

PEX-D96S/PEX-D144LS

PCI Express, 96/144-channel Digital I/O Board



Features

- PCI Express x1 Interface
- Supports Card ID (SMD Switch)
- DI/O Response Time approximately 2 μ s (500 kHz Max.)
- DO Provides Higher Driving Capability
- 96/144 Buffered CMOS Digital Input/Output Lines
- Twelve/Eighteen 8-bit Bi-directional I/O Ports
- Four Interrupt Sources
- Pull-high/Pull-low Jumpers for DI Channels

Introduction

The PEX-D96S/D144LS utilizes the PCI Express bus and designed as an easy replacement for the PIO-D96U/D96SU/D144U/D144LU without requiring any modification to the software or the driver.

The PEX-D96S/D144LS provides a high-density connector that reduces the amount of installation space required for the card in the computer.

The PEX-D96S/D144LS supports the 96/144 CMOS digital I/O lines that consist of twelve/eighteen 8-bit bi-direction ports: port A (PA), port B (PB) and port C (PC) in a connector. All ports are configured as input ports during power-on or after a reset.

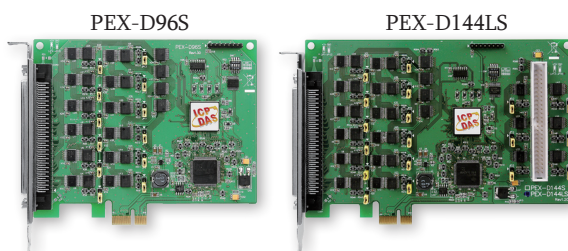
The PEX-D96S/D144LS also includes an onboard Card ID that enables the board to be recognized via software if two or more cards are installed in the same computer.

Hardware Specifications

Model	PEX-D96S	PEX-D144LS
Programmable DI/O		
Channels	96	144
Digital Input		
Compatibility	5 V/CMOS	
Input Voltage	Logic 0: 0.8 V Max. Logic 1: 2.0 V Min.	
Response Speed	500 kHz	
Digital Output		
Compatibility	5 V/CMOS	
Output Voltage	Logic 0: 0.1 V Max. Logic 1: 4.4 V Min.	
Output Capability	Sink: 6 mA @ 0.33 V Source: 6 mA @ 4.77 V	
Response Speed	500 kHz	
General		
Bus Type	PCI Express x1	
Card ID	Yes (4-bit)	
Connectors	Female SCSI II 100-pin x 1	Female SCSI II 100-pin x 1, 50-pin Box Header x 1
Power Consumption	650 mA @ +3.3 V 0 mA @ +12 V	750 mA @ +3.3 V 0 mA @ +12 V
Operating Temperature	0°C to +60°C	
Humidity	5 to 85% RH, Non-condensing	

Ordering Information

PEX-D96S CR	PCI Express, 96-channel Digital I/O Board (RoHS)
PEX-D144LS CR	PCI Express, 144-channel Digital I/O Board (RoHS)



Software

Drivers

- ☒ 32/64-bit Windows XP/2003/2008/7/8/10
- ☒ Linux

Sample Programs

- ☒ DOS Lib and TC/BC/MSC Demo
- ☒ LabVIEW Toolkit
- ☒ VB/VC/Delphi/BCB/VB.NET/C#.NET/VC.NET/MATLAB Demo

Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
PA_00	01	51	PA_10	02	+5 V
PA_01	02	52	PA_11	03	PA_50
PA_02	03	53	PA_12	04	PA_51
PA_03	04	54	PA_13	05	PA_52
PA_04	05	55	PA_14	06	PA_53
PA_05	06	56	PA_15	07	PA_54
PA_06	07	57	PA_16	08	PA_55
PA_07	08	58	PA_17	09	PA_56
PB_00	09	59	PB_10	10	PA_57
PB_01	10	60	PB_11	11	PB_50
PB_02	11	61	PB_12	12	PB_51
PB_03	12	62	PB_13	13	PB_52
PB_04	13	63	PB_14	14	PB_53
PB_05	14	64	PB_15	15	PB_54
PB_06	15	65	PB_16	16	PB_55
PB_07	16	66	PB_17	17	PB_56
PC_00	17	67	PC_10	18	PB_57
PC_01	18	68	PC_11	19	PC_50
PC_02	19	69	PC_12	20	PC_51
PC_03	20	70	PC_13	21	PC_52
PC_04	21	71	PC_14	22	PC_53
PC_05	22	72	PC_15	23	PC_54
PC_06	23	73	PC_16	24	PC_55
PC_07	24	74	PC_17	25	PC_56
GND	25	75	GND	26	PC_57
PA_20	26	76	PA_30	27	PC_50
PA_21	27	77	PA_31	28	PC_51
PA_22	28	78	PA_32	29	PC_52
PA_23	29	79	PA_33	30	PC_53
PA_24	30	80	PA_34	31	PC_54
PA_25	31	81	PA_35	32	PC_55
PA_26	32	82	PA_36	33	PC_56
PA_27	33	83	PA_37	34	PC_57
PB_20	34	84	PB_30	35	PC_50
PB_21	35	85	PB_31	36	PC_51
PB_22	36	86	PB_32	37	PC_52
PB_23	37	87	PB_33	38	PC_53
PB_24	38	88	PB_34	39	PC_54
PB_25	39	89	PB_35	40	PC_55
PB_26	40	90	PB_36	41	PC_56
PB_27	41	91	PB_37	42	PC_57
PC_20	42	92	PC_30	43	PC_50
PC_21	43	93	PC_31	44	PC_51
PC_22	44	94	PC_32	45	PC_52
PC_23	45	95	PC_33	46	PC_53
PC_24	46	96	PC_34	47	PC_54
PC_25	47	97	PC_35	48	PC_55
PC_26	48	98	PC_36	49	PC_56
PC_27	49	99	PC_37		
+5 V	50	100	+5 V		

CON2 (PEX-D144LS only)