



## ET-7204

## PET-7204

Ethernet I/O Module with 2-port Ethernet Switch,  
4-ch AI, 4-ch AO, 4-ch DI

### Features

- Built-in Web Server
- Web HMI
- Support for both Modbus TCP and Modbus UDP Protocols
- Communication Access Control
- 2-port Ethernet Switch (LAN bypass) for Daisy-chain Wiring
- Dual Watchdog
- I/O Pair Connection
- Built-in I/O
- AI: 4 Channels with 240 Vrms Overvoltage Protection
- AO: 4 Channels
- DI/Counter: 4 Channels



### Introduction

The ET-7204/PET-7204 is a multi-function module with 4-channel analog inputs, 4-channel analog outputs, 4-channel digital inputs. It provides various programmable analog inputs ( $\pm 500$  mV,  $\pm 1$  V,  $\pm 5$  V,  $\pm 10$  V,  $\pm 20$  mA,  $0 \sim 20$  mA and  $4 \sim 20$  mA), and analog outputs ( $\pm 5$  V,  $\pm 10$  V,  $0 \sim 20$  mA and  $4 \sim 20$  mA). Each analog input is allowed to configure a proper range with 240 Vrms high voltage protection. Each analog input/output can be programmed to accept current or voltage as input/output depending upon the position of corresponding jumper.

### System Specifications

Model	ET-7204	PET-7204
<b>Software</b>		
Built-in Web Server	Yes	
<b>CPU Module</b>		
Watchdog Timer	Module, Communication (Programmable)	
<b>2-Way Isolation</b>		
Ethernet	1500 VDC	-
I/O	2500 VDC	
<b>EMS Protection</b>		
EFT (IEC 61000-4-4)	$\pm 2$ 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, I/O	Run, Ethernet, I/O, PoE
<b>Ethernet</b>		
Ports	2 x RJ-45, 10/100 Base-TX, Swtich Ports	
PoE	-	Yes
LAN bypass	Yes	
Access Control	ID, Password and IP Filter	
Protocol	Modbus TCP, Modbus UDP	
<b>Power</b>		
Reverse Polarity Protection	Yes	
Consumption	4.9 W (max.)	5.5 W (max.)
Powered from PoE	-	IEEE 802.3af, Class1
Powered from Terminal Block	$+12 \sim +48$ VDC	
<b>Mechanical</b>		
Dimensions (mm)	76 x 120 x 42 (W x L x H)	
Installation	DIN-Rail Mounting	

Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +80 °C
Humidity	10 ~ 90% RH, Non-condensing

## I/O Specifications

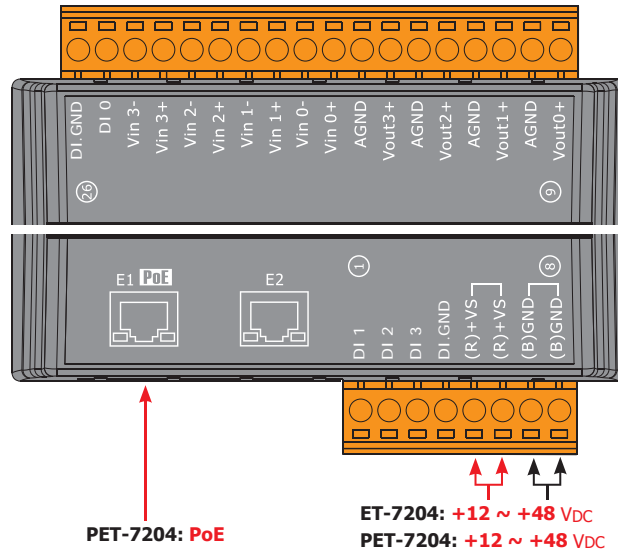
Analog Input		
Channels	4 (Differential)	
Type	Voltage, Current	
Range	$\pm 500$ mV, $\pm 1$ V, $\pm 5$ V, $\pm 10$ V $+0$ mA ~ $+20$ mA, $\pm 20$ mA, $4 \sim 20$ mA (Jumper Selectable)	
Resolution	16-bit	
Accuracy	Normal Mode	$\pm 0.1\%$
	Fast Mode	$\pm 0.5\%$ or better
Sampling Rate	Normal Mode	10 Hz (total channels)
	Fast Mode	50 Hz (total channels)
Input Impedance	Voltage	2 M $\Omega$
	Current	125 $\Omega$
Common Voltage Protection	$\pm 200$ VDC	
Overvoltage Protection	240 V <sub>rms</sub>	
Overcurrent Protection	50 mA at 110 VDC (max.)	
Individual Channel Configuration	Yes	
Open Wire Detection	For 4 ~ 20 mA only	
Virtual Channel to Channel Isolation	$\pm 400$ VDC	
Analog Output		
Channels	4	
Type	Voltage, Current	
Range	$+0 \sim +5$ VDC, $\pm 5$ VDC, $+0 \sim +10$ VDC, $\pm 10$ VDC $0 \sim 20$ mA, $4 \sim 20$ mA (Jumper Selectable)	
Resolution	12-bit	
Accuracy	$\pm 0.1\%$ of FSR	
Open Wire Detection	For 4 ~ 20 mA only	
Voltage Output Capability	10 V @ 20 mA	
Current Load Resistance	400 $\Omega$	
Individual Channel Configuration	Yes	
Power on Value	Programmable	
Safe Value	Programmable	
Digital Input/Counter		
Channels	4	
Type	Dry Contact, Wet Contact	
ON Voltage Level	Dry	Open
	Wet	+1 VDC (max.)
OFF Voltage Level	Dry	Close to GND
	Wet	+3.5 ~ +30 VDC
Max. Counts	4,294,967,295 (32-bit)	
Frequency	100 Hz	
Min. Pulse Width	5 ms	
Effective Distance	500 m (max.)	
Overvoltage Protection	+30 VDC	

