

PIO-D24U

Universal PCI, 24-ch Digital I/O Board

PIO-D56U

Universal PCI, 56-ch Digital I/O Board

Introduction

The PIO-D24U/D56U cards are designed to be fully compatible with PIO-D24/D56 boards. The PIO-D24U/D56U series can be used as a direct replacement for PIO-D24/D56 boards without requiring any modification to the software or the driver.

The PIO-D24U/D56U supports the 3.3 V/5 V PCI bus, and contains three 8-bit bi-directional I/O ports, referred to as Port A (PA), Port B (PB) and Port C (PC), respectively. Each port is configured as an input on power-up or after a reset. In addition, the PIO-D56U also provides 16 Digital Input channels and 16 Digital Output channels.

The PIO-D24U/D56U cards also include 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.

Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
N.C	01	20	DI 0	01	DI 1
N.C	02	21	DI 2	03	DI 3
PB_7	03	22	DI 4	05	DI 5
PB_6	04	23	DI 6	07	DI 7
PB_5	05	24	DI 8	09	DI 9
PB_4	06	25	DI 10	11	DI 11
PB_3	07	26	DI 12	13	DI 12
PB_2	08	27	DI 14	15	DI 13
PB_1	09	28	DI 15	17	DI 15
PB_0	10	29	GND	19	GND
GND	11	30	+5 V		+12 V
N.C	12	31	PC_7	CON2 (PIO-D56U only)	
GND	13	32	PC_6	DO 0	01
N.C	14	33	PC_5	DO 2	03
GND	15	34	PC_4	DO 4	05
N.C	16	35	PC_3	DO 6	07
GND	17	36	PC_2	DO 8	09
+5 V	18	37	PC_1	DO 10	10
GND	19		PC_0	DO 12	12
			PA_7	DO 14	14
			PA_6	DO 16	16
			PA_5	DO 18	18
			PA_4	+5 V	18
			PA_3		
			PA_2		
			PA_1		
			PA_0		

Ordering Information

PIO-D24U CR	Universal PCI, 24-ch Digital I/O Board (RoHS)
PIO-D56U CR	Universal PCI, 56-ch Digital I/O Board (RoHS)

Features

- Universal PCI (3.3 V/5 V) Interface
- 24/56 Buffered TTL Digital I/O Lines
- Three 8-bit Bi-directional Programmable I/O Ports
- Emulates two Industrial-standard 8255 PPI Ports (Mode 0)
- 4-channel Interrupt Source
- Supports Card ID (SMD Switch)
- Supports DO Status Readback (Register Level)
- DI/O Response Time approximately 1 μ s (1 MHz)



Software

Drivers

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

















Sample Programs

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

Hardware Specifications

Model	PIO-D24U	PIO-D56U
Programmable DIO		
Channels	24	
Digital Input		
Channels	-	16
Compatibility	5V/TTL	
Input Voltage	Logic 0: 0.8 V Max. Logic 1: 2.0 V Min.	
Response Speed	1 MHz	
Digital Output		
Channels	-	16
Compatibility	5V/TTL	
Output Voltage	Logic 0: 0.4 V Max. Logic 1: 2.4 V Min.	
Output Capability	Sink: 64 mA @ 0.8 V Source: 32 mA @ 2.0 V	CN1 Sink: 2.4 mA @ 0.8 V Source: 0.8 mA @ 2.0 V CN3 Sink: 64 mA @ 0.8 V Source: 32 mA @ 2.0 V
Response Speed	1 MHz	
General		
Bus Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz	
Card ID	Yes (4-bit)	
Connectors	Female DB37 x 1	Female DB37 x 1, 20-pin Male Box Header x 2
Power Consumption	420 mA @ +5 V	580 mA @ +5 V
Operating Temperature	0°C to +60°C	
Humidity	5 to 85% RH, Non-condensing	

Accessories

	CA-2010	20-pin flat cable, 1 M
	CA-2020	20-pin flat cable, 2 M.
	CA-3710	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (45°))
	CA-3710D	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (180°))
	CA-3715DM-H	DB-37 Male-Male Cable, 1.5 M, 180°. (RoHS)
	CA-3730DM-H	DB-37 Male-Male Cable, 3.0 M, 180°. (RoHS)
	CA-3750DM	DB-37 Male-Male Cable, 5.0 M, 180°. (RoHS)
	CA-4002	37-pin Male D-sub connector with plastic cover.
	DB-24PD	24-channel of isolated D/I board
	DB-24RD	24-channel of relay board
	DB-24PRD	24-channel of power relay board
	DB-24POR	24-channel of PhotoMos Relay output board
	DB-24SSR	24-channel Photo Mos relay output board
	DB-24C	24-channel of open-collector output board
	DN-20/DN-20-381	I/O Connector Block with DIN-Rail Mounting and two 20-Pin Header
	DN-37/DN-37-381	I/O Connector Block with DIN-Rail Mounting and 37-Pin D-Sub Connector

