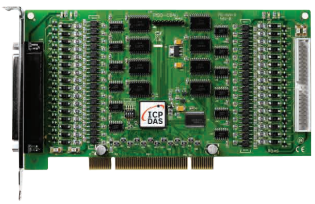
PISO-C64U



PISO-A64U

PISO-C64U

Universal PCI, 64-ch Open Collector Isolated (Sink, NPN) DO Board

PISO-A64U

Universal PCI, 64-ch Open Collector Isolated (Source, PNP) DO Board

Features

- Universal PCI (3.3 V/5 V) Interface
- 64-channel Optically-isolated Open-collector Digital Output
  - PISO-C64U: Current Sinking, NPN type
  - PISO-A64U: Current Sourcing, PNP type
- Supports Card ID (SMD Switch)
- Supports DO Status Readback (Register Level)
- 4 Isolated Banks when using 4 Isolated External Power Supplies
- 3750 Vrms Photo-isolation Protection

Introduction

The PISO-C64U/PISO-A64U Universal PCI card supports the 3.3 V/5 V PCI bus. These cards provide 64 optically-isolated Digital Output channels, each of which includes a PNP transistor (PISO-A64U) or a Darlington transistor (PISO-C64U) and an integrated suppression diode for the inductive load.

The Digital Output channels are allocated to four isolated banks when using four isolated external power supplies, and act as an interface to field logic signals, eliminating ground-loop problems, and isolating the host computer from potentially damaging voltage spikes. The open-collector Digital Output channels are typically used for alarm and warning notifications, signal output control, control for external circuits that require a higher voltage level, or signal transmission applications, etc.

The PISO-C64U/PISO-A64U card also includes an onboard Card ID switch that enables the board to be recognized via software if two or more boards are installed in the same computer. Both cards have a DB-37 connector and a 40-pin male header, each supporting 32 output channels.

Pin Assignments

Pin Assignment	Terminal No.		Pin Assignment
Ext. GND0	01	20	Ext. GND1
DO_0	02	21	DO_16
DO_1	03	22	DO_17
DO_2	04	23	DO_18
DO_3	05	24	DO_19
DO_4	06	25	DO_20
DO_5	07	26	DO_21
DO_6	08	27	DO_22
DO_7	09	28	DO_23
DO_8	10	29	DO_24
DO_9	11	30	DO_25
DO_10	12	31	DO_26
DO_11	13	32	DO_27
DO_12	14	33	DO_28
DO_13	15	34	DO_29
DO_14	16	35	DO_30
DO_15	17	36	DO_31
Ext. PWR0	18	37	Ext. PWR1
N.C.	19		

CON1

Pin Assignment	Terminal No.		Pin Assignment
Ext. GND2	01	02	Ext. GND3
DO_32	03	04	DO_48
DO_33	05	06	DO_49
DO_34	07	08	DO_50
DO_35	09	10	DO_51
DO_36	11	12	DO_52
DO_37	13	14	DO_53
DO_38	15	16	DO_54
DO_39	17	18	DO_55
DO_40	19	20	DO_56
DO_41	21	22	DO_57
DO_42	23	24	DO_58
DO_43	25	26	DO_59
DO_44	27	28	DO_60
DO_45	29	30	DO_61
DO_46	31	32	DO_62
DO_47	33	34	DO_63
Ext. PWR2	35	36	Ext. PWR3
N/A	37	38	N/A
N/A	39	40	N/A

CON2

Software

Drivers

- [x] 32/64-bit Windows 10/11
- [x] Linux
- [x] DASYLab

Sample Programs

- [x] DOS Lib and TC/BC/MSC Demo
- [x] VB/VC/Delphi/VB.NET/C#.NET/VC.NET/LabVIEW/Python/MATLAB

