



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, MQTT, and SNMP V2c Protocols (Note: The model with "-32" does not yet support SNMP)
- 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, MQTT, and SNMP V2c		Modbus TCP, Modbus UDP, MQTT	
Power				
Reverse Polarity Protection	Yes			
Consumption	2.7 W (max.)	2.9 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

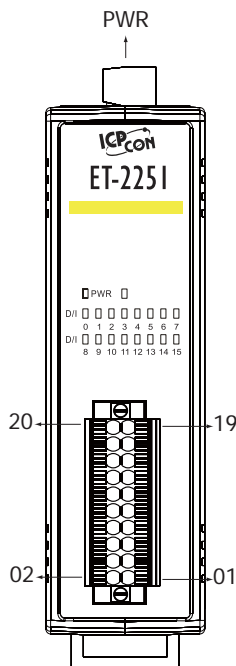
Model	(P)ET-2251	(P)ET-2251-32
Digital Input/Counter		
Channels	16	32
Type	Dry Contact Wet Contact	
Sink/Source (NPN/PNP)	Dry: Source Wet: Sink/Source	
ON Voltage Level	Dry: Close to GND Wet: +5 to +50 VDC	
OFF Voltage Level	Dry: Open Wet: +1 VDC (max.)	
Max. Counts	4,294,967,295 (32-bit)	
Frequency	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

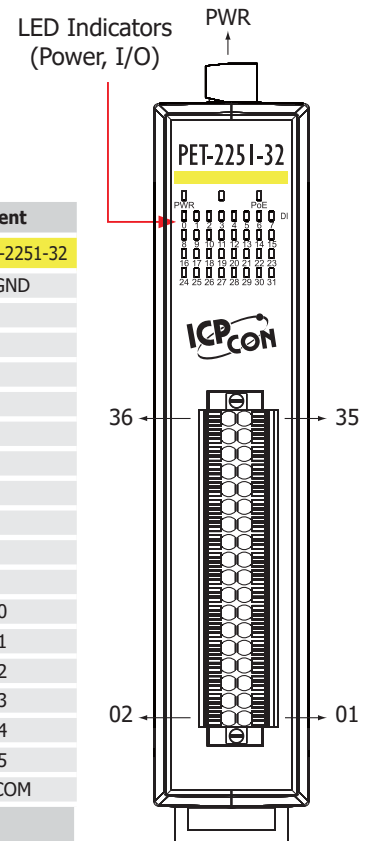
Digital Input/Counter	Readback as 1	Readback as 0
Dry Contact	Close to GND 	Open
	+5 to +50 VDC 	OPEN or <1 VDC
Wet Contact (Sink)	+5 to +50 VDC 	OPEN or <1 VDC
	+5 to +50 VDC 	OPEN or <1 VDC
Wet Contact (Source)	+5 to +50 VDC 	OPEN or <1 VDC

Pin Assignments

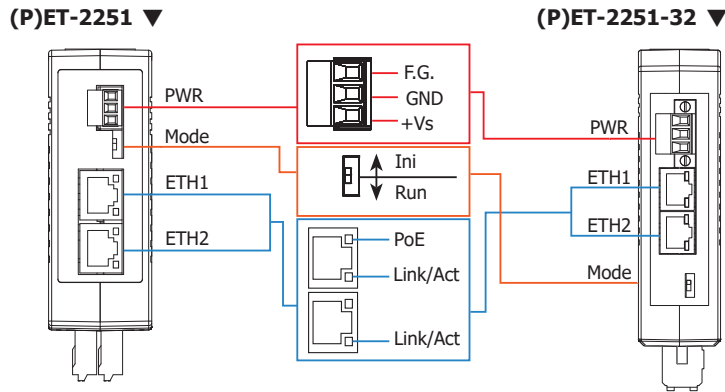
Port	Pin Assignment
PWR	F.G.
	GND
	+ Vs
ETH1	
ETH2	



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

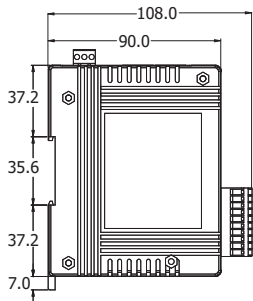


Appearance

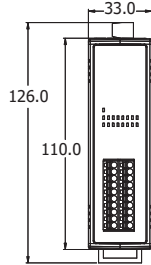


Dimensions (Units: mm)

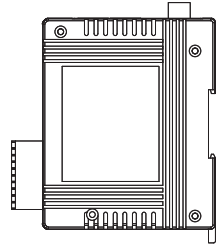
(P)ET-2251



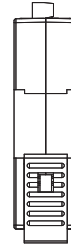
Left Side View



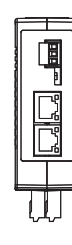
Front View



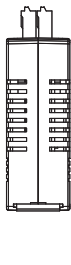
Right Side View



Rear View

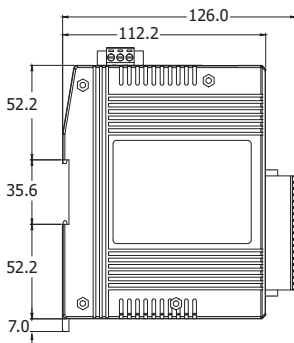


Top View

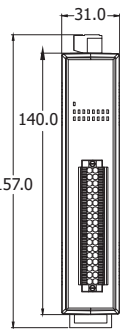


Bottom View

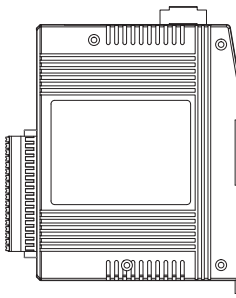
(P)ET-2251-32



Left Side View



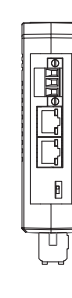
Front View



Right Side View



Rear View



Top View



Bottom View

Ordering Information

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