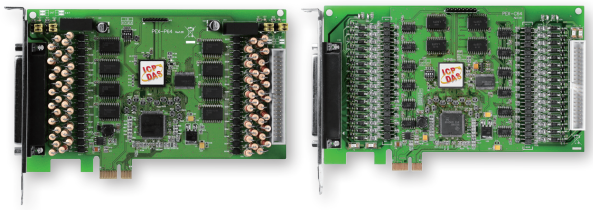
PEX-P64/PEX-P64-24V
PEX-C64

NEW

PCI Express, 64-ch Optical-Isolated DI Board

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



CE FC RoHS 32-bit 64-bit Linux DOS
VB VC BCB Delphi LabVIEW VB.NET C#.NET VC.NET MATLAB

Features

- PCI Express x1, Plug & Play
- Supports Card ID (SMD Switch)
- 3750 V_{rms} photo-isolation protection
- Four isolated banks when using four isolated external power supplies
- 64-ch optically isolated DO (Sink, NPN) for PEX-C64
  - Supports output status Readback
- 64-ch optically isolated DI for PEX-P64/P64-24V
  - Internal power (3000 V_{DC} Isolation) for dry-contact input

Introduction

The PEX-P64 card provides 64 optically isolated digital input channels that use either an internal or external power supply selected via a jumper. The internal power is provided by an onboard DC/DC converter with 3000 V_{DC} isolation and is used for connecting dry-contact input devices. The PEX-C64 card provides 64 optically isolated digital output channels, each of which offers a Darlington transistor and an integrated suppression diode for the inductive load. The open collector outputs (DO channels) are typically used for alarm and warning notification, signal output control, control for external circuits that require a higher voltage level, and signal transmission applications, etc.

The PEX-P64/C64 supports PCI Express bus. These DI and DO channels are arranged into four isolated banks when using four isolated external power supplies. The onboard provide 3750 V_{rms} isolation, and act as an interface to field logic signals, eliminate ground-loop problems, and isolate the host computer from damaging voltages.

These cards also add a Card ID switch on-board. Users can set Card ID and then recognize the board by the ID via software when using two or more PEX-P64/C64 cards in one computer. The PEX-P64/C64 is designed as easy replacement for the PISO-P64U/C64U without any software/driver modification.

Hardware Specifications

Models	PEX-P64	PEX-P64-24V	PEX-C64
Digital Input			
Isolation Voltage	3750 V_{rms}		-
Channels	64		-
Compatibility	Photo coupler isolated		-
Input Logic Low	0 ~ 1 V	0 ~ 1 V	-
Input Logic High	5 ~ 15 V	20 ~ 28 V	-
Impedance	1.2 KΩ,1 W	3 KΩ,1 W	-
Digital Output			
Isolation Voltage	-		3750 V_{rms}
Channels	-		64
Compatibility	-		Sink, Open Collector
Output Capability	-		100 mA/+30 V for one channel @ 100% duty
General			
Bus Type	PCI Express x1		
Card ID	Yes (4-bit)		
Connectors	Female DB-37 x 1,40-pin box header x 1		
Power Consumption	400 mA @ +5 V		800 mA @ +5 V
Operating Temperature	0 °C ~ +60 °C		
Humidity	5 ~ 85% RH, non-condensing		

Ordering Information

PEX-P64 CR	PCI Express, 64-ch Optically Isolated DI (high: 5~15 V) Board (RoHs) Includes one CA-4037B cable and two CA-4002 D-Sub connectors.
PEX-P64-24V CR	PCI Express, 64-ch Optically Isolated DI (high: 20~28 V) Board (RoHs) Includes one CA-4037B cable and two CA-4002 D-Sub connectors.
PEX-C64 CR	PCI Express, 64-ch Optically Isolated DO Board (Sink, NPN, RoHs) Includes one CA-4037B cable and two CA-4002 D-Sub connectors.

Software

Driver

- 32/64-bit Windows XP/2003/2008/Vista/7/8
- Linux

Sample Programs

- DOS Lib and TC/BC/MSC demo
- LabVIEW toolkit
- VB/VC/Delphi/BCB/VB.NET/C#.NET/ VC.NET and MATLB demo

Pin Assignments

Pin Assignment PEX-C64	Pin Assignment PEX-P64	Terminal No.		Pin Assignment PEX-P64	Pin Assignment PEX-C64
Ext. GND0	IGND0	01			
DO_0	DI_0	02			
DO_1	DI_1	03			
DO_2	DI_2	04			
DO_3	DI_3	05			
DO_4	DI_4	06			
DO_5	DI_5	07			
DO_6	DI_6	08			
DO_7	DI_7	09			
DO_8	DI_8	10			
DO_9	DI_9	11			
DO_10	DI_10	12			
DO_11	DI_11	13			
DO_12	DI_12	14			
DO_13	DI_13	15			
DO_14	DI_14	16			
DO_15	DI_15	17			
Ext. PWR0	ECOM0	18			
N.C.	N.C.	19			
			20	IGND1	Ext. GND1
			21	DI_16	DO_16
			22	DI_17	DO_17
			23	DI_18	DO_18
			24	DI_19	DO_19
			25	DI_20	DO_20
			26	DI_21	DO_21
			27	DI_22	DO_22
			28	DI_23	DO_23
			29	DI_24	DO_24
			30	DI_25	DO_25
			31	DI_26	DO_26
			32	DI_27	DO_27
			33	DI_28	DO_28
			34	DI_29	DO_29
			35	DI_30	DO_30
			36	DI_31	DO_31
			37	ECOM1	Ext. PWR1

CON1

Pin Assignment PEX-C64	Pin Assignment PEX-P64	Terminal No.		Pin Assignment PEX-P64	Pin Assignment PEX-C64
Ext. GND2	IGND2	01			
DO_32	DI_32	03			
DO_33	DI_33	05			
DO_34	DI_34	07			
DO_35	DI_35	09			
DO_36	DI_36	11			
DO_37	DI_37	13			
DO_38	DI_38	15			
DO_39	DI_39	17			
DO_40	DI_40	19			
DO_41	DI_41	21			
DO_42	DI_42	23			
DO_43	DI_43	25			
DO_44	DI_44	27			
DO_45	DI_45	29			
DO_46	DI_46	31			
DO_47	DI_47	33			
Ext. PWR2	ECOM2(+)	35			
N.C.	ECOM2(-)	37			
N.C.	N.C.	39			
			02	IGND3	Ext. GND3
			04	DI_48	DO_48
			06	DI_49	DO_49
			08	DI_50	DO_50
			10	DI_51	DO_51
			12	DI_52	DO_52
			14	DI_53	DO_53
			16	DI_54	DO_54
			18	DI_55	DO_55
			20	DI_56	DO_56
			22	DI_57	DO_57
			24	DI_58	DO_58
			26	DI_59	DO_59
			28	DI_60	DO_60
			30	DI_61	DO_61
			32	DI_62	DO_62
			34	DI_63	DO_63
			36	ECOM3	Ext. PWR3
			38	N.C.	N.C.
			40	N.C.	N.C.

CON2