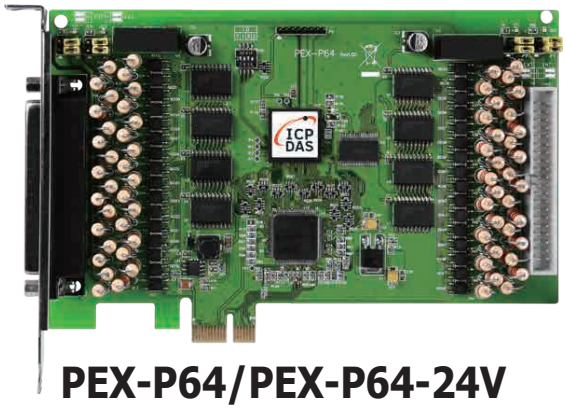


PEX-P64/PEX-P64-24V

PCI Express, 64-ch Isolated DI Board

Features

- Support PCI Express x1
- Card ID Function(SMD Switch)
- 64-channel Isolated DI
- Built-in DC/DC converter providing 3000 VDC isolation
- Four isolated banks when using four isolated external power supplies
- 3750 Vrms photo-isolation protection
- Selectable internal or external power for DI

Introduction

The PEX-P64/P64-24V series utilizes the PCI Express bus and provides 64 optically-isolated Digital Input channels that use either an internal or external power supply that can be selected via a jumper. The internal power is provided by an onboard isolated DC/DC converter that provides 3000 VDC isolation and is used for connecting dry-contact input devices. The DI channels are arranged into four isolated banks when using four isolated external power supplies, where DI channels 0 to 15 are allocated to bank A, DI channels 16 to 31 are allocated to bank B, DI channels 32 to 47 are allocated to bank C, and DI channels 48 to 63 are allocated to bank D. The onboard photocouplers provide 3750 Vrms isolation, and act as an interface between field logic signals, eliminating ground loop problems and isolating the host computer from potentially damaging voltage spikes.

The PEX-P64/P64-24V series also include an onboard Card ID switch that enables the board to be easily recognized via software if two or more cards are installed in the same computer. The PEX-P64/P64-24V series is designed as an easy replacement for the PISO-P64U board without requiring any modification to either the software or the driver.

Applications

- Factory automation
- Product test
- Laboratory automation

Software

Drivers

- ☑ 32/64-bit Windows 10/11
- ☑ Linux

Sample Programs

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

Hardware Specifications

Model	PEX-P64	PEX-P64-24V
Hardware		
Card ID	Yes (4-bit)	
Connector	Female DB37 x 1 40-pin Box header x 1	
Digital Input		
Channels	64	
Type	Dry + Wet Contact , Photocoupler	
Sink/Source (NPN/PNP)	Sink/Source	
ON Voltage Level	Dry: Close to GND Wet: 5 ~ 15 V (Max 24 V)	Dry: Close to GND Wet: 20 ~ 28 V (Max 30 V)
OFF Voltage Level	Dry: Open Wet: 0 ~ 1 V	Dry: Open Wet: 0 ~ 1 V
Response Speed	4 kHz (Typical)	
Trigger Mode	Static Update	
Isolation	3750 Vrms (Using external power)	
PC Bus		
Type	PCI Express x 1	
Data Bus	8-bit	
Power		
Consumption	600 mA @ +3.3 V 400 mA @ +12 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	

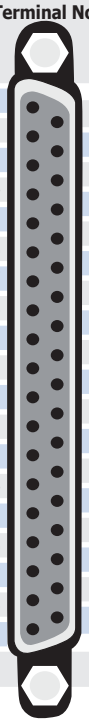
Ordering Information

PEX-P64 CR	PCI Express, 64-ch Optically Isolated Digital Input Board (RoHS) Includes one CA-4037B cable and two CA-4002 D-Sub connectors
PEX-P64-24V CR	PCI Express, 64-ch Optically Isolated Digital Input Board (RoHS) Includes one CA-4037B cable and two CA-4002 D-Sub connectors

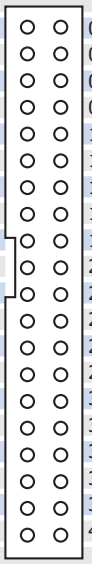
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Pin Assignments

