



## ZT-2055-IOP

ZigBee I/O Pair-connection Module with the 8-channel Isolated Digital Input and 8-channel Digital Output

### Introduction

The ZT-2055-IOP module is a ZigBee coordinator that offers 8 isolated channels for digital input and 8 isolated channels for digital output. An embedded I/O channel binding function means that there is no need to use an external controller.

The status of each channel is bound to a remote channel of the ZT-2055. The ZT-2055-IOP continually updates the status of the DO channel of the remote ZT-2055 based on its own DI channels. It also reads the status of the DI channel of the remote ZT-2055 to synchronize its own DO channels. The ZT-2055-IOP also provides external DIP switches for easy configuration, which can be used to synchronize the digital signals in any difficult wiring environment.

### System Specifications

Communication Interface	
Wireless Standards	ZigBee 2007 Pro
Transmission Power	11 dBm (FCC Certificated)
2.4 GHz Antenna	5 dBi Omni directional
Transmission Range (LoS)	700 m (Typical)
Max. Slaves in a ZigBee Network	255
Hot Swap	Rotary and DIP switch
LED Indicators	
Power	1 Red LED, ZigBee Device Power Indicator
ZigBee Communication	1 Green LED, ZigBee Communication Indicator
Digital Input and Output	8 Green LEDs for Digital Input 8 Red LEDs for Digital Output
Isolation	
Intra-module Isolated, Field-to-Logic	2500 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	3 kV for Power Line
Power	
Input Voltage Range	+10 Vdc ~ +30 Vdc
Power Consumption	2.5 W Max.
Mechanical	
Flammability	Fire Retardant Materials (UL94-V0 Level)
Dimensions (L x W x H)	96 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

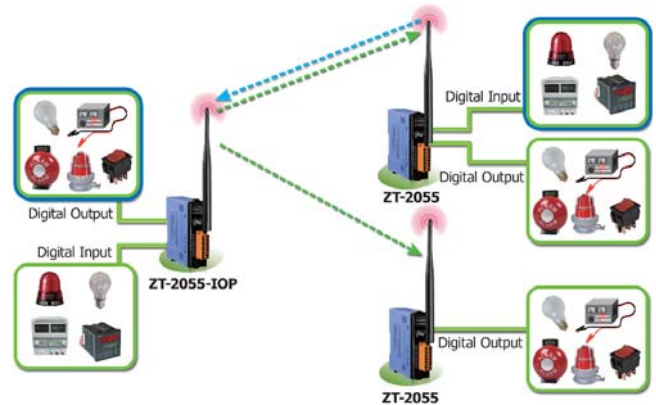
### Features

- 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
- 8 Channels Pair-connection of the Digital Input and 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



### Applications

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



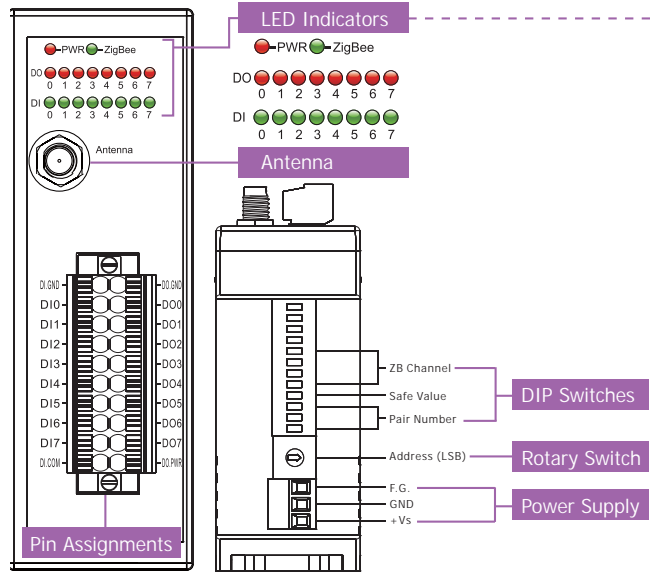
### I/O Specifications

Digital Input/ Counter		
Input Channels		8
Input Types	Dry Contact	Source
	Wet Contact	Sink/Source
Wet Contact	On Voltage Level	+10 Vdc ~ +50 Vdc
	Off Voltage Level	+4 Vdc Max.
Dry Contact	On Voltage Level	Close to GND
	Off Voltage Level	Open
Input Impedance		10 KΩ
Overvoltage Protection		±70 Vdc
Digital Output		
Output Channels		8
Output Types		Open Collector
Sink/Source(NPN/PNP)		Sink
Load Voltage		+3.5 ~ 50 Vdc
Max. Load Current		650 mA/Channel
Overvoltage Protection		60 Vdc
Overload Protection		1.4 A (with short-circuit protection)

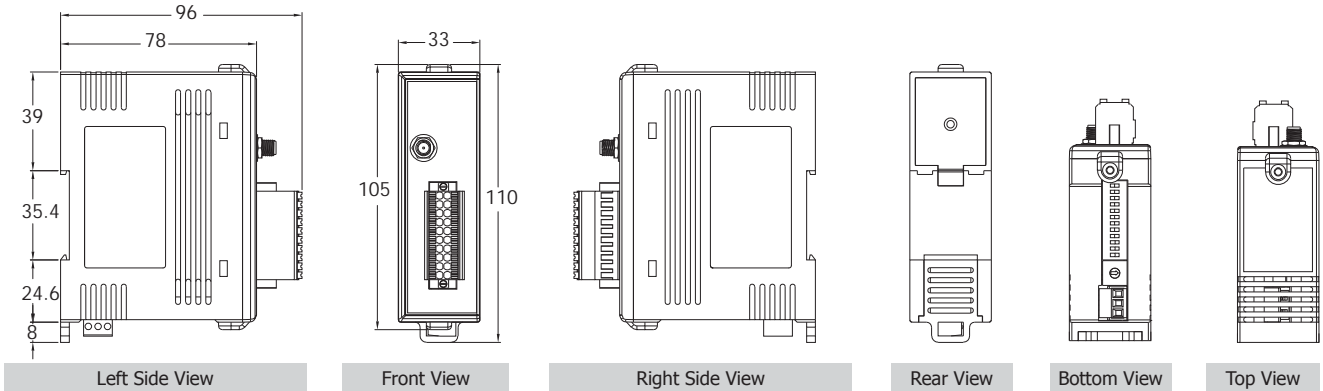
## Wiring

Input Type	ON State Readback as 1	OFF State Readback as 0
Dry Contact	Close to GND	Open
Wet Contact (Sink)	+10 ~ +50 VDC	+4 VDC Max.
Wet Contact (Source)	+10 ~ +50 VDC	+4 VDC Max.
Output Type	ON State Readback as 1	OFF State Readback as 0
Digital Output (Resistance Load)		
Digital Output (Inductive Load)		

## Appearance



## Dimensions (Units: mm)



## Ordering Information

ZT-2055-IOP CR	ZigBee Pair-connection to the 8-ch Isolated Digital Input and 8-ch Digital Output 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.