


# tZT-P4C4

## Features

- ISM 2.4 GHz Operating Frequency
- Fully Compliant with 2.4G IEEE 802.15.4 / ZigBee 2007 Pro Specifications
- Wireless Transmission Range up to 300 m
- Adjustable RF Transmission Output Power
- GUI Configuration Software (Windows Version)
- Supports AES-128 Encryption for the Wireless Communication (Passive)
- Supports ZigBee Repeater Function
- 4 Digital Input Channels and 4 Digital Output Channels
- All Digital Input Channels can be used as 16-bit Counters
- Sink-type Digital Output Channels with Overload Protection
- Surge and ESD Protection
- Configurable Power-on Value and Safe Value Settings
- DIN-Rail Mountable

## Introduction

The tZT-P4C4 provides 4 channels for digital input and 4 channels for digital output, each of which features photocouple isolation. The tZT-P4C4 supports sink-type output with short circuit protection, while input is source-type. All input channels can be used a 16-bit counters. There are options for configuring power-on and safe digital output values. 4 kV ESD protection and 3750 VDC intra-module isolation are also provided.

The tZT series products of ICP DAS have the advantage of low cost and low power consumption of ZigBee. Provide wireless communication capability up to 300 meters (LOS) standard transmission distance. Coupled with the dynamic mesh network, users can easily catch DIO data in difficult-to-wire environments.

## System Specifications

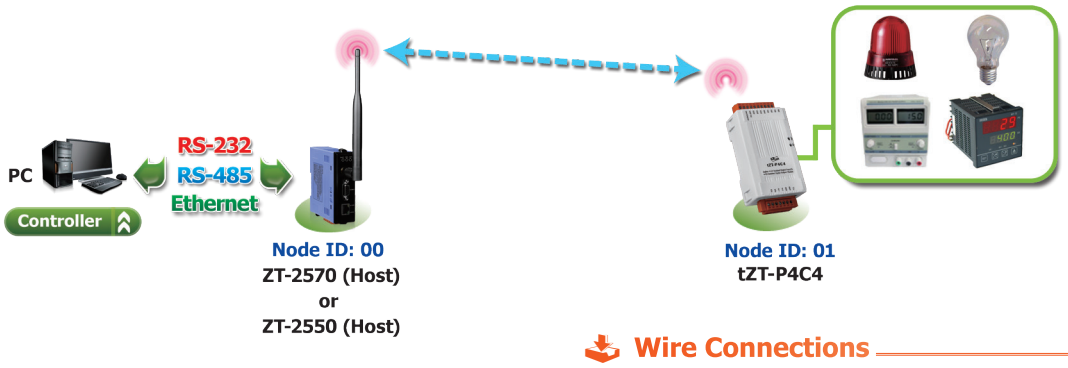
| Communication Interface | |
|---|---|
| Wireless Standards | ZigBee 2007 Pro |
| Transmission Power | 11dBm (Max. 19dBm) |
| 2.4GHz Antenna | 2.4 GHz - PCB Antenna (3dBi, 50Ω) |
| Transmission Range(LOS) | 300m |
| Protocols | Supports DCON and ModBus |
| Watchdog | Module(1.6seconds), Communication(Programmable) |
| **LED Indicators** | |
| ZigBee Communication | 1LED, Green |
| Power | 1LED, Red |
| **EMS Protection** | |
| ESD (IEC 61000-4-2) | ±4 kV Contact for each Terminal |
| EFT (IEC 61000-4-4) | ±1 kV for Power |
| **Power** | |
| Input Voltage Range | +10 VDC ~ +30 VDC |
| Power Consumption | 1W Max. |
| **Mechanical** | |
| Dimensions(W x L x H) | 52mm x 98mm x 27mm |
| Installation | DIN-Rail Mounting |
| **Environment** | |
| Operating Tempertaure | -25 ~ +75°C |
| Storage Tempertaure | -30 ~ +80°C |
| Humidity | 10 ~ 95% RH(Non-condensing) |

