ICP DAS

ZT-2052-IOP
ZigBee I/O Pair-connection Module with the 8-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
- 8 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-2052 offers 8 digital input channels, each of which features photocouple isolation. In addition, you can choose either sink-type or source-type input via wire connections. All channels are able to be used as 16-bit counters. The ZT-2052 has 8 LED indicators to display the channel status and also includes 4 kV ESD protection and 3000 V_{DC} intra-module isolation. Users can easily 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 , IEEE 802.15.4
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 Output	8 LEDs, Red
Power	
Input Voltage Range	+10 VDC ~ +30 VDC
Power Consumption	1 W Max.
Mechanical	
Flammability	Fire Retardant Materials (UL 94V-0 Level)
Dimensions (L × W × H)	88 mm × 33 mm × 110 mm
Installation	DIN-Rail
Environment	
OperatingTemperature	-25 ~ +75°C
Storage Temperature	-30 ~ +80°C
Humidity	10 ~ 90% RH, Non-condensing

Applications

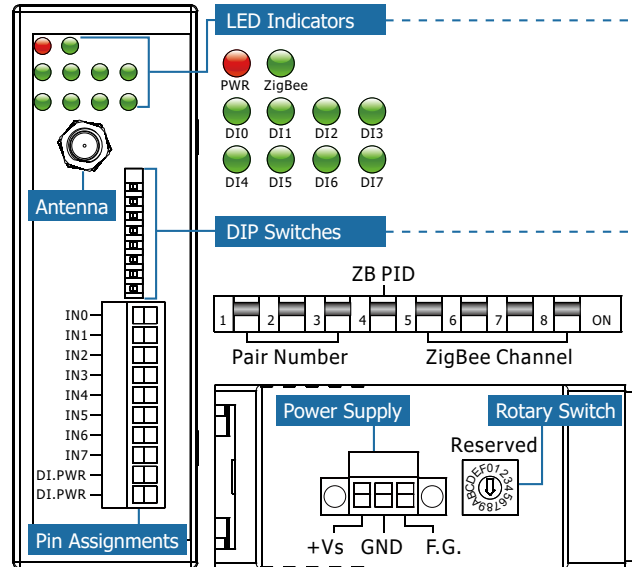Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment.
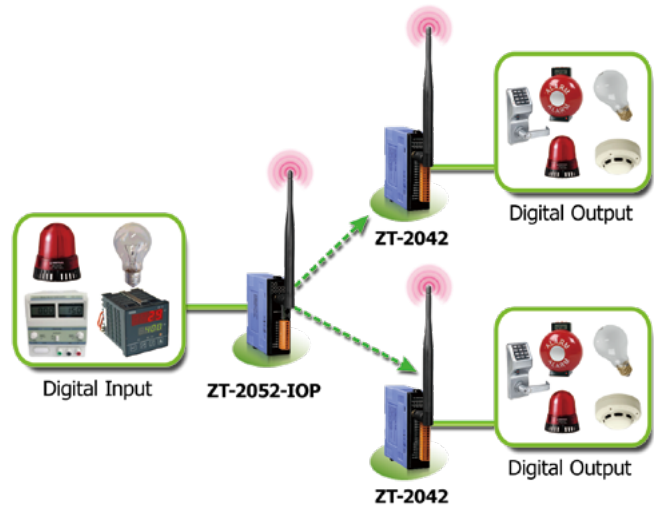
I/O Specifications

Digital Input		
Input Channels		8
OFF Voltage Level		+1 VDC 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
Intra-module Isolated, Field-to-Logic		3000 V_{DC}
ESD Protection		±4 kV contact for each channel

▣ Wiring

Input Type	ON State Readback as 1	OFF State Readback as 0
TTL/ CMOS Logic	Voltage > 3.5V	Voltage < 1V
	Logic Level High / Logic GND — DI.PWR INx	Logic Level Low / Logic GND — DI.PWR INx
Relay Contact	Relay ON	Relay OFF
	+ / - Relay Close — DI.PWR INx	+ / - Relay Open — DI.PWR INx
Open Collector	Open Collector ON	Open Collector OFF
	ON — DI.PWR INx	ON — DI.PWR INx

▣ Appearance

LED Indicators — PWR, ZigBee, DI0, DI1, DI2, DI3, DI4, DI5, DI6, DI7

Antenna

Pin Assignments — IN0, IN1, IN2, IN3, IN4, IN5, IN6, IN7, DI.PWR, DI.PWR

DIP Switches — ZB PID, 1 2 3 4 5 6 7 8 ON, Pair Number, ZigBee Channel

Power Supply — +Vs, GND, F.G.

Rotary Switch — Reserved

▣ Dimensions (Units: mm)

88
78
39.0
35.4
24.6
8.0

Left Side View

33
105
110

Front View

Right Side View

Top View

Rear View

Bottom View
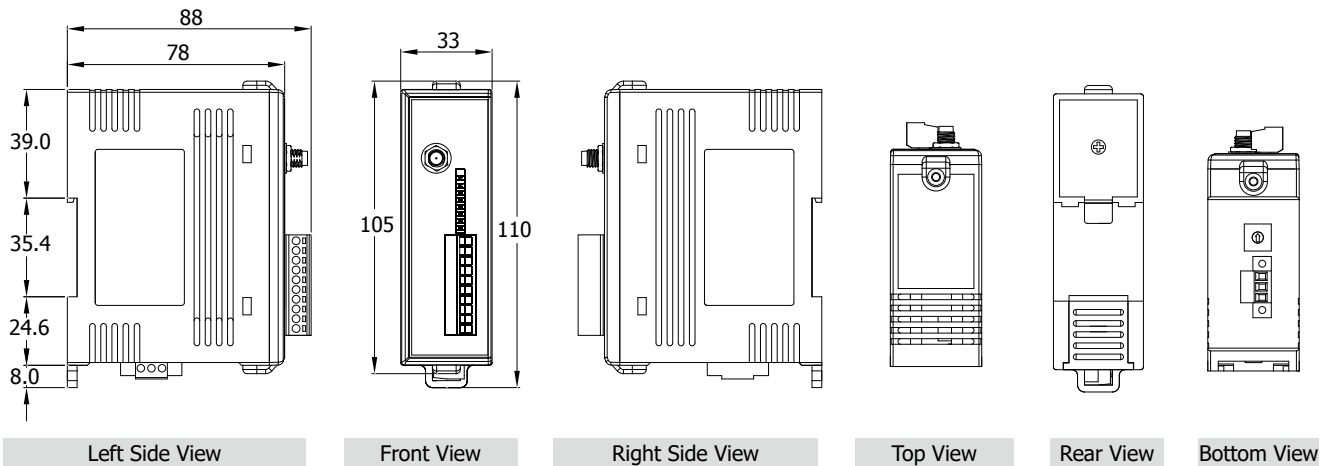
▣ Ordering Information

ZT-2052-IOP CR	ZigBee Pair-connection to the 8-ch Isolated Digital Input Module (Host, ZigBee Coordinator) (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-USBC CR	USB to ZigBee Converter (ZigBee Full-function) (RoHS)
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)
Important Note: The default pairing setting of ZT-2052-IOP is paired with the ZT-2042. If there is any pairing requirement with other ZigBee I/O modules, a ZigBee converter is required for doing the software configuration.	