



ET-2251
PET-2251

ET-2251-32
PET-2251-32

(PoE) Ethernet I/O Module with 16/32-ch DI

Features

- Built-in Web Server
- Support Modbus TCP/UDP and MQTT Protocols
- 2-port Ethernet Switch (LAN Bypass) for Daisy-Chain Wiring
- Dual Watchdog
- I/O Pair Connection (Push and Pull)
- Built-in I/O
 - (P)ET-2251: 16-channel Wet contact & Dry contact DI
 - (P)ET-2251-32: 32-channel Wet contact & Dry contact DI
- LED Display to Indicate the I/O Status



Introduction

The (P)ET-2251/(P)ET-2251-32 provides 16/32 wet contact and dry contact Digital Input channels. With 2 Ethernet ports, the (P)ET-2251/(P)ET-2251-32 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 VDC I/O isolation to enhance noise protection capabilities in industrial environments. Each input channel can be used as a 32-bit counter.

System Specifications

Model	ET-2251	PET-2251	ET-2251-32	PET-2251-32
Software				
Built-in Web Server	Yes			
CPU Module				
CPU	32-bit ARM			
Watchdog Timer	Module, Communication (Programmable)			
Isolation				
2-way Isolation	Ethernet: 1500 VDC I/O: 3000 VDC			
EMS Protection				
EFT (IEC 61000-4-4)	±4 kV for Power Line			
ESD (IEC 61000-4-2)	±8 kV Contact for Each Terminal ±16 kV Air for Random Point			
Surge (IEC 61000-4-5)	±3 kV for Power Line			
LED Indicators				
Status	Run, Ethernet, I/O	Run, Ethernet, I/O, PoE	Run, Ethernet, I/O	Run, Ethernet, I/O, PoE
Ethernet				
Ports	2 x RJ-45, 10/100 Base-Tx, Switch Ports			
PoE	-	Yes	-	Yes
LAN bypass	Yes			
Security	Password and IP Filter			
Protocol	Modbus TCP, Modbus UDP, and MQTT			
Power				
Reverse Polarity Protection	Yes			
Consumption	2.9 W (max.)	3.4 W (max.)	3.1 W (max.)	3.6 W (max.)
Powered from PoE	-	IEEE 802.3af, Class1	-	IEEE 802.3af, Class1
Powered from Terminal Block	+10 to +30 VDC		+10 to +48 VDC	
Mechanical				
Casing	Plastic			
Dimensions (mm)	33 x 126 x 108 (W x L x H)		31 x 157 x 126 (W x L x H)	
Installation	DIN-Rail Mounting			
Environment				
Operating Temperature	-25 to +75°C			
Storage Temperature	-40 to +80°C			
Humidity	10 to 90% RH, Non-condensing			

I/O Specifications

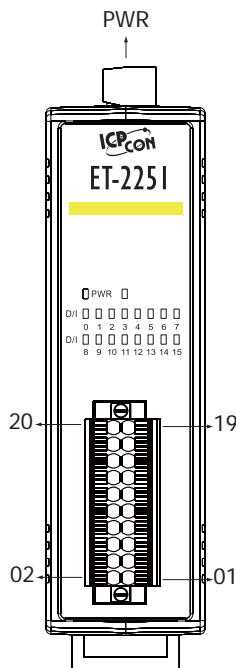
Model	(P)ET-2251	(P)ET-2251-32
Digital Input/Counter		
Channels	16	32
Type	Dry Contact Wet Contact	
Sink/Source (NPN/PNP)	Dry: Source Wet: Sink/Source	
ON Voltage Level	Dry: Close to GND Wet: +5 to +50 VDC	
OFF Voltage Level	Dry: Open Wet: +1 VDC (max.)	
Max. Counts	4,294,967,295 (32-bit)	
Frequency	3 kHz	
Input Impedance	7.5 kΩ	
Overvoltage Protection	+ 70 VDC	
Low Pass Filter	1 to 6500 ms (0.08 Hz to 500 Hz)	

Wire Connections

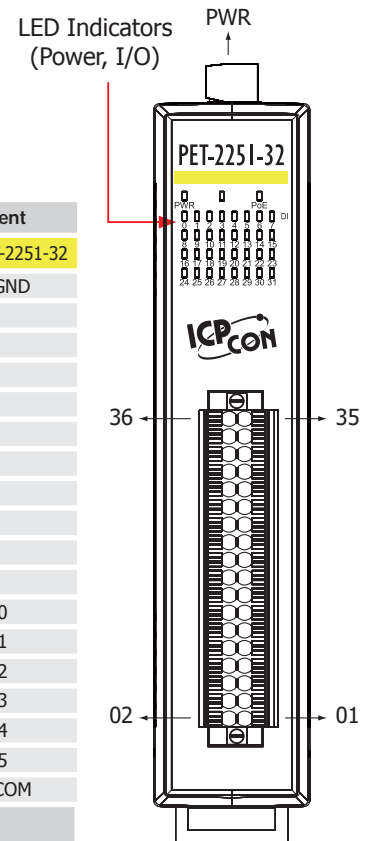
Digital Input/Counter	Readback as 1	Readback as 0
Dry Contact	Close to GND 	Open
	+5 to +50 VDC 	OPEN or <1 VDC
Wet Contact (Source)	+5 to +50 VDC 	OPEN or <1 VDC

