



ET-2255U

Ethernet I/O Module with 8-ch DI, 8-ch Sink-/Source-type DO

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
- Wide Operating Temperature Range: -25 ~ +75°C
- Built-in I/O
 - 8-ch Wet/Dry Contact Digital Input
 - 8-ch Digital Output selectable as either sink-type or source-type via wire connection



Introduction

The ET-2255U provides 8 wet/dry contact Digital Input channels and 8 sink- or source-type Digital Output channels by wire connection. With 2 Ethernet ports, The ET-2255U allows daisy chain connection which permits the flexibility in locating devices, eases installation and lowers infrastructure costs. It features optical isolation for 3000 Vrms of transient overvoltage protection but doesn't provide channel-to-channel isolation. Each input channel can be used as a 32-bit counter and each output channel can drive 500 mA load. The power-on value and safe value of digital output channel are programmable. It can safely be used in applications where hazardous voltages are present. It features 8 kV ESD protection, 4 kV EFT protection, 3 kV surge and 3750 V_{DC} I/O isolation to enrich the noise protection ability for industrial environment.

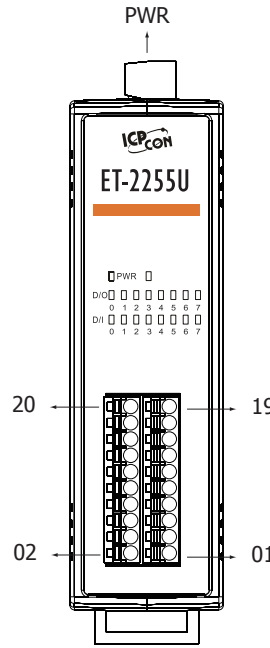
System Specifications

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		3750 Vdc
EMS Protection		
ESD (IEC 61000-4-2)		±8 kV Contact for Each Terminal and ±15 kV Air for Random Point
EFT (IEC 61000-4-4)		±4 kV for Power Line
Surge (IEC 61000-4-5)		±2 kV for Power Line
Power		
Reverse Polarity Protection		Yes
Powered from Terminal Block		+10 ~ +48 VDC
Consumption	24 VDC	2.3 W (Max.)
	48 VDC	2.7 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	8	
Contact	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	
Digital Output		
Channels	8	
Type	Push-Pull	
Sink/Source (NPN/PNP)	Sink/Source	
Load Voltage	+3.5 V ~ +80 V	
Max. Load Current	500 mA/Channel	
Overload Protection	-	
Overvoltage Protection	-	

Pin Assignments



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

Terminal No.	Pin Assignment	Pin Assignment	Terminal No.
20	N/A	DI.GND	19
18	DO0	DI0	17
16	DO1	DI1	15
14	DO2	DI2	13
12	DO3	DI3	11
10	DO4	DI4	09
08	DO5	DI5	07
06	DO6	DI6	05
04	DO7	DI7	03
02	DO.COM	DI.COM	01

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		

Output Type	ON State Readback as 1	OFF State Readback as 0
Sink		
Source		

Ordering Information

ET-2255U CR	Ethernet I/O Module with 2-port Ethernet Switch, 8-ch wet/dry contact Digital Input and 8-ch sink-/Source-type Digital Output (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