



## ZT-2053-IOP

ZigBee I/O Pair-connection Module with the 14-channel Isolated Digital Input

### Features

- ISM 2.4 GHz Operating Frequency
- Fully Compliant with 2.4G IEEE 802.15.4/ZigBee Specifications
- Wireless Transmission Range up to 700 m (Default)
- Adjustable RF Transmission Output Power
- 14 Channels Pair-connection of the Digital Input
- DO Safe Value setting for Wireless Disconnection Monitoring
- Configurable I/O Pairing Number
- Surge and ESD Protection
- Supports AES-128 Encryption for the Wireless Communication
- DIN-Rail Mountable



### Introduction

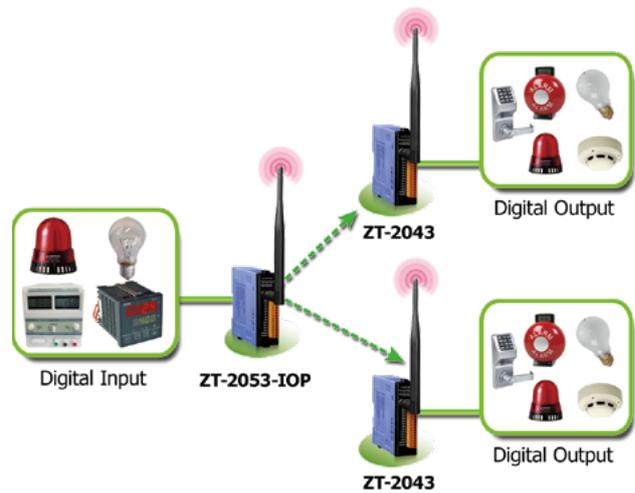
The ZT-2053-IOP module acts as a ZigBee coordinator that provides 14-channel digital input pair-connection function with module of ZT-2043 (14-ch sink type digital output). An embedded I/O channel binding function means that there is no need to use an external controller. The status of each ZT-2053-IOP channel triggers the corresponding remote digital output channels on the ZT-2043 module. The ZT-2053-IOP continually transmits updates on the status of the digital input channels to the remote ZT-2043 to ensure that the digital output channels are synchronized. The ZT-2053-IOP also provides external DIP switches for easy configuration, which can be used to synchronize the digital signals in any environment where wiring is difficult.

### System Specifications

Communication Interface	
Wireless Standards	ZigBee 2007 Pro
Transmission Power	11 dBm (FCC Certificated) (Max 19 dBm)
Antenna	2.4 GHz - 5 dBi Omni-directional Antenna
Transmission Range (LoS)	700 m (Typical)
Max. Slaves in a ZigBee Network	255
LED Indicators	
Power	1 LED, Red
ZigBee Communication	1 LED, Green
Digital Input	14 LEDs, Green
Isolation	
Intra-module Isolated, Field-to-Logic	3750 Vrms
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	
Input Voltage Range	+10 VDC ~ +30 VDC
Power Consumption	0.72 W Max.
Mechanical	
Flammability	Fire Retardant Materials (UL 94V-0 Level)
Dimensions (L × W × H)	87 mm × 33 mm × 110 mm
Installation	DIN-Rail
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-30 ~ +80°C
Humidity	10 ~ 90% RH, Non-condensing