## Wire Connections

Voltage Input	Current Input
Voltage Output	Current Output

Digital Input/Counter	ON State, Readback as 1	OFF State, Readback as 0
Dry Contact (Source)		
Wet Contact (Sink)		

## Pin Assignments



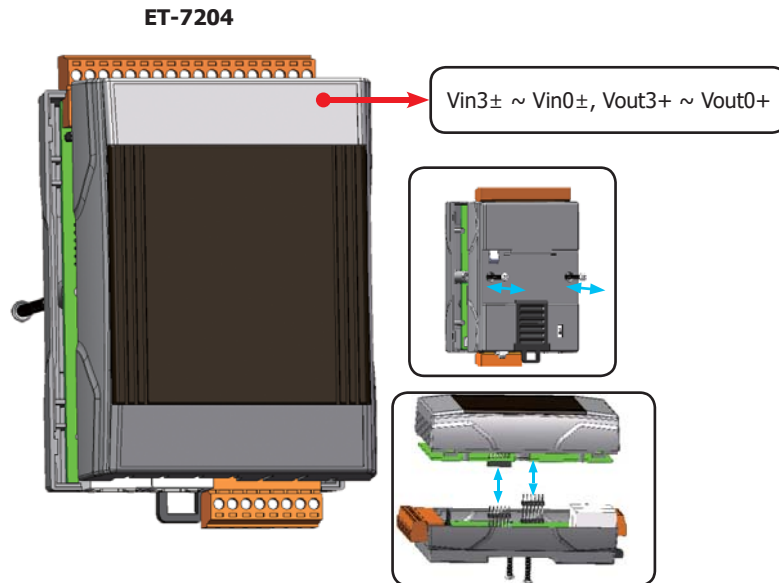
## Ordering Information

<b>ET-7204 CR</b>	Ethernet I/O Module with 2-port Ethernet Switch, 4-ch AI, 4-ch AO, 4-ch DI (RoHS)
<b>PET-7204 CR</b>	PoE I/O Module with 2-port Ethernet Switch, 4-ch AI, 4-ch AO, 4-ch DI (RoHS)

## Jumper

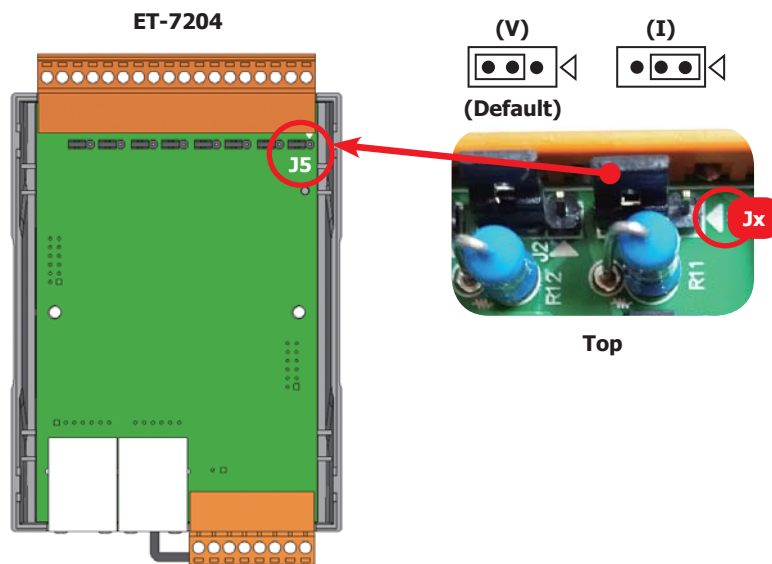
### Notice:

1. Before adjusting the jumpers, remove the module's top cover. For the ET-7200 series, the screws are located on the rear cover, and the CPU board must be removed as well.



2. Users can locate the Jx/JPx jumpers on the board by checking the I/O labels on the cover.

Channel	Vin3±	Vin2±	Vin1±	Vin0±	Vout3+	Vout2+	Vout1+	Vout0+
Jumper	J4	J3	J2	J1	J8	J7	J6	J5



3. After adjusting the jumpers, reinstall the top cover (along with the CPU board) and secure the screws.