ICP DAS

ET-2217CI-4   ET-2217CI

Ethernet I/O Module with 4/8-ch AI

Features

- Web Server for Configuration
- Support Modbus TCP/UDP and MQTT Protocols
- 2-port Ethernet Switch (LAN Bypass) for Daisy-chain Wiring
- I/O Pair Connection (Push and Pull)
- Software Configurable Voltage/Current Input
- Adjustable Sampling Rate (200Hz/10Hz per channel)
- Records with Time Stamps for Voltage and Current Measurements
  - ET-2217CI-4: 480,000 records/each channel
  - ET-2217CI: 320,000 records/each channel
- Built-in I/O
  - ET-2217CI-4: 4-ch AI (Differential)
  - ET-2217CI: 8-ch AI (Differential)
- 3000 VDC Channel-to-channel Isolation

Introduction

ET-2217CI-4/ET-2217CI is a 4/8-channel analog input module with channel-to-channel isolation. All analog input channels can be individually configured with input ranges including ±1 V, ±2.5 V, ±5 V, ±10 V, 0-20 mA, 4-20 mA, and ±20 mA. The module can be set as voltage or current inputs via the software and provides up to 120 VDC overvoltage protection, as well as 50 mA overcurrent protection at 110 VDC/VAC. Additionally, each 4-20 mA input channel features open wire detection.

The sampling rate of **ET-2217CI-4/ET-2217CI** can be set to either fast mode (200 Hz) or normal mode (10 Hz) for recording voltage and current values with timestamps. The module supports commonly used industrial protocols such as Modbus TCP and the emerging M2M (Machine-to-Machine) or IoT (Internet of Things) connectivity protocols like MQTT. It 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-2217CI-4	ET-2217CI
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)	±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	
System		
Real Time Clock	Yes	
Data Logger	Up to 480,000 records (ET-2217CI-4) and 320,000 records (ET-2217CI)	
Ethernet		
Ports	2 x RJ-45, 10/100 Base-Tx, Switch Port	
LAN bypass	Yes	
Access Control	Password and IP Filter	
Protocol	Modbus TCP, Modbus UDP, and MQTT	
Environment		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-40 ~ +80 °C	
Humidity	10 ~ 90% RH, Non-condensing	

Model	ET-2217CI-4	ET-2217CI
Power		
Reverse Polarity Protection	Yes	
Consumption	3.6 W (max.)	5.4 W (max.)
Powered from Terminal Block	+10 ~ +48 VDC	
Mechanical		
Casing	Metal	
Dimensions (mm)	33 x 176 x 129 (W x L x H)	
Installation	DIN-Rail mounting / Wall mounting (Optional ASO-0015)	
Ingress Protection Rating	IP30	

Dimensions (Units: mm)

Left View   Front View   Top View
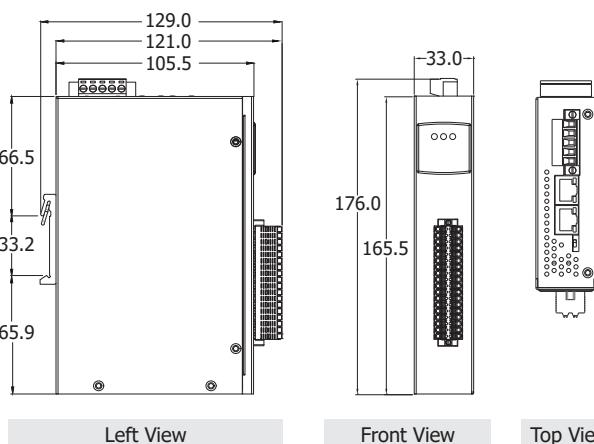
▣ I/O Specifications

Model	ET-2217CI-4	ET-2217CI
Analog Input		
Channels	4 Differential	8 Differential
Type	Voltage, Current (Software Configurable)	
Range — Voltage	±1 V, ±2.5 V, ±5 V, ±10 V	
Range — Current	0 ~ 20mA, 4 ~ 20mA	
Resolution	16-bit	
Accuracy	±0.1% of FSR	
Sampling Rate — Normal Mode	10 Hz (per channel)	
Sampling Rate — Fast Mode	200 Hz (per channel)	
Input Impedance	Voltage: 20 MΩ, Current: 135 Ω	
Overvoltage Protection	+120 VDC	
Overcurrent Protection	50 mA at 110 VDC (max.)	
Individual Channel Configuration	Yes	
Channel-to-channel Isolation	3000 VDC	
Open Wire Detection	For 4 ~ 20 mA only	

▣ Pin Assignments

Pin Assignment	ET-2217CI-4		Pin Assignment
AI0-	02	01	AI0+
	04	03	
	06	05	
	08	07	
AI1-	10	09	AI1+
	12	11	
	14	13	
	16	15	
AI2-	18	17	AI2+
	20	19	
	22	21	
	24	23	
	26	25	
	28	27	
AI3-	30	29	AI3+
	32	31	
	34	33	
	36	35	