## I/O Specifications

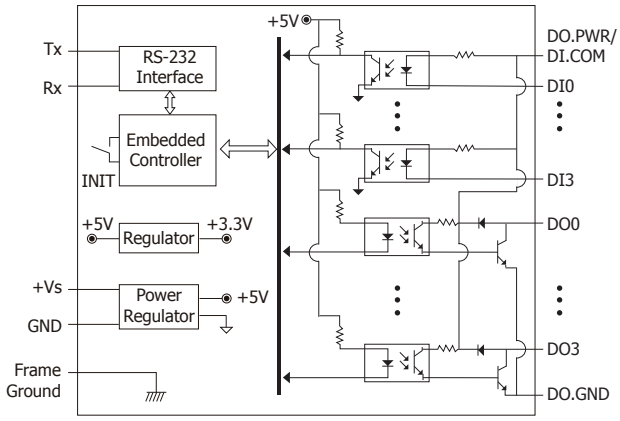
| Digital Input / Counter | | |
|---|---|---|
| Input Channels | | 4 |
| Type | | Wet Contact (Source) |
| On Voltage Level | | +6 VDC ~ +50 VDC |
| Off Voltage Level | | Max. +5 VDC |
| Counters | Channels | 4 |
| | Max. Counts | 65535 (16-bit) |
| | Max. Input Frequency | 100Hz |
| | Min. Pulse Width | 5ms |
| Input Impedance | | 10 KΩ , 0.66W |
| Overvoltage Protection | | ± 70 VDC |
| **Digital Output** | | |
| Output channels | | 4 |
| Type | | Isolated Open Collector (Sink) |
| Load Voltage | | +3.5 ~ +50 VDC |
| Max. Load Current | | 700mA / channel |
| Overvoltage Protection | | Yes |
| Overload Protection | | Yes |
| Power On Value | | Yes, Programmable |
| Safe Value | | Yes, Programmable |

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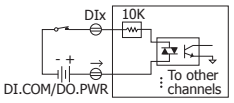
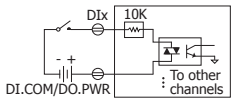
## Applications



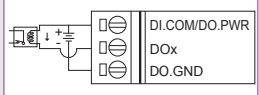
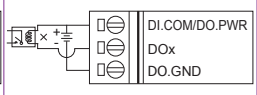
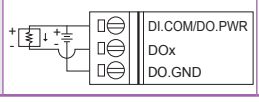
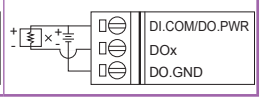

## Block Diagram




## Wire Connections

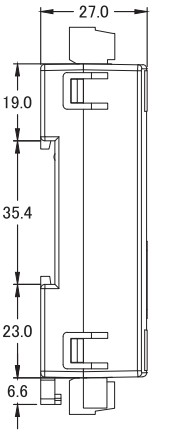
| Digital Input / Counter | ON State Readback as 1 | OFF State Readback as 0 |
|---|---|---|
| Source | +6 ~ +50 VDC | OPEN or <5 VDC |
| |  |  |



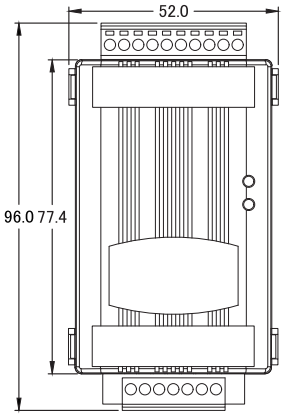
| Output Type | ON State Readback as 1 | OFF State Readback as 0 |
|---|---|---|
| Drive Relay | Relay ON | Relay OFF |
| |  |  |
| Resistance Load |  |  |



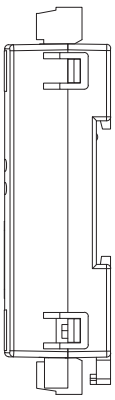
## Dimensions (Units: mm)



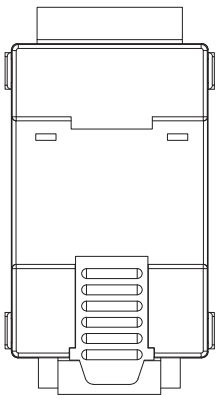

Left Side View



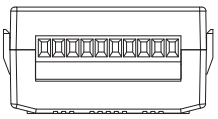

Front View



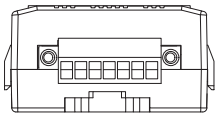
Right Side View



Rear View



Top View



Bottom View

## Ordering Information

| | |
|---|---|
| **tZT-P4C4 CR** | Wireless 4-channel Isolated Digital Input and 4-channel Isolated Digital Output Module (ZigBee Router) (RoHS) |

**Important Note:**
ZigBee Data Acquisition modules require a ZigBee host converter to coordinate the data transmission path. Remember to order a ZT-2550 or ZT-2570 ZigBee host converter when purchasing ZigBee Data Acquisition Products.

## Related Products

| | |
|---|---|
| MDR-20-24 | 24 VDC/1.0 A, 24 W Power Supply with DIN-Rail Mounting |
| ZT-2510 CR | ZigBee Repeater (Slave, ZigBee Router) (RoHS) |
| ZT-2550 CR | RS-485/RS-232 to ZigBee Converter (Host, ZigBee Coordinator) (RoHS) |
| ZT-2570 CR | Ethernet/RS-485/RS-232 to ZigBee Converter (Host, ZigBee Coordinator) (RoHS) |





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