



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	

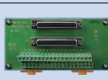
Ordering Information

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

Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
IGND0	01	20	IGND1	01	IGND2
DI_0	02	21	DI_16	02	IGND3
DI_1	03	22	DI_17	03	DI_48
DI_2	04	23	DI_18	04	DI_49
DI_3	05	24	DI_19	05	DI_50
DI_4	06	25	DI_20	06	DI_51
DI_5	07	26	DI_21	07	DI_52
DI_6	08	27	DI_22	08	DI_53
DI_7	09	28	DI_23	09	DI_54
DI_8	10	29	DI_24	10	DI_55
DI_9	11	30	DI_25	11	DI_56
DI_10	12	31	DI_26	12	DI_57
DI_11	13	32	DI_27	13	DI_58
DI_12	14	33	DI_28	14	DI_59
DI_13	15	34	DI_29	15	DI_60
DI_14	16	35	DI_30	16	DI_61
DI_15	17	36	DI_31	17	DI_62
ECOM0	18	37	ECOM1	18	DI_63
N.C.	19			19	DI_64
CON1				20	DI_65
				21	DI_66
				22	DI_67
				23	DI_68
				24	DI_69
				25	DI_70
				26	DI_71
				27	DI_72
				28	DI_73
				29	DI_74
				30	DI_75
				31	DI_76
				32	DI_77
				33	DI_78
				34	DI_79
				35	DI_80
				36	DI_81
				37	DI_82
				38	DI_83
				39	DI_84
				40	DI_85

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)
	CA-4002 CR	37-pin Male D-sub connector with plastic cover (RoHS)
	CA-4037B CR	40-pin flat & D-sub 37-pin Female cable 24 cm (RoHS)
	DB-37 CR	Directly connect signal to D-sub 37-pin connector (RoHS)
	DN-37 CR	DIN Rail Mounting 37-pin Connector (RoHS)

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