Pin Assignment	ET-2217CI		Pin Assignment
AI0-	02	01	AI0+
	04	03	
AI1-	06	05	AI1+
	08	07	
AI2-	10	09	AI2+
	12	11	
AI3-	14	13	AI3+
	16	15	
AI4-	18	17	AI4+
	20	19	
	22	21	
AI5-	24	23	AI5+
	26	25	
	28	27	
AO6-	30	29	AI6+
	32	31	
	34	33	
AI7-	36	35	AI7+
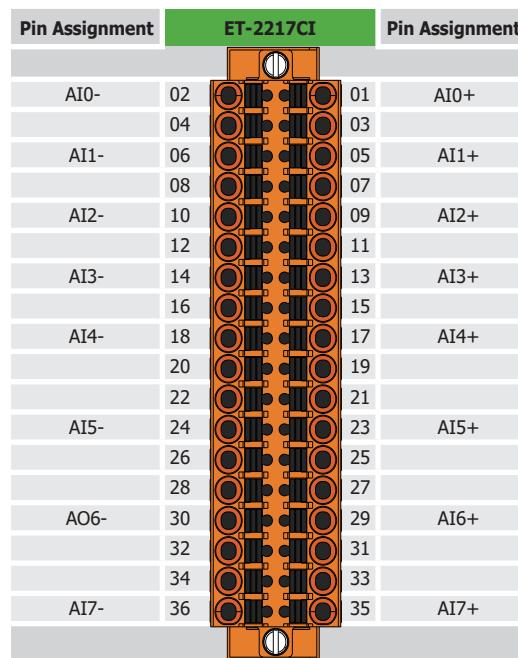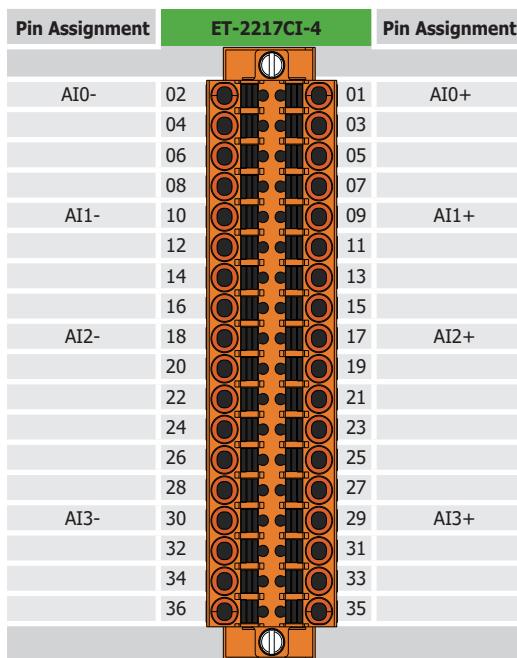
Top Side of ET-2217CI-4/ET-2217CI

Power Input: +10 ~ +48 VDC	SW2

+Vs
GND
N/A
N/A
F.G.

ETH1
ETH2
Init
Run

▣ Wire Connections

Voltage Input

mV/V — V (+/-) → AIx+ / AIx-

Current Input

mA — (+/-) → AIx+ / AIx-
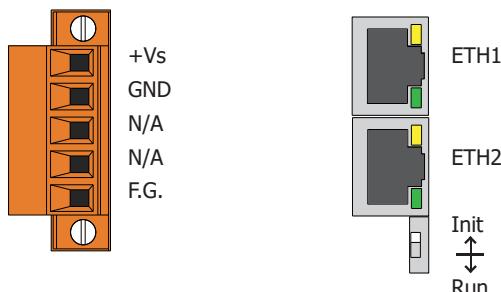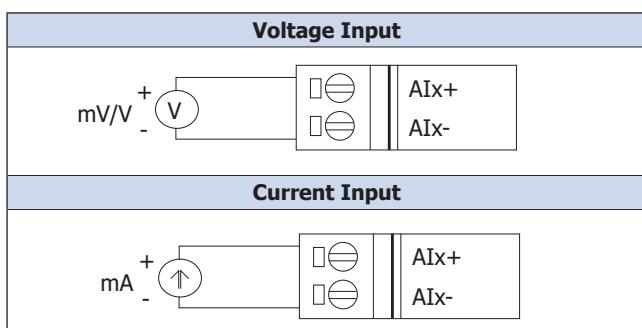
▣ Ordering Information

ET-2217CI-4 CR	Ethernet I/O Module with 2-port Ethernet Switch, 4-ch AI with Channel-to-channel Isolation (RoHS)
ET-2217CI CR	Ethernet I/O Module with 2-port Ethernet Switch, 8-ch AI with Channel-to-channel Isolation (RoHS)