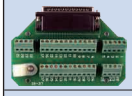
Pin Assignment	Terminal No.		Pin Assignment
IGND0	01	20	IGND1
DI_0	02	21	DI_16
DI_1	03	22	DI_17
DI_2	04	23	DI_18
DI_3	05	24	DI_19
DI_4	06	25	DI_20
DI_5	07	26	DI_21
DI_6	08	27	DI_22
DI_7	09	28	DI_23
DI_8	10	29	DI_24
DI_9	11	30	DI_25
DI_10	12	31	DI_26
DI_11	13	32	DI_27
DI_12	14	33	DI_28
DI_13	15	34	DI_29
DI_14	16	35	DI_30
DI_15	17	36	DI_31
ECOM0	18	37	ECOM1
N.C.	19		
CON1			

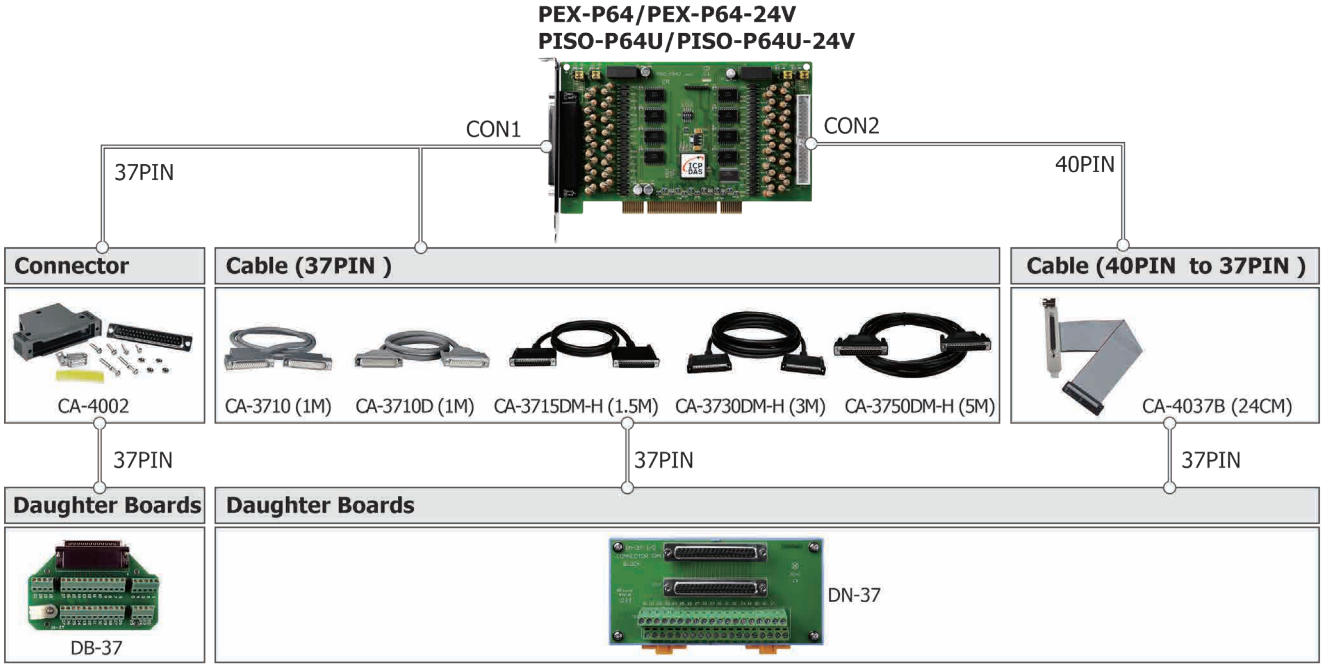


Pin Assignment	Terminal No.		Pin Assignment
IGND2	01	02	IGND3
DI_32	03	04	DI_48
DI_33	05	06	DI_49
DI_34	07	08	DI_50
DI_35	09	10	DI_51
DI_36	11	12	DI_52
DI_37	13	14	DI_53
DI_38	15	16	DI_54
DI_39	17	18	DI_55
DI_40	19	20	DI_56
DI_41	21	22	DI_57
DI_42	23	24	DI_58
DI_43	25	26	DI_59
DI_44	27	28	DI_60
DI_45	29	30	DI_61
DI_46	31	32	DI_62
DI_47	33	34	DI_63
ECOM2(+)	35	36	ECOM3
ECOM2(-)	37	38	N.C.
N.C.	39	40	N.C.
CON2			



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-37 CR	Directly connect signal to D-sub 37-pin connector (RoHS)
 DN-37 CR	DIN Rail Mounting 37-pin Connector (RoHS)



LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000