ICP DAS

ZT-2043

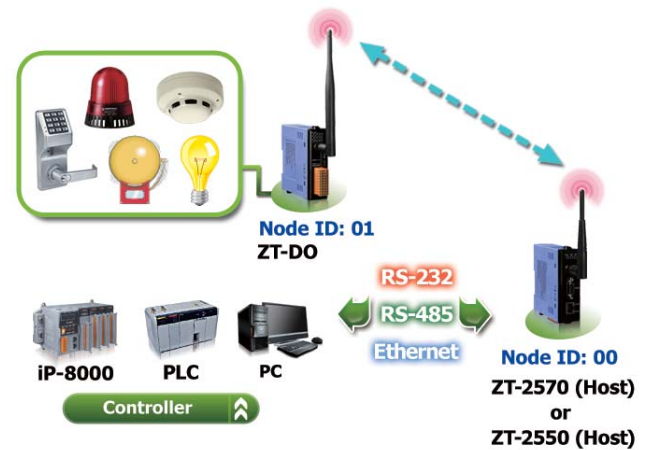### Wireless 14-channel Isolated Digital Output Module

Features

- ■ ISM 2.4 GHz Operating Frequency
- ■ Fully Compliant with 2.4G /ZigBee Specifications
- ■ Wireless Transmission Range up to 700 m (Default)
- ■ Adjustable RF Transmission Output Power
- ■ GUI Configuration Software (Windows Version)
- ■ Supports AES-128 Encryption for the Wireless Communication (Passive)
- ■ Supports ZigBee Repeater Function
- ■ 14 Digital Output Channels for Open Collector
- ■ Short Circuit Protection
- ■ Surge and ESD Protection
- ■ Configurable Power-on Value and Safe Value Settings
- ■ DIN-Rail Mounting

CE FC RoHS

Introduction

The ZT-2043 offers 14 sink type digital output channels with short circuit protection. All channels feature photo-couple isolation. There are options for configuring power-on and safe digital output values. The ZT-2043 includes 14 LED indicators to display the DO channel status. 4 kV ESD protection and 3750 V_{DC} intra-module isolation are the standard. 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 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
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)
Hot Swap	Rotary and DIP switch
LED Indicators	
Power	1 LED, red
ZigBee Communication	1 LED, green
Digital Output	14 LEDs, red
Isolation	
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	0.84 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.
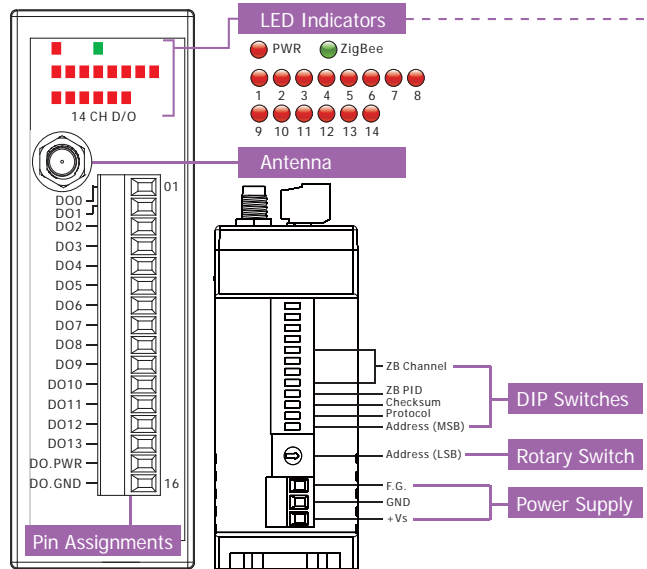

Node ID: 01
ZT-DO

iP-8000   PLC   PC
Controller

RS-232
RS-485
Ethernet

Node ID: 00
ZT-2570 (Host)
or
ZT-2550 (Host)

I/O Specifications

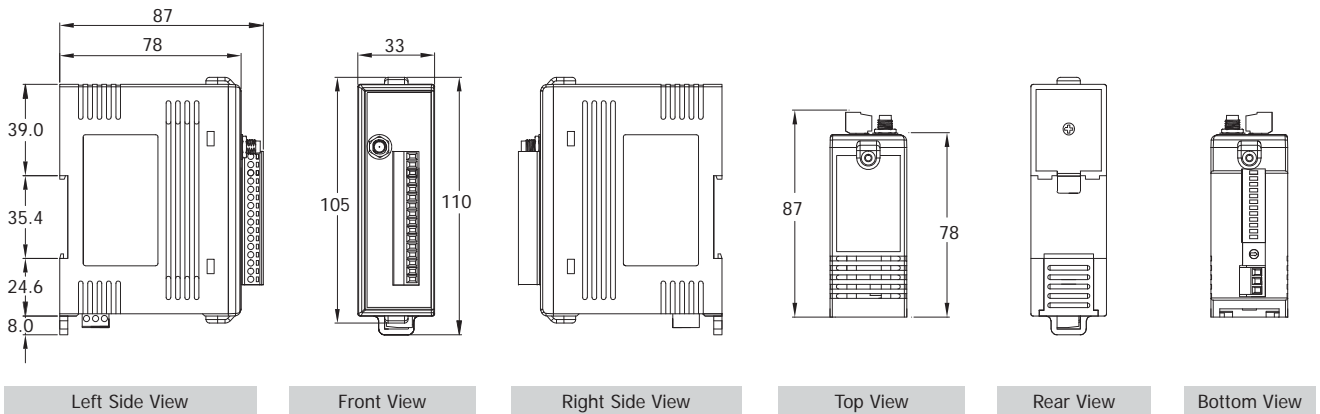| Digital Output	
Output Channels	14 (Sink)
Output Types	Isolated Open Collector
Max. Load Current	700 mA/channel
Load Voltage	+5 V_{DC} ~ +50 V_{DC}
External Power Reversed Protection and Short Circuit Protection	Yes
Current Limited Protection	1.1 A
Power-on Value	Yes
Safe Value	Yes

5

3

ZigBee Products

1   ICP DAS CO., LTD.   Professional Provider of High Quality Industrial Computer Products and Data Acquisition Systems   Vol. IWCP 20140520

📁 Wiring

Digital Output	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
	Relay ON	Relay OFF
Drive Relay	DO.PWR / DOx / DO.GND	DO.PWR / DOx / DO.GND
	Relay ON	Relay OFF
Resistance Load	DO.PWR / DOx / DO.GND	DO.PWR / DOx / DO.GND

📁 Appearance

LED Indicators
PWR   ZigBee
1 2 3 4 5 6 7 8
9 10 11 12 13 14

14 CH D/O

Antenna

Pin Assignments
DO0, DO1, DO2, DO3, DO4, DO5, DO6, DO7, DO8, DO9, DO10, DO11, DO12, DO13, DO.PWR, DO.GND

ZB Channel
ZB PID
Checksum
Protocol
Address (MSB)   DIP Switches

Address (LSB)   Rotary Switch

F.G.
GND
+Vs   Power Supply

📁 Dimensions (Units: mm)

87
78
39.0
35.4
24.6
8.0
Left Side View

33
105   110
Front View

Right Side View

87   78
Top View

Rear View

Bottom View

📁 Ordering Information

ZT-2043 CR	Wireless 14-channel Isolated Digital Output 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 VDC/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)

5
3
ZigBee Products