DIP switch
LED Indicators	
Power	1 LED, red
ZigBee Communication	1 LED, green
Digital Input	14 LEDs, green
Power	
Intra-module Isolation, Field to Logic	3750 V$_{DC}$
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
Surge (IEC 61000-4-5)	3 kV for Power
Power	
Power Consumption	0.72 W Max.
Mechanical	
Flammability	Fire Retardant Materials (UL94-V0 Level)
Dimensions (W x L x H)	33 mm x 87 mm x 107 mm
Installation	DIN-Rail
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-30 ~ +80°C
Relative Humidity	10 ~ 90% RH, Non-condensing

Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment.
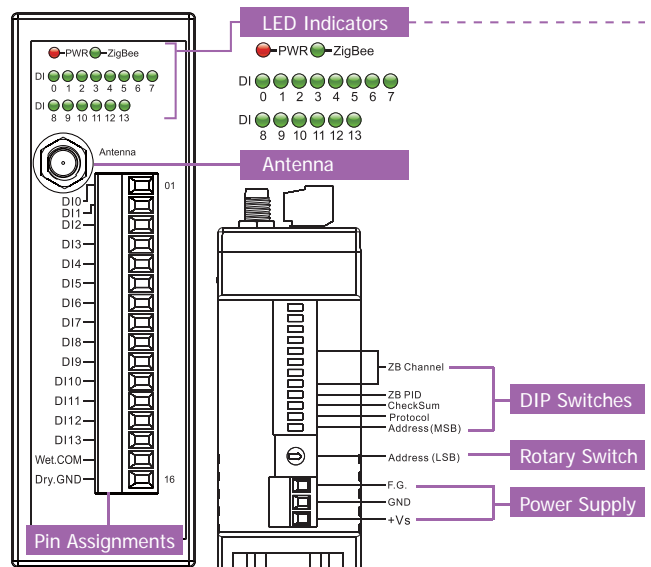
Node ID: 01
ZB-DI

RS-232
RS-485
Ethernet

iP-8000   PLC   PC
Controller

Node ID: 00
ZB-2570-T(PA) (Host)
or
ZB-2550-T(PA) (Host)

I/O Specifications

Digital Input	
Input Channels	14
Dry Contact (Sink)	On Voltage Level: Close to GND
	Off Voltage Level: Open
	Effective Distance for Dry Contact: 500 m Max.
Wet Contact (Sink/Source)	On Voltage Level: +3.5 V$_{DC}$ ~ +30 V$_{DC}$
	Off Voltage Level: +1 V$_{DC}$ Max.
Input Impedance	3 kΩ, 0.33 W
Counter	Channels: 14
	Max. Count: 16-bit (65535)
	Max. Input Frequency: 100 Hz
	Min. Pulse Width: 5 ms

PLCs   Adquisición   Instrumentos   Registradores   Potencia   HMIs   Switches   Movimiento   Sensores   Convertidores   Teclados   SCADA   Telemetría

■ Wiring

Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Dry Contact	Relay ON	Relay OFF
	Relay Close — Dry.GND / INx	Relay Open — Dry.GND / INx
Wet Contact (Source)	Voltage > 3.5V	Voltage < 1V
	Wet.COM / INx	Wet.COM / INx
Wet Contact (Sink)	Open Collector ON	Open Collector OFF
	Wet.COM / INx	Wet.COM / INx

■ Appearance

- LED Indicators
- Antenna
- Pin Assignments
- ZB Channel
- ZB PID
- CheckSum
- Protocol
- Address (MSB)
- DIP Switches
- Address (LSB)
- Rotary Switch
- F.G.
- GND
- +Vs
- Power Supply

■ Dimensions (Units: mm)

| Left Side View | Front View | Right Side View | Top View | Rear View | Bottom View |
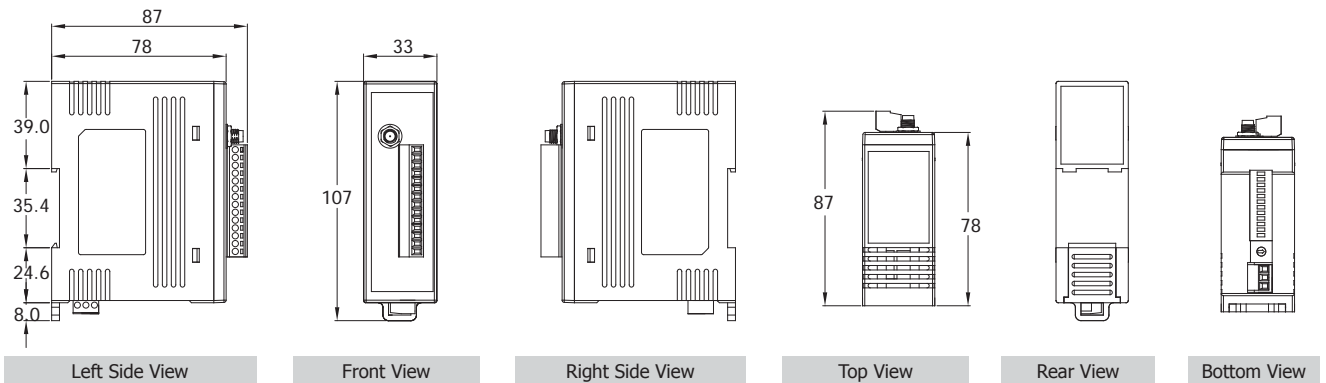
■ Ordering Information

ZT-2053 CR	Wireless 14-channel Isolated Digital Input Module (RoHS) (Long Range)

Important Note: 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 V$_{DC}$/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 High Power Amplifier ZigBee Converter (Host) (RoHS)
ZT-2570 CR	Ethernet/RS-485/RS-232 to High Power Amplifier ZigBee Converter (Host) (RoHS)

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