



## 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 to the Digital Output
- DO Safe Value setting for Wireless Disconnection Monitoring
- Configurable I/O Pairing Number
- External DIP Switch and Rotary Configuration
- 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.

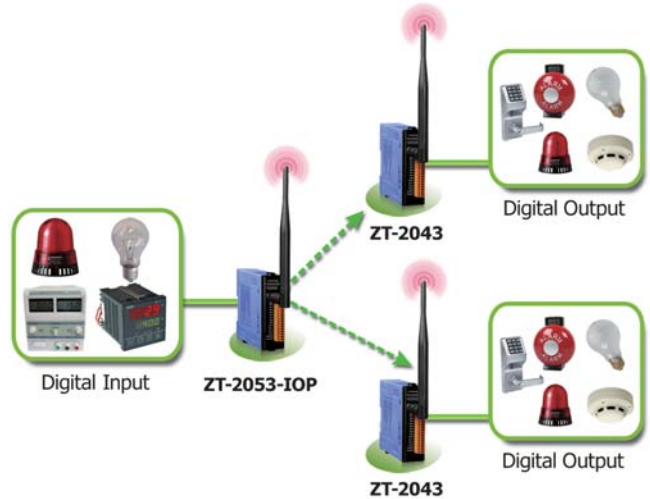
The ZT-2053-IOP also provides external DIP switches for easy configuration, which can be used to synchronize the digital signals in any environment where wiring is difficult.

### System Specifications

Communication Interface	
Wireless Standards	ZigBee 2007 Pro
Transmission Power	11 dBm (FCC Certified) ( Max 19 dBm)
2.4 GHz Antenna	5 dBi Omni directional
Transmission Range (LoS)	700 m (Typical)
Max. Slaves in a ZigBee Network	255
Hot Swap	DIP Switch
LED Indicators	
Power / Debug	1 Red LED, ZigBee Device Power Indicator
ZigBee Communication	1 Green LED, ZigBee Communication Indicator
Digital Input and Output	14 Green LED, Digital Input Channel Indicators
Isolation	
Intra-module Isolated, Field-to-Logic	3750 Vdc
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
Power	
Input Voltage Range	+10 Vdc ~ +30 Vdc
Power Consumption	0.72 W (Max.)
Mechanical	
Flammability	Fire Retardant Materials (UL94-V0 Level)
Dimensions (L x W x H)	87 mm x 33 mm x 110 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.



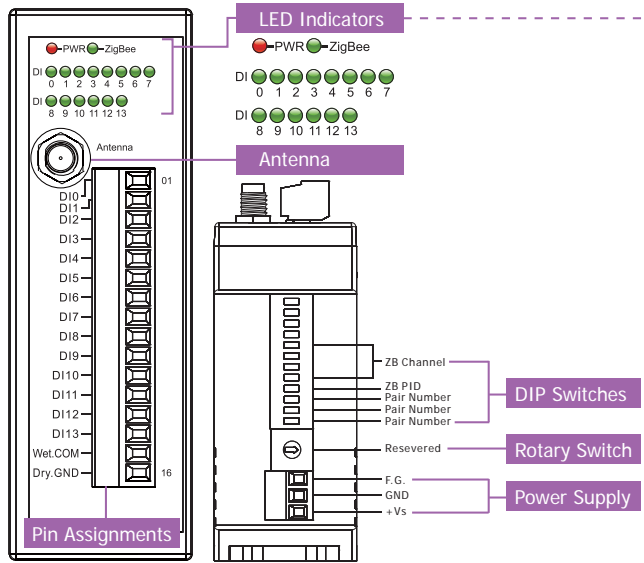
### I/O Specifications

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
	Off Voltage Level: +1 VDC Max.
Input Impedance	3 kΩ, 0.33 W

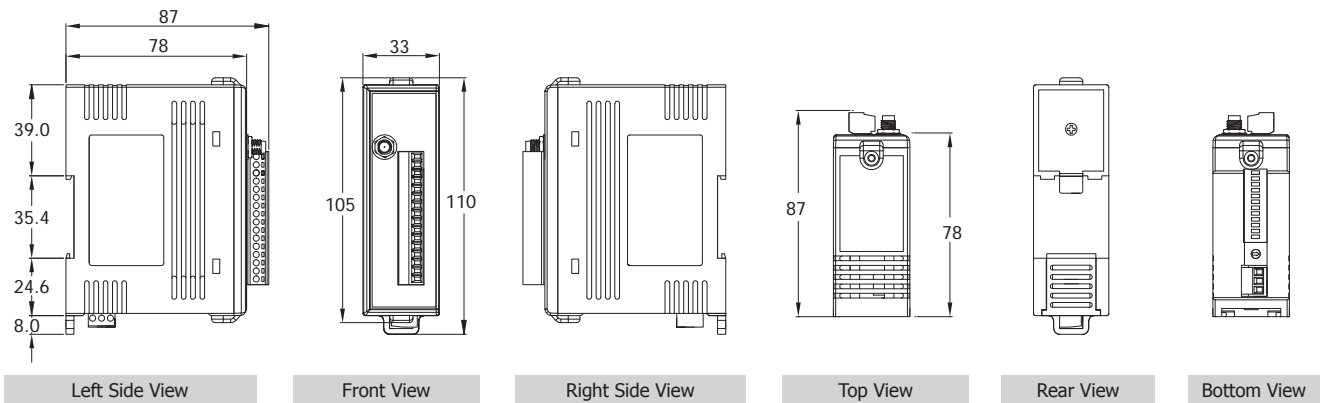
### Wiring

Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
	Relay ON	Relay OFF
Dry Contact		
Wet Contact (Source)		
Wet Contact (Sink)		

### Appearance



### Dimensions (Units: mm)



### Ordering Information

ZT-2053-IOP CR	ZigBee Pair-connection to the 14-ch Isolated Digital Input Module (Host, ZigBee Coordinator) (RoHS)
ZT-2042 CR	ZigBee 4-ch PhotoMOS Relay Output and 4-ch Open Collector Output Module (Slave, ZigBee Router) (RoHS)
ZT-2043 CR	ZigBee 14-ch Isolated Digital Output Module (Slave, ZigBee Router) (RoHS)
ZT-2055 CR	ZigBee 8-channel Isolated Digital Input and 8-channel Isolated Digital Output Module (Slave, ZigBee Router) (RoHS)
ZT-2060 CR	ZigBee 6-ch Isolated Digital Input and 4-ch Relay Output Module (Slave, ZigBee Router) (RoHS)

**Important Note:** ZigBee Pair-connection module is a ZigBee host to coordinate the ZigBee I/O module. Please order at least one ZT-2000 digital series module to work for ZigBee I/O pairing.

### Accessories

ZT-2510 CR	ZigBee Repeater (RoHS)
ZT-USBC CR	USB to ZigBee Converter (Coordinator)
ZT-2550 CR	RS-485/RS-232 to ZigBee Converter (Coordinator)
ZT-2570 CR	Ethernet/RS-485/RS-232 to ZigBee Converter (Coordinator)

**Important Note:** The default pairing setting of ZT-2055-IOP is paired with the ZT-2055. If there is any pairing requirement with other ZigBee I/O modules, a ZigBee converter is required for doing the software configuration.

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