



ET-2217H **PET-2217H**

Ethernet I/O Module with 8-ch High Speed AI

Features

- Web Server for Configuration
- Support Modbus TCP/UDP, MQTT, and SNMP V2c Protocols
- 2-port Ethernet Switch (LAN bypass) for Daisy-chain Wiring
- Supports Dual-watchdog
- I/O Pair Connection (Push and Pull)
- Built-in I/O
  - ☐ 8-ch High Speed AI (Differential)

Introduction

(P)ET-2217H is an 8-channel differential high-speed analog input module. All analog input channels can be individually configured with input ranges including ±2.5 V, 0-5V, ±5 V, 0-10 V, ±10 V, 0-20 mA, 4-20 mA, and ±20 mA. The module can be set as voltage or current inputs via the DIP switch and provides up to 50 VDC overvoltage protection, as well as 50 mA overcurrent protection at 50 VDC/VAC. The sampling rate of (P)ET-2217H is 8 kHz for all channels, and it utilizes TCP streaming continuous transmission mode to record voltage and current values. The module also provides EMS (EFT/ESD/Surge) protection and 3000 VDC I/O Isolation to enhance noise protection capabilities in industrial environments.

System Specifications

Model	ET-2217H	PET-2217H
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	I/O: 3000 VDC
EMS Protection		
EFT (IEC 61000-4-4)	±4 kV for Power Line	
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal, ±8 kV Air for Random Point	
Surge (IEC 61000-4-5)	±2 kV for Power Line	
LED Indicators		
Status	Run, Ethernet	Run, Ethernet, PoE
Ethernet		
Ports	2 x RJ-45, 10/100 Base-Tx, Switch Ports	
PoE	-	Yes
LAN bypass	Yes	
Access Control	Password and IP Filter	
Protocol	Modbus TCP, Modbus UDP, MQTT, SNMP V2c, TCP Streaming (Access data by SDK library)	
Power		
Reverse Polarity Protection	Yes	
Consumption	2.5 W (max.)	2.7 W (max.)
Powered from PoE	-	IEEE 802.3af, Class1
Powered from Terminal Block	+10 ~ +48 VDC	
Mechanical		
Casing	Metal	
Dimensions (mm)	33 x 127 x 117 (W x L x H)	
Installation	DIN-Rail Mounting / Wall mounting (Optional ASO-0015)	
Environment		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-40 ~ +80 °C	
Humidity	10 ~ 90% RH, Non-condensing	

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I/O Specifications

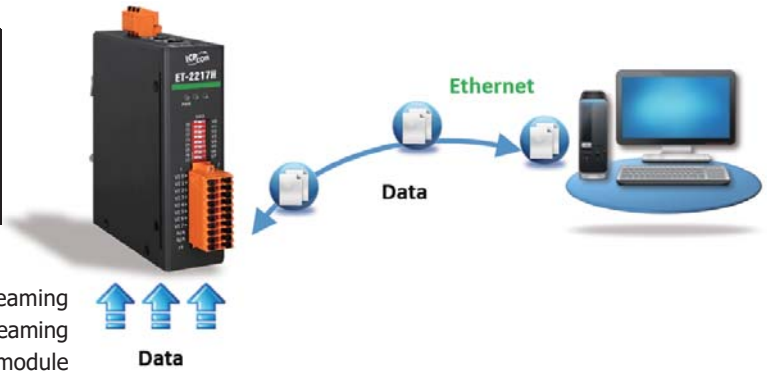
Model		ET-2217H	PET-2217H
Analog Input			
Channels		8 Differential	
Type		Voltage, Current (DIP switch selectable)	
Range	Voltage	±2.5 V, 0 ~ +5 V, ±5 V, 0 ~ +10 V, ±10 V	
	Current	0 ~ +20 mA, ±20 mA, +4 ~ +20 mA	
Resolution		16-bit	
Accuracy	Voltage	±0.1% of FSR	
	Current	±0.15% of FSR	
Sampling Rate		8K Hz (total channels, TCP Streaming)	
Input Impedance	Voltage	20 MΩ	
	Current	136 Ω	
Common Voltage Protection		±200 V_{DC}	
Overvoltage Protection		+50 V_{DC}	
Overcurrent Protection		50 mA at 50 V_{DC} (max.)	
Individual Channel Configuration		Yes	

Data Transmission Mode

Continuous Transmission

After starting A/D acquisition, data is continuously transmitted to the Host PC And you can specify the required channels for collection.

