



**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

The **ET-2217CI** is a Channel-to-channel isolated analog input module that includes 8 analog input channels. The module provides a programmable input range on all Analog Input channels ( $\pm 1$  V,  $\pm 2.5$  V,  $\pm 5$  V,  $\pm 10$  V, 0 to 20mA, 4 to 20mA, and  $\pm 20$  mA). Each analog input channel can be configured for an individual input range, providing a high overvoltage protection of 120 VDC and 50mA overcurrent protection at 110 VDC/VAC. Voltage and current input is software configurable.

The sampling rate of the ET-2217CI is adjustable and can be set to either fast (200Hz) or normal (10Hz) mode. It can be used to record voltage and current information, including the date and time stamps. Support is provided for common industrial protocols such as Modbus TCP, as well as the emerging machine-to-machine (M2M)/IoT (Internet of Things) connectivity protocol – MQTT.

The module also features per-channel open wire detection for 4 to 20 mA input and provides 4 kV ESD/EFT protection, 2 kV Surge protection, and 3000 VDC intra-module isolation and Channel-to-channel isolation. The **ET-2217CI-4** has the same specifications as ET-2217CI, but provides 4-channel analog inputs.

## System Specifications

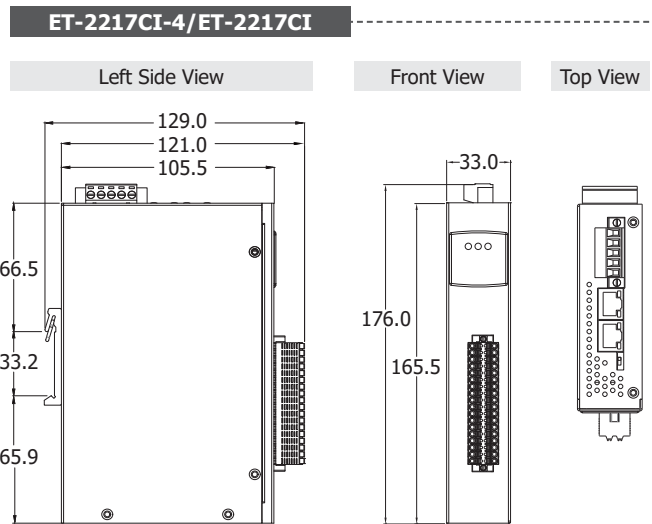
Model	ET-2217CI-4	ET-2217CI
<b>Software</b>		
Built-in Web Server	Yes	
<b>CPU Module</b>		
CPU	32-bit ARM	
Watchdog Timer	Module, Communication (Programmable)	
<b>Isolation</b>		
2-way Isolation	Ethernet: 1500 VDC I/O: 3000 VDC	
<b>EMS Protection</b>		
EFT (IEC 61000-4-4)	$\pm 4$ kV for Power Line	
ESD (IEC 61000-4-2)	$\pm 4$ kV Contact for Each Terminal $\pm 8$ kV Air for Random Point	
Surge (IEC 61000-4-5)	$\pm 2$ kV for Power Line	
<b>LED Indicators</b>		
Status	Run, Ethernet	
<b>System</b>		
Real Time Clock	Yes	
Data Logger	Up to 480,000 records (ET-2217CI-4) and 320,000 records (ET-2217CI)	

Model	ET-2217CI-4	ET-2217CI
<b>Ethernet</b>		
Ports	2 x RJ-45, 10/100 Base-Tx, Switch Ports	
LAN bypass	Yes	
Access Control	Password and IP Filter	
Protocol	Modbus TCP, Modbus UDP, and MQTT	
<b>Power</b>		
Reverse Polarity Protection	Yes	
Consumption	3.6 W (max.)	5.4 W (max.)
Powered from Terminal Block	+10 to +48 VDC	
<b>Mechanical</b>		
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	
<b>Environment</b>		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-40 ~ +80 °C	
Humidity	10 ~ 90% RH, Non-condensing	

## I/O Specifications

Model	ET-2217CI-4	ET-2217CI
<b>Analog Input</b>		
Channels	4 Differential	8 Differential
Type	Voltage, Current (Software Configurable)	
Range	Voltage	$\pm 1\text{ V}$ , $\pm 2.5\text{ V}$ , $\pm 5\text{ V}$ , $\pm 10\text{ V}$
	Current	0 to 20mA, 4 to 20mA
Resolution	16-bit	
Accuracy	$\pm 0.1\%$ of FSR	
Sampling Rate	Normal Mode	10 Hz (per channel)
	Fast Mode	200 Hz (per channel)
Input Impedance	Voltage: 20 M $\Omega$ , Current: 135 $\Omega$	
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 to 20 mA only	

## Dimensions (Units: mm)



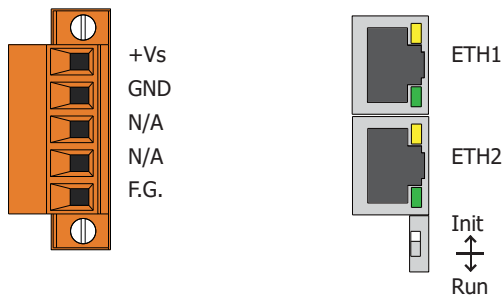
## Pin Assignments

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

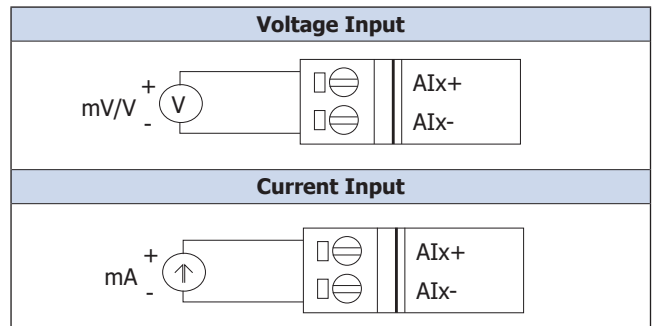
Pin Assignment	ET-2217CI	Pin Assignment
AI0-	02	01 AI0+
	04	03
AI1-	06	05 AI1+
	08	07
AI2-	10	09 AI2+
	12	11
AI3-	14	13 AI3+
	16	15
AI4-	18	17 AI4+
	20	19
	22	21
AI5-	24	23 AI5+
	26	25
	28	27
AI6-	30	29 AI6+
	32	31
	34	33
AI7-	36	35 AI7+

Top Side of ET-2217CI-4/ET-2217CI

Power Input: +10 to +48 VDC SW2



## Wire Connections



## Ordering Information

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