

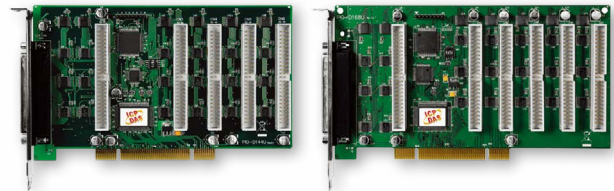
PIO-D144U/PIO-D144LU PIO-D168U

Universal PCI, 144/168-channel Digital I/O Board



PIO-D144U/PIO-D144LU

PIO-D168U



Features >>>

- Universal PCI (3.3 V/5 V) Interface, Plug & Play
- 144/168 Digital I/O Channels
- 18/21 8-bit Bi-directional Programmable I/O Ports
- Emulates 6/7 Industrial-standard 8255 PPI Ports (Mode 0)
- All I/O Lines Buffered on the Board
- 4-channel Interrupt Source
- Supports Card ID (SMD Switch)
- Supports DO Status Readback (Register Level)
- DI/O Response Time: ~0.77 μ s (1.3 MHz Max.)

Introduction

The PIO-D144U/D144LU/D168U cards are designed as direct replacements for PIO-D144/D168 cards without requiring any modification to the software or the driver.

The PIO-D144U/D144LU/D168U Universal PCI cards support the 3.3 V/5 V PCI bus, and provide 144/168 TTL Digital I/O lines that are grouped into 18/21 8-bit bi-directional ports. Each group of three 8-bit ports is arranged on the connector as Port A (PA), Port B (PB) and Port C (PC), respectively, and all ports are configured as inputs Channels on power-up or after a reset.

The PIO-D144U uses 5V/TTL to provide high DO driving capability. The PIO-D144LU uses 5V/CMOS to provide low power consumption and producing less heat.

The PIO-D144U/D144LU/D168U 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	+5 V	PC_7	01
N.C.	02	21	GND	PC_6	03
PB_7	03	22	PC_7	PC_5	05
PB_6	04	23	PC_6	PC_4	07
PB_5	05	24	PC_5	PC_3	09
PB_4	06	25	PC_4	PC_2	11
PB_3	07	26	PC_3	PC_1	13
PB_2	08	27	PC_2	PC_0	15
PB_1	09	28	PC_1	PB_7	17
PB_0	10	29	PC_0	PB_6	19
GND	11	30	PA_7	PB_5	21
N.C.	12	31	PA_6	PB_4	23
GND	13	32	PA_5	PB_3	25
N.C.	14	33	PA_4	PB_2	27
GND	15	34	PA_3	PB_1	29
N.C.	16	35	PA_2	PB_0	31
GND	17	36	PA_1	PA_7	33
+5 V	18	37	PA_0	PA_6	35
GND	19			PA_5	37
				PA_4	39
				PA_3	41
				PA_2	43
				PA_1	45
				PA_0	47
				+5 V	49

Terminal No. 01-19: CN1

Terminal No. 01-49: CN2/CN3/CN4/CN5/CN6, CN7 (for PIO-D168U only)

Software

Drivers

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

Models	PIO-D144LU	PIO-D144U	PIO-D168U
Programmable DIO			
Channels	144		168
Digital Input			
Compatibility	5 V/CMOS		5 V/TTL
Input	Logic 0	0.8 V Max.	
Voltage	Logic 1	2.0 V Min.	
Response Speed	1.2 MHz (Typical)		
Digital Output			
Compatibility	5 V/CMOS		5 V/TTL
Output	Logic 0	0.1 V Max.	0.4 V Max.
Voltage	Logic 1	4.4 V Min.	2.4 V Min.
Output	Sink	6 mA @ 0.33 V	64 mA @ 0.8 V
Capability	Source	6 mA @ 4.77 V	32 mA @ 2.0 V
Response Speed	1.2 MHz (Typical)		
General			
Bus Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz		
Card ID	Yes (4-bit)		
Connectors	Female DB37 x 1, 50-pin Box Header x 5		Female DB-37 x 1, 50-pin Box Header x 6
Power Consumption	250 mA @ +5 V	600 mA @ +5 V	1300 mA @ +5 V
Operating Temperature	0°C to +60°C		
Humidity	5 to 85% RH, Non-condensing		

Ordering Information

PIO-D144U CR	Universal PCI, 144-channel Digital I/O Board (5 V/TTL, RoHS).
PIO-D144LU CR	Universal PCI, 144-channel Digital I/O Board (5 V/CMOS, RoHS).
PIO-D168U CR	Universal PCI, 168-channel Digital I/O Board (RoHS)