# PFN-2024
### PROFINET I/O Module

## Features

- Protocol: PROFINET IO Device
- PROFINET Conformance Class B and RT Class 1
- Cyclic Time: 1ms (min)
- Generic GSDML File Provided (Version 2.25)
- 16-bits resolution DAC
- Output Range: 0~20mA, 4~20mA, 0~10V, +/-10V, 0~5V, +/-5V
- 4 kV Contact ESD protection for any terminal
- The operating temperature range is -25°C~+70°C

## Introduction

The PFN-2024 is one of the PROFINET IO series products produced by ICP DAS. It provides the PROFINET IO communication protocol with any PROFINET IO controllers. It has 4-channel isolated analog output with voltage and current output types. It provides ±4kV ESD protection contacting for all terminals. You can access and configure it by using the GSDML file in any PROFINET Engineering tool.
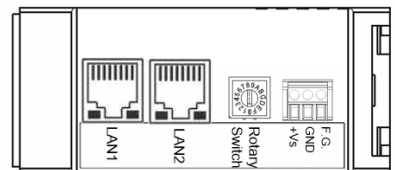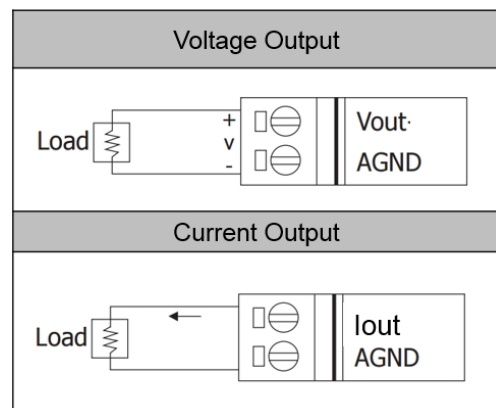
## Internal I/O Structure
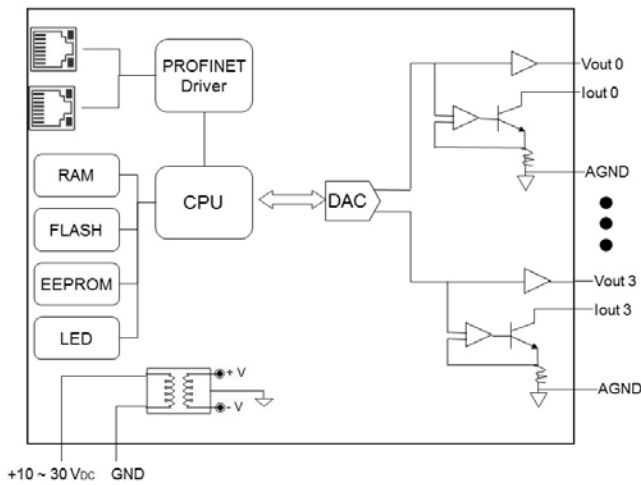


## I/O Pin & Wire Connection
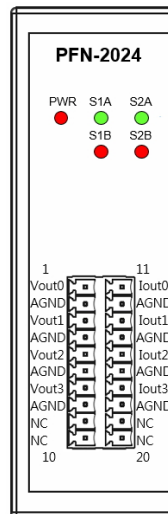


| Terminal No. | Pin Assignment | Terminal No. | Pin Assignment |
|---|---|---|---|
| 01 | Vout0 | 11 | Iout0 |
| 02 | AGND | 12 | AGND |
| 03 | Vout1 | 13 | Iout1 |
| 04 | AGND | 14 | AGND |
| 05 | Vout2 | 15 | Iout2 |
| 06 | AGND | 16 | AGND |
| 07 | Vout3 | 17 | Iout3 |
| 08 | AGND | 18 | AGND |
| 09 | NC | 19 | NC |
| 10 | NC | 20 | NC |

## Dimensions (Units: mm)
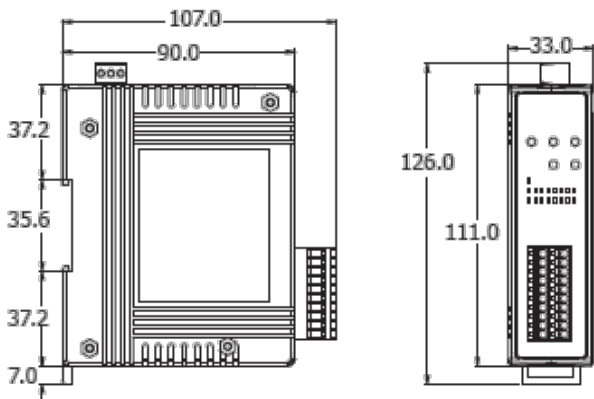
## ■ Hardware Specifications

| Hardware | |
|---|---|
| CPU | 32-bit CPU Core |
| RAM/Flash/EEPROM | 32 MB / 4 MB / 8 KB |
| Watchdog | CPU built-in |
| ESD Protection | 4 kV class A |
| **PROFINET Interface** | |
| Protocol | PROFINET IO Device |
| Conformance Classes | Class B |
| Services | RTC, RTA, CL-RPC, DCP, LLDP, I&M |
| Cycle Time | 1 ms (min) |
| **Ethernet Interface** | |
| Controller | 10/100Base-TX Ethernet Controller (Auto-negotiating, Auto_MDIX) |
| Connector | RJ-45 x 2 (LED indicators) , Integrated 2-Port Switch |
| Services | ICMP, IGMP, ARP, DHCP, TELNET, TFTP, SNMP, VLAN Priority Tagging |
| **Analog Output** | |
| Channels | 4 |
| Output Range | 0~20mA, 4~20mA (current sourcing)<br>0~10V, +/-10V, 0~5V, +/-5V |
| Resolution | 16 bit |
| Accuracy | +/- 0.1% of FSR |
| Isolation | 1500 VDC |
| **LED** | |
| Round LED | PWR LED, S1A LED, S1B LED, S2A LED, S2B LED |
| **Power** | |
| Power supply | Unregulated +10 ~ +30 VDC |
| Protection | Power reverse polarity protection, Over-voltage brown-out protection |
| Power Consumption | 7W |
| **Mechanism** | |
| Installation | DIN-Rail |
| Dimensions | 33 mm x 107 mm x 126 mm (W x L x H) |
| **Environment** | |
| Operating Temp. | -25 ~ 70 ℃ |
| Storage Temp. | -30 ~ 80 ℃ |
| Humidity | 10 ~ 90% RH, non-condensing |

## ■ Application



PFN-2024

Analog Output

Output Device

## ■ Ordering Information

| PFN-2024 CR | PROFINET I/O Module (4-channel Isolated Analog Output Module) (RoHS) |
|---|---|