

### Features

- Built-in Web Server
- Support Modbus TCP/UDP Protocols
- Powerful 32-bit MCU Handles Efficient Network Traffic
- 2-port Ethernet Switch (LAN Bypass) for Daisy-Chain Wiring
- Dual Watchdog
- I/O Pair Connection (Push and Polling)
- Easy Firmware Update via Ethernet
- LED Display to Indicate the I/O status
- 16 Wet Contact & Dry Contact Digital Input Channels
- Wide Operating Temperature Range: -25 ~ +75°C



### Introduction

The ET-2251 provides 16 wet contact and dry contact Digital Input channels. With 2 Ethernet ports, the ET-2251 allows daisy chain connection which permits the flexibility in locating devices, eases installation and lowers infrastructure costs. It features 8 kV ESD protection, 4 kV EFT protection, 3 kV surge and 3000 V<sub>DC</sub> I/O isolation to enhance noise protection capabilities in industrial environments. Each input channel can be used as a 32-bit counter.

### System Specifications

System	
CPU	32-bit ARM
Communication	
Ethernet Port	2 x RJ-45, 10/100 Base-TX, Switch Ports
Protocol	Modbus TCP, Modbus UDP
Security	Password and IP Filter
I/O Pair Connection	Yes (Push, Polling)
Dual Watchdog	Yes, Module, Communication (Configurable)
LAN Bypass	Yes
LED Indicators	
System Running	Yes
Ethernet Link/Act	Yes
DI/DO status	Yes
2-Way Isolation	
Ethernet	1500 Vdc
I/O	3000 Vdc
EMS Protection	
ESD (IEC 61000-4-2)	±8 kV Contact for Each Terminal and ±16 kV Air for Random Point
EFT (IEC 61000-4-4)	±4 kV for Power Line
Surge (IEC 61000-4-5)	±3 kV for Power Line
Power	
Reverse Polarity Protection	Yes
Powered from Terminal Block	+10 ~ +30 Vdc
Consumption	2.9 W (Max.)
Mechanical	
Dimensions (L x W x H)	127 mm x 33 mm x 99 mm
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-30 ~ +80°C
Humidity	10 ~ 90% RH, Non-condensing

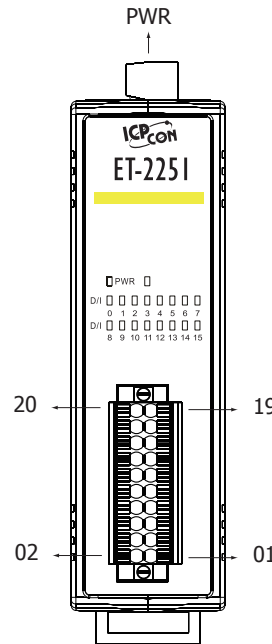
### I/O Specifications

Digital Input/Counter		
Channels	16	
Type	Wet Contact/Dry Contact	
Sink/Source (NPN/PNP)	Sink/Source	
On Voltage Level	+5 VDC ~ +50 VDC	
Off Voltage Level	+1 VDC Max.	
Input Impedance	7.5 kΩ	
Counters	Max. Count	4,294,967,295 (32 bits)
	Max. Input Frequency	3 kHz
	Programmable Digital Filter	1 ~ 6500 ms (0.08 Hz ~ 500 Hz)
Overvoltage Protection	+ 70 VDC	

### Wire Connections

Digital Input/Counter	Readback as 1	Readback as 0
	Close to GND	Open
Dry Contact		
	+5 ~ +50 VDC	OPEN or <1 Vdc
Sink		
	+5 ~ +50 VDC	OPEN or <1 Vdc
Source		

### Pin Assignments



Terminal No.	Pin Assignment
PWR	F.G. GND + Vs
ETH1	
ETH2	

Terminal No.	Pin Assignment	Pin Assignment	Terminal No.
20	DI.GND	DI.GND	19
18	DI8	DI0	17
16	DI9	DI1	15
14	DI10	DI2	13
12	DI11	DI3	11
10	DI12	DI4	09
08	DI13	DI5	07
06	DI14	DI6	05
04	DI15	DI7	03
02	DI.COM	DI.COM	01

### Ordering Information

<b>ET-2251 CR</b>	Ethernet I/O Module with 2-port Ethernet Switch, 16-ch Wet Contact and Dry Contact Digital Input (RoHS)
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### Related Products

NS-205 CR	Unmanaged 5-Port Industrial Ethernet Switch with Power Input +10 ~ +30 Vdc (RoHS)
NS-208 CR	Unmanaged 8-port Industrial 10/100 Base-TX Ethernet Switch with Power Input +10 ~ +30 VDC (RoHS)
DIN-KA52F CR	24 V/1.04 A, 25 W Power Supply with DIN-Rail Mounting (RoHS)
GPSU06U-6	24 V/0.25 A (max.) Power Supply