



### Introduction

The ZT-2042 offers 4 PhotoMOS relay output channels and 4 sink-type digital output channels with short circuit protection. Each channel features photo couple isolation. There are options for configuring power-on and safe digital output values. The ZT-2042 has 8 LED indicators to display the DO channel status. 4 kV ESD protection and 3000 Vdc 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)
Antenna	2.4 GHz - 5 dBi Omni-directional Antenna
Transmission Range (LoS)	700 m (Typical)
Certification	CE/FCC, FCC ID
Max. Slaves in a ZigBee Network	255
Protocols	Supports DCON and Modbus RTU Protocols
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)
LED Indicators	
Power	1 LED, Red
ZigBee Communication	1 LED, Green
Digital Output	8 LEDs, Red
Isolation	
Intra-module Isolated, Field-to-Logic	3000 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
Surge ( IEC 61000-4-5)	±3 kV for Power
Power	
Input Voltage Range	+10 Vdc ~ +30 Vdc
Power Consumption	1.32 W Max.
Mechanical	
Flammability	Fire Retardant Materials (UL 94V-0 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

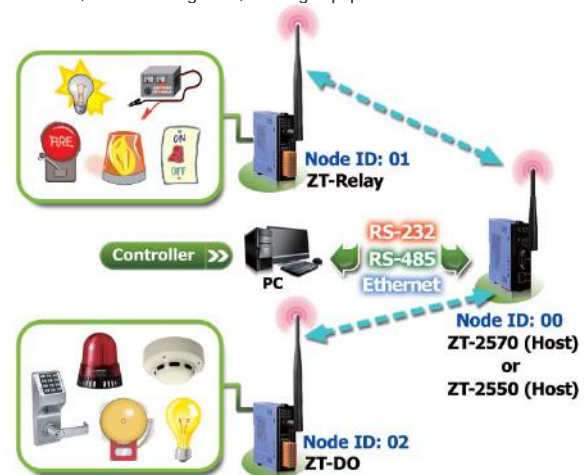
### Features

- 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
- External DIP and Rotary Switches for easy Configuration
- GUI Configuration Software (Windows Version)
- Supports AES-128 Encryption for the Wireless Communication (Passive)
- Supports ZigBee Repeater Function
- 4 PhotoMOS Relay Output Channels and 4 Open Collector Digital Output Channels
- Short Circuit Protection
- Surge and ESD Protection
- Configurable Power-on Value and Safe Value Settings
- DIN-Rail Mounting



### Applications

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



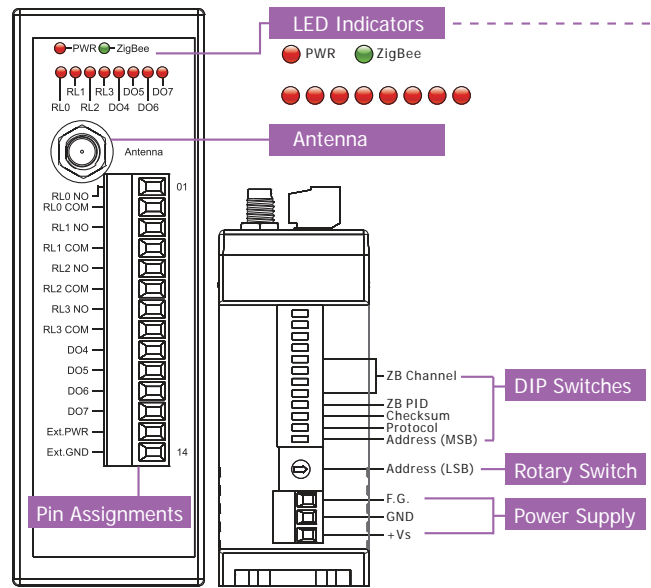
### I/O Specifications

Relay Output	
Output Channels	4
Output Types	PhotoMOS Relay, Form A
Load Voltage	60 Vdc/Vac
Max. Load Current	60 V/1.0 A (Operating Temperature: -25 ~ +40°C)
	60 V/0.8 A (Operating Temperature: +40 ~ +60°C)
	60 V/0.7 A (Operating Temperature: +60 ~ +75°C)
Power-on Time	5.0 ms
Power-off Time	0.5 ms
Power-on Value	Yes
Safe Value	Yes
Digital Output	
Output Channels	4 (Sink)
Output Types	Isolated Open Collector
Max. Load Current	700 mA/channel
Load Voltage	+5 Vdc ~ +50 Vdc
Power-off Time	0.5 ms
External Power Reversed Protection and Short Circuit Protection	Yes
Current Limited Protection	1.1 A
Power-on Value	Yes
Safe Value	Yes

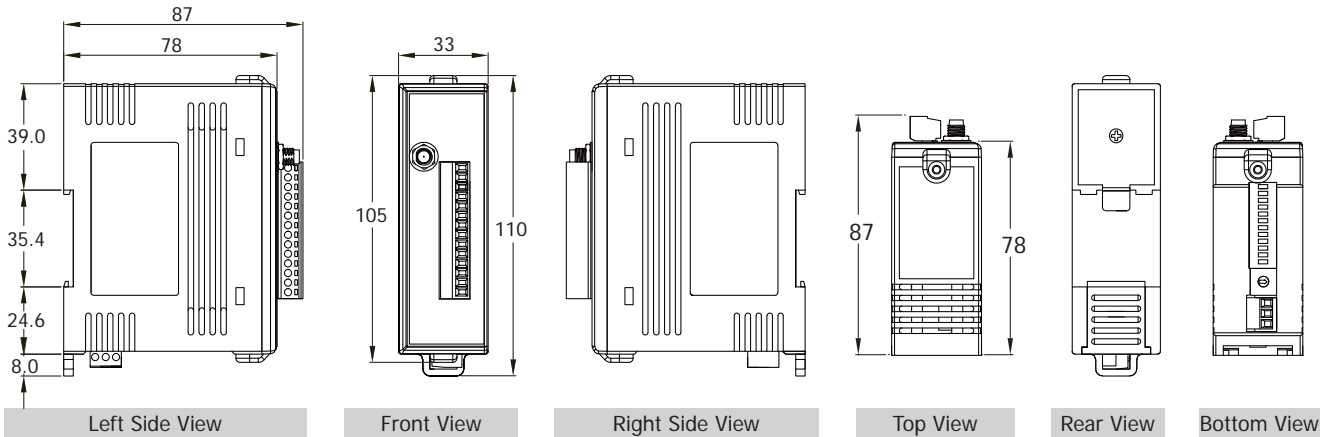
### Wiring

Relay Output	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
From A Relay Contact	Relay ON 	Relay OFF 
Digital Output	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Drive Relay	Relay ON 	Relay OFF 
Resistance Load	Relay ON 	Relay OFF 

### Appearance



### Dimensions (Units: mm)



### Ordering Information

ZT-2042 CR	Wireless 4-channel PhotoMOS Relay Output and 4-channel Open Collector Output Module (ZigBee Router) (RoHS)
<b>Important Note:</b> ZigBee Data Acquisition modules need a ZigBee host converter to coordinate the data transmission route. Please remember to order a ZT-2550, ZT-2570, and ZT-USBC 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 ZigBee Converter (Host)
ZT-2570 CR	Ethernet/RS-485/RS-232 to ZigBee Converter (Host) (RoHS)
External Antenna	2.4 GHz External Antenna, RP SMA Male (Plug)
Extension Cable	3S00x-1, RG58A/U x Meter Long RP-SMA (male) to RP-SMA (female)