Applications

- Factory automation
- Product test
- Laboratory automation

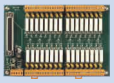
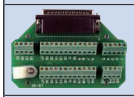
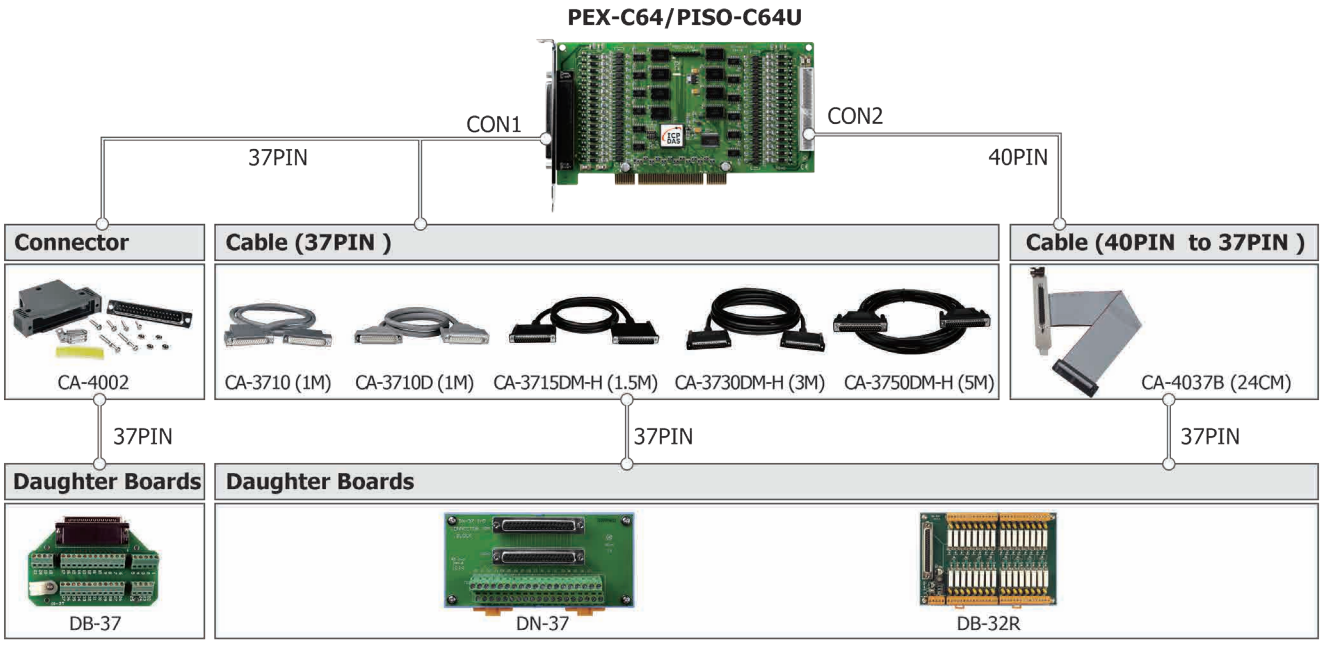
Hardware Specifications

Model	PISO-C64U	PISO-A64U
Hardware		
Card ID	Yes (4-bit)	
Connector	Female DB37 x 1 , 40-pin box header x 1	
Digital Output		
Channels	64	
Type	Sink(NPN), Open Collector	Source(PNP), Open Emitter
Operation Mode	Static Update	
Load Current	100 mA/+30 V for each channel @ 60% duty	
Response Speed	4 kHz (Typical)	
Isolation	3750 Vrms	
PC Bus		
Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz	
Data Bus	8-bit	
Power		
Consumption	400 mA @ +3.3 V 200 mA @ +12 V	800 mA @ +5 V
Mechanical		
Dimensions (mm)	105 x 180 x 22 (W x L x D)	
Environment		
Operating Temperature	0 ~ +60°C	
Storage Temperature	-20 ~ +70°C	
Humidity	5 ~ 85% RH, Non-condensing	

Ordering Information

PISO-C64U CR	Universal PCI, 64-ch Open Collector Isolated (Sink, NPN) DO Board (RoHS) Includes one CA-4037B cable and two CA-4002 D-Sub connectors
PISO-A64U CR	Universal PCI, 64-ch Open Collector Isolated (Source, PNP) DO Board (RoHS) Includes one CA-4037B cable and two CA-4002 D-Sub connectors

Accessories

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)
 DB-32R CR	32-channel relay output board Include : CA-3710D Male- Male D-sub Cable 1.0 M (RoHS)
 DB-37 CR	Directly connect signal to D-sub 37-pin connector (RoHS)
DN-37 CR	DIN Rail Mounting 37-pin Connector (RoHS)