PCI Digital I/O Board

PIO-D64

PCI bus 64-bit DIO board with timer/counter

Features

- 32-bit +5V PCI bus, Plug & Play
- 32-channel digital input
- 32-channel digital output
- 3 independent programmable 16-bit down counters
- Four clock sources: 2M, 1M, 500K, 250KHz
- Three frequency divider: 100,10,1
- One 16-bit counter, one 32-bit timer with a 4 MHz for interface function
- Interrupt source: timer, event and direct trigger
- One breadboard area for add-on circuitry
- DIO response time is about 0.77 us (1.3 MHz max.)

Functional Description

The PIO-D64 provides 32-channel digital input, 32-channel output and 6-channel counter/timer. The user can use the DB-16P to connect the input ports (CN2, CN4) for isolation purpose, or use DB-16R to interface to the output ports (CN1, CN3) for relay control. The first 8254 chip is used as general purpose timer/counter, such as frequency measurement, event counting and pulse generation. The second 8254 chip is used to generate interrupt trigger signal. The Counter 3 accept event signal and it will generate trigger signal of interrupt. The Counter 4 and Counter 5 are cascaded together. The clock source is 4MHz. It is used to generate pacer timer trigger for interrupt.

Applications

- Factory automation
- Laboratory automation
- Communication switching
- Industrial automation

Specifications

Digital I/O

- All outputs and inputs are TTL Compatible
- Input logic high voltage: 2.4V min
- Input logic low voltage: 0.8V max
- Input load current: -0.45 mA min/ +70 μ A
- Output sink current: +24 mA max
- Output source current: -15 mA max

General Specifications

- I/O connector: five 20-pin ribbon male
- Power consumption: +5V/580 mA
- Operating temperature: 0 ~ 60°C
- Operating humidity: 0 ~ 90% non-condensing
- Storage temperature: -20 ~ 80°C
- Dimensions: 156 mm x 110 mm

Pin Assignment

CN1/CN3

DO 0	1	○	○	2	DO 1
DO 2	3	○	○	4	DO 3
DO 4	5	○	○	6	DO 5
DO 6	7	○	○	8	DO 7
DO 8	9	○	○	10	DO 9
DO 10	11	○	○	12	DO 11
DO 12	13	○	○	14	DO 13
DO 14	15	○	○	16	DO 15
GND	17	○	○	18	GND
+5V	19	○	○	20	+12V

CN2/CN4

DI 0	1	○	○	2	DI 1
DI 2	3	○	○	4	DI 3
DI 4	5	○	○	6	DI 5
DI 6	7	○	○	8	DI 7
DI 8	9	○	○	10	DI 9
DI 10	11	○	○	12	DI 11
DI 12	13	○	○	14	DI 13
DI 14	15	○	○	16	DI 15
GND	17	○	○	18	GND
+5V	19	○	○	20	STROBE

CN5

CLK2	1	○	○	2	CLK1
OUT2	3	○	○	4	OUT1
GATE2	5	○	○	6	GATE1
CLK3	7	○	○	8	GLK0
OUT3	9	○	○	10	OUT0
GATE3	11	○	○	12	GATE0
GATE4	13	○	○	14	CLK4
X	15	○	○	16	OUT4
GND	17	○	○	18	GND
+5V	19	○	○	20	X

Ordering Information

Standard

PIO-D64:	PCI bus 64-bit DIO board with timer/ counter

Optional

DB-16P:	16-channel OPTO-isolated input board
DB-26R:	16-channel relay terminal board
DB-24PR:	24-channel power relay board
DB-24POR:	24-channel PhotoMOS relay board
DB-24C:	24-channel open-collector output board
DB-24OD:	24-channel open-drain output board
DB-8025:	General screw terminal board
DN-20:	DIN-rail mounting terminal board
ADP-20/PCI:	20-pin extender