

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				CN2/CN4					
DO 0	1	○ ○	2	DO 1	DI 0	1	○ ○	2	DI 1
DO 2	3	○ ○	4	DO 3	DI 2	3	○ ○	4	DI 3
DO 4	5	○ ○	6	DO 5	DI 4	5	○ ○	6	DI 5
DO 6	7	○ ○	8	DO 7	DI 6	7	○ ○	8	DI 7
DO 8	9	○ ○	10	DO 9	DI 8	9	○ ○	10	DI 9
DO 10	11	○ ○	12	DO 11	DI 10	11	○ ○	12	DI 11
DO 12	13	○ ○	14	DO 13	DI 12	13	○ ○	14	DI 13
DO 14	15	