### Applications

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



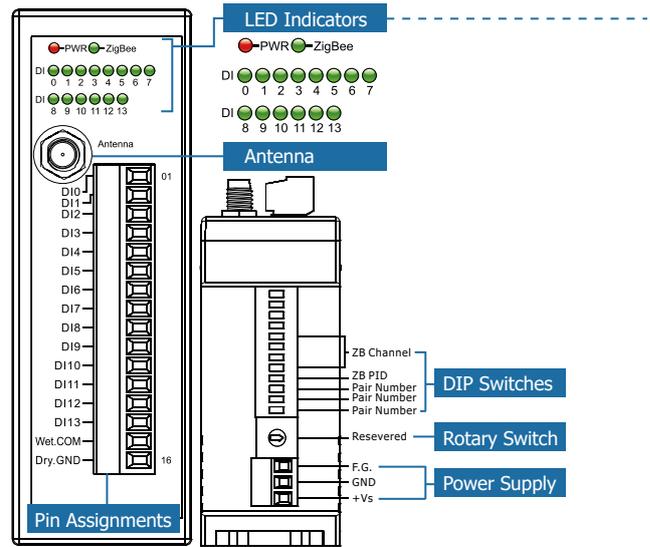
### I/O Specifications

Digital Input	
Input Channels	14
Dry Contact (Sink)	On Voltage Level: Close to GND
	Off Voltage Level: Open
Wet Contact (Sink/Source)	Effective Distance for Dry Contact: 500 m Max.
	On Voltage Level: +3.5 VDC ~ +30 VDC
Input Impedance	Off Voltage Level: +1 VDC Max.
	3 kΩ, 0.33 W

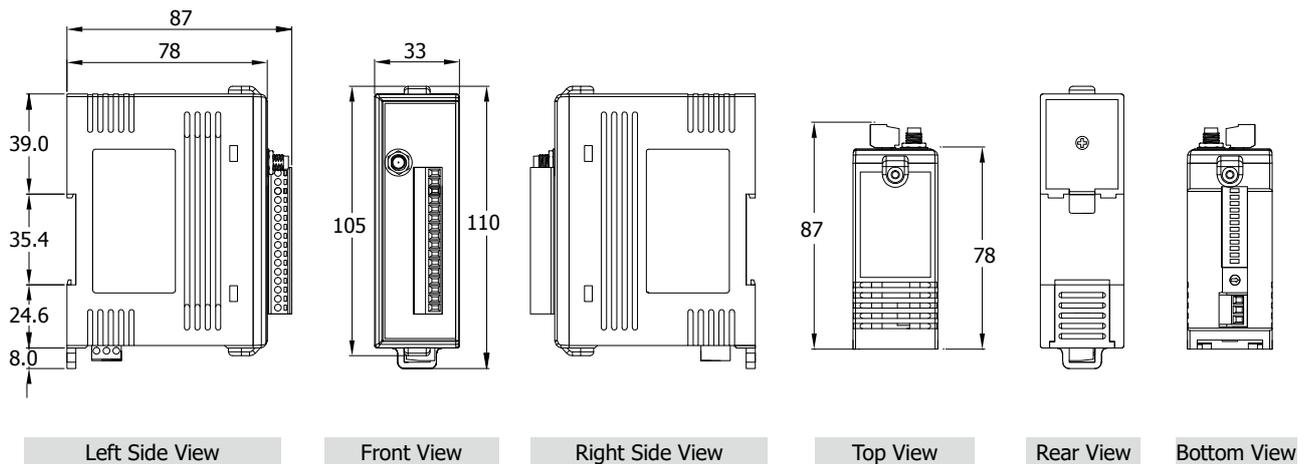
## Wiring

Input Type	ON State Readback as 1	OFF State Readback as 0
Dry Contact	Relay ON 	Relay OFF 
Wet Contact (Source)	Voltage > 3.5V 	Voltage < 1V 
Dry Contact (Sink)	Open Collector ON 	Open Collector OFF 

## Appearance



## Dimensions (Units: mm)



## Ordering Information

<b>ZT-2053-IOG CR</b>	ZigBee I/O Group (Pair-connection) Module with the 14-channel Isolated Digital Input (Full-function) (RoHS)
<b>Important Note:</b> If there is any requirement to do the advanced configuration, please remember to order at least one ZT-USBC or ZT-2570 ZigBee converter.	

## Accessories

<b>ZT-USBC CR</b>	USB to ZigBee Converter (ZigBee Full-function) (RoHS)
<b>ZT-2510 CR</b>	ZigBee Repeater (RoHS)
<b>ZT-2550</b>	RS-485/RS-232 to ZigBee Converter (Host)
<b>ZT-2570 CR</b>	Ethernet/RS-485/RS-232 to ZigBee Converter (Host) (RoHS)

**Important Note:** The default pairing setting of ZT-2053-IOP is paired with the ZT-2043. If there is any pairing requirement with other ZigBee I/O modules, a ZigBee converter is required for doing the software configuration.