



## PISO-813U

Universal PCI, 10 kS/s, 32-ch, 12-bit Isolated AI Board

### Features

- Universal PCI (3.3 V/5 V) Interface
- 32 Single-ended Analog Input Channels
  - Bipolar Input :  $\pm 0.625\text{ V}$ ,  $\pm 1.25\text{ V}$ ,  $\pm 2.5\text{ V}$ ,  $\pm 5\text{ V}$ ,  $\pm 10\text{ V}$
  - Unipolar Input :  $0 \sim +0.625\text{ V}$ ,  $0 \sim +1.25\text{ V}$ ,  $0 \sim +2.5\text{ V}$ ,  $0 \sim +5\text{ V}$ ,  $0 \sim +10\text{ V}$
  - Programmable Gain Control : 1, 2, 4, 8, 16
  - AD Trigger: Software-trigger
  - 12-bit, 10 kS/s AD Converter
  - 3750 Vrms Bus Isolation Protection
  - Built-in DC/DC Converter with 3000 Vdc Protection
- Supports Card ID (SMD Switch)



### Introduction

The PISO-813U card is bus-typed isolated A/D board and supports 3.3 V/5 V PCI bus. They feature 12-bit 32 single-ended AIs, 3750 Vrms bus-typed isolation protection and 10 kS/s data acquisition under DOS and Windows. It is the most cost effective isolated A/D board for the universal PCI in the world.

The PISO-813U also adds a Card ID switch on-board. Users can set Card ID and then recognizes the board by the ID via software when using two or more PISO-813U cards in one computer.

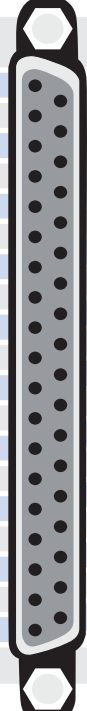
The cards support various OS versions, such as Linux, DOS, Windows. DLL and Active X control together with various language sample program based on Turbo C++, Borland C++, Microsoft C++, Visual C++, Borland Delphi, Borland C++ Builder, Visual Basic, C#.NET, Visual Basic.NET and LabVIEW are provided in order to help users to quickly and easily develop their own applications.

### Software

Drivers	
<input checked="" type="checkbox"/>	32/64-bit Windows 10/11
<input checked="" type="checkbox"/>	Linux
<input checked="" type="checkbox"/>	DASYLab
Sample Programs	
<input checked="" type="checkbox"/>	DOS Lib and TC/BC/MSC Demo
<input checked="" type="checkbox"/>	VB/VC/Delphi/VB.NET/C#.NET/VC.NET/LabVIEW/Python/MATLAB

### Pin Assignments

Pin Assignment	Terminal	No.	Pin Assignment
AI_0	01		AI_1
AI_2	02	20	AI_3
AI_4	03	21	AI_5
AI_6	04	22	AI_7
AI_8	05	23	AI_9
AI_10	06	24	AI_11
AI_12	07	25	AI_13
AI_14	08	26	AI_15
A.GND	09	27	AI_17
A.GND	10	28	AI_19
AI_16	11	29	AI_21
AI_18	12	30	AI_23
AI_20	13	31	AI_25
AI_22	14	32	AI_27
AI_24	15	33	AI_29
AI_26	16	34	AI_31
AI_28	17	35	
AI_30	18	36	
A.GND	19	37	



### Hardware Specifications

Hardware	
Card ID	Yes (4-bit)
Connector	Female DB37 x 1
Analog Input	
Channels	32 single-ended
Range	Gain : 1, 2, 4, 8, 16 Bipolar Range : $\pm 10\text{ V}$ , $\pm 5\text{ V}$ , $\pm 2.5\text{ V}$ , $\pm 1.25\text{ V}$ , $\pm 0.625\text{ V}$ , $\pm 5\text{ V}$ , $\pm 2.5\text{ V}$ , $\pm 1.25\text{ V}$ , $\pm 0.625\text{ V}$ Unipolar Range : $0 \sim 10\text{ V}$ , $0 \sim 5\text{ V}$ , $0 \sim 2.5\text{ V}$ , $0 \sim 1.25\text{ V}$ , $0 \sim 0.625\text{ V}$
Resolution	12-bit
Accuracy	0.01% of FSR $\pm 1\text{ LSB}$ @ 25 °C, $\pm 10\text{ V}$
Sampling Rate	10 kS/s. Max.
Input Impedance	10 M $\Omega$ /6 Pf
Overvoltage Protection	Continuous $\pm 35\text{ Vp-p}$
Zero Drift	$\pm 25\text{ ppm}/^\circ\text{C}$ of FSR
Trigger Mode	Software
Isolation	3750 Vrms (Bus Type)
Data Transfer	Polling
PC Bus	
Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz
Data Bus	8-bit
Power	
Consumption	850 mA @ +5 V
Mechanical	
Dimensions (mm)	92 x 128 x 22 (W x L x D)
Environment	
Operating Temperature	$0 \sim +60^\circ\text{C}$
Storage Temperature	$-20 \sim +70^\circ\text{C}$
Humidity	$5 \sim 85\% \text{ RH}$ , Non-condensing








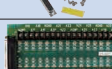
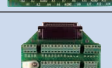
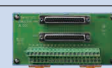


## Applications

- High speed data acquisition system.
- Harsh environment operation.
- Signal isolation.

## Ordering Information

<b>PISO-813U CR</b>	Universal PCI, 10 kS/s, 32-ch, 12-bit Isolated AI Board (RoHS) Includes one CA-4002 D-Sub connector
<b>PISO-813U/S CR</b>	Universal PCI, 10 kS/s, 32-ch, 12-bit Isolated AI Board (RoHS) Includes one DB-8325 screw terminal board

## Accessories

 ADP-20/PCI CR	Extender, Extended dual 20-pin flat-cable connector to PC slot window (RoHS)
 CA-3710 CR	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (45°)) (RoHS)
 CA-3710D CR	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (180°)) (RoHS)
 CA-3715DM-H CR	DB-37 Male-Male Cable, 1.5 M, 180° (RoHS)
 CA-3730DM-H CR	DB-37 Male-Male Cable, 3.0 M, 180° (RoHS)
 CA-3750DM CR	DB-37 Male-Male Cable, 5.0 M, 180° (RoHS)
 CA-3750DM-H CR	DB-37 Male-Male Cable, 5.0 M, 180° (RoHS)
 CA-4002 CR	37-pin Male D-sub connector with plastic cover (RoHS)
 DB-8325 CR	Screw terminal board , filter circuitry can be added for PCI-1800H, 1800L (RoHS)
 DB-37 CR	Directly connect signals to the back of PISO-813 (RoHS)
 DN-37 CR	I/O connector block with DIN rail mounting and 37-PIN D-SUB connector on it (RoHS)
 2AB125R CR	Resistor DIP 125R 0.1% 1/4W MF 50PPM (1PCS) (RoHS)