Pin Assignments

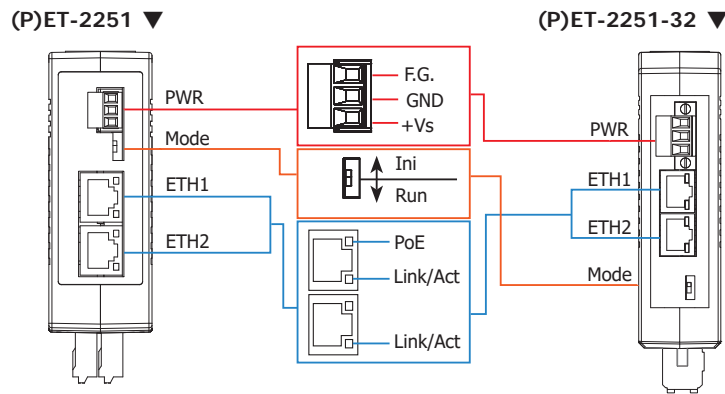
Port	Pin Assignment
PWR	F.G.
	GND
	+ Vs
ETH1	
ETH2	



Pin Assignment		Terminal No.	Pin Assignment	
(P)ET-2251	(P)ET-2251-32		(P)ET-2251	(P)ET-2251-32
DI.GND	DI16	36	35	DI.GND
DI16	DI17	34	33	DI0
DI17	DI18	32	31	DI1
DI18	DI19	30	29	DI2
DI19	DI20	28	27	DI3
DI20	DI21	26	25	DI4
DI21	DI22	24	23	DI5
DI22	DI23	22	21	DI6
DI.GND	DI24	20	19	DI.GND
DI8	DI25	18	17	DI0
DI9	DI26	16	15	DI1
DI10	DI27	14	13	DI2
DI11	DI28	12	11	DI3
DI12	DI29	10	09	DI4
DI13	DI30	08	07	DI5
DI14	DI31	06	05	DI6
DI15	DI.COM	04	03	DI7
DI.COM		02	01	DI.COM

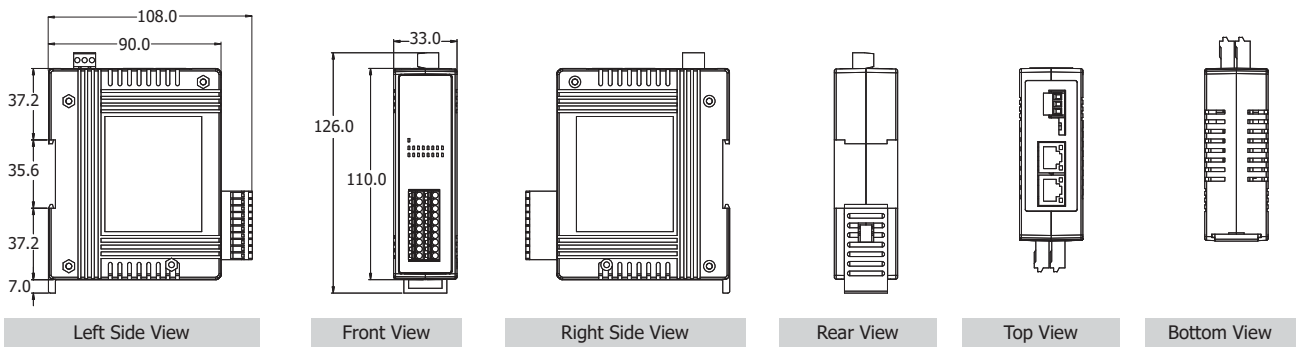


Appearance

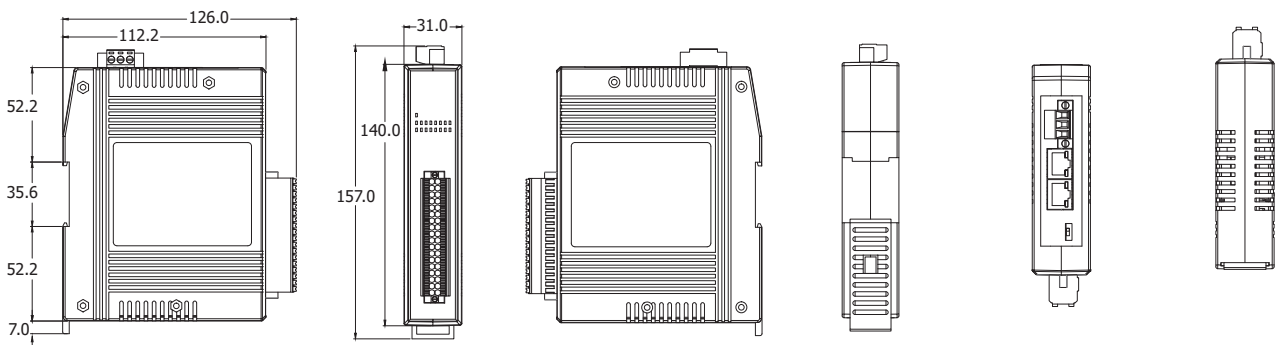


Dimensions (Units: mm)

(P)ET-2251



(P)ET-2251-32



Ordering Information

ET-2251CR	Ethernet I/O Module with 2-port Ethernet Switch and 16-ch DI (RoHS)
PET-2251CR	PoE Ethernet I/O Module with 2-port Ethernet Switch and 16-ch DI (RoHS)
ET-2251-32 CR	Ethernet I/O Module with 2-port Ethernet Switch and 32-ch DI (RoHS)
PET-2251-32 CR	PoE Ethernet I/O Module with 2-port Ethernet Switch and 32-ch DI (RoHS)