Total simultaneous sampling channels	Maximum sampling rate per channel
8	1 kHz
4	2 kHz
2	4 kHz
1	8 kHz

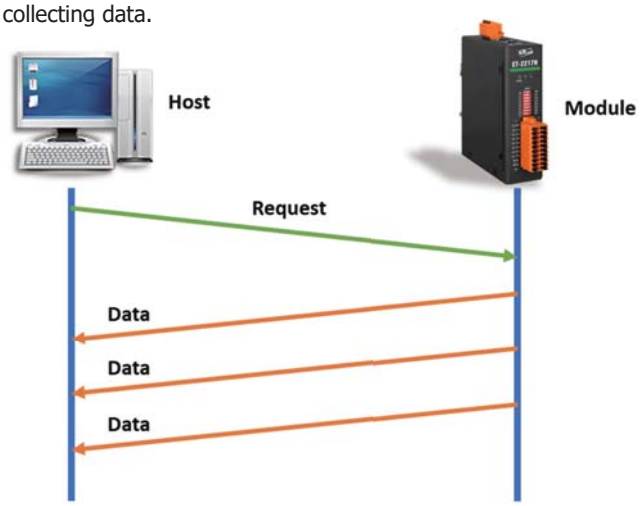


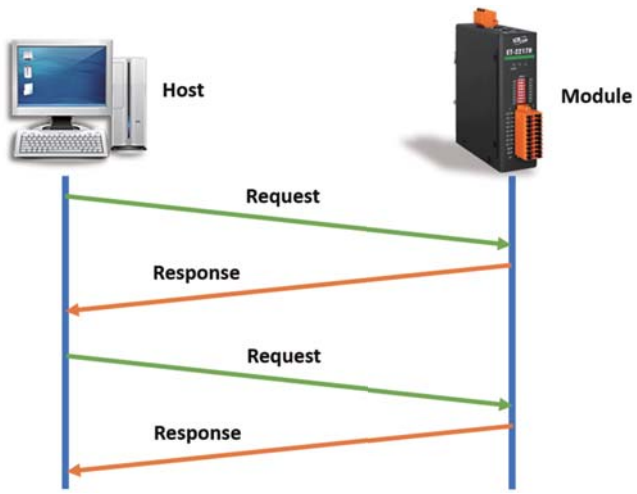
The continuous collection mode uses TCP streaming to transmit the collected data back to the PC. The streaming method of this module is that the firmware of the module uses polling scanning to sample data, and the data sampling rate is fixed.

The firmware polling scanning places the data in the module buffer. When the data reaches a certain amount, it is automatically sent to the host. The host sends a start collection command, and the module uses large data packets according to the above method, sending each packet to the host until the host sends a stop collection command to stop collecting data.

Modbus/TCP (Command Response Mode)

This mode of the Modbus/TCP protocol is a commonly used communication method for acquisition modules. The firmware of the acquisition module will collect data at a fixed sampling rate and temporarily store it in the module memory (Modbus Register table). When the host sends a command to the module, the module will send the temporarily stored relevant data back to the host as needed.



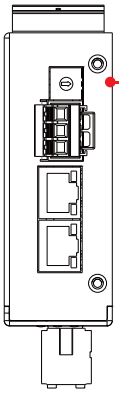


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Software Specifications

PC Software	
Support OS	Windows 7/8/10/11 and Linux
Utility	Configuration, graphically display and data logging
SDK	Windows ◦ Microsoft VC, C#, VB.NET SDK API and Demo ◦ Python Demo ◦ NI LabVIEW Toolkit and Demo Linux ◦ C/C++ library and Demo ◦ .NET library and Demo ◦ Python Demo

Appearance



(Only PET series support PoE)

Port	Description	
SW1	0: Run 1-E: Run IP F: Init	User specified IP or DHCP Default IP, 192.168.255.1 - 14) Factory default, Firmware Update
PWR	F.G. GND + Vs	
ETH1	PoE Link/Act	
ETH2	Link/Act	

Pin Assignments

Pin Assignment	SW2	Pin Assignment
I0		V0
I1		V1
I2		V2
I3		V3
I4		V4
I5		V5
I6		V6
I7		V7



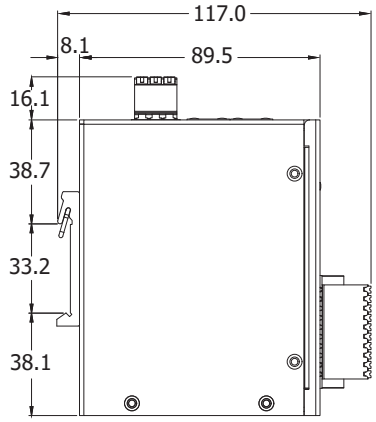
Pin Assignment	Terminal No.		Pin Assignment
VI 0+	01	02	VI 0-
VI 1+	03	04	VI 1-
VI 2+	05	06	VI 2-
VI 3+	07	08	VI 3-
VI 4+	09	10	VI 4-
VI 5+	11	12	VI 5-
VI 6+	13	14	VI 6-
VI 7+	15	16	VI 7-
N/A	17	18	N/A
N/A	19	20	N/A

Wire Connections

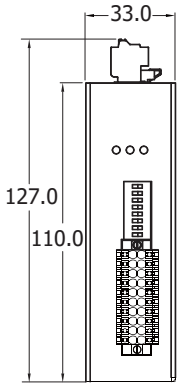
SW2	Current Input	SW2	Voltage Input
ON ON: Current	mA + - VIx VIx-	ON OFF: Voltage	mV/V + - V VIx VIx-

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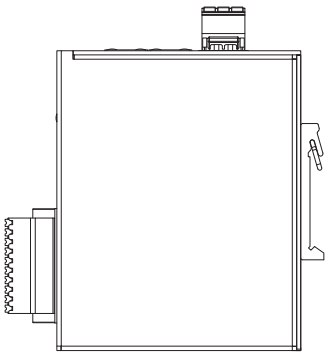
Dimensions (Units: mm)



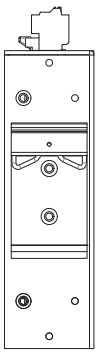
Left Side View



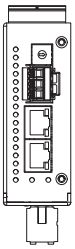
Front View



Right Side View



Rear View



Top View

ET-2217 Series Comparison Table

Model	(P)ET-2217	(P)ET-2217H	(P)ET-2217CI
			
Ethernet	2-port	2-port	2-port
PoE	Yes, PET-2217	Yes, PET-2217H	Yes, PET-2217CI
Channels	8 DIFF or 16 SE	8 DIFF	8 DIFF
Channel to Channel Isolation	No	No	Yes, 3000 VDC
Overvoltage Protection	120 VDC	50 VDC	120 VDC
Overcurrent Protection	50 mA at 110 VDC	50 mA at 50 VDC	50 mA at 110 VDC
Max. Sampling Rate	200 Hz (total channels)	8K Hz (total channels)	200 Hz (per channel)
Data Logger	No	No	320,000 records/ channel
Voltage/Current Inputs	DIP Switch	DIP Switch	Software
Terminals Block (Screw Locking)	Yes	Yes	Yes
Casing	Metal	Metal	Metal
Dimensions (mm)	33 x 127 x 117 (W x L x H)	33 x 127 x 117 (W x L x H)	33 x 184 x 129 (W x L x H)
Operating Temperature	-25 ~ 75 ℃	-25 ~ 75 ℃	-25 ~ 75 ℃

Ordering Information

ET-2217H CR	Ethernet I/O Module with 2-port Ethernet Switch, 8-ch High Speed AI (RoHS)
PET-2217H CR	PoE I/O Module with 2-port Ethernet Switch, 8-ch High Speed AI (RoHS)

Accessories

ASO-0015 CR	Wall Mount Kit (W: 28 mm) (RoHS)



ASO-0015



(P)ET-2000 + ASO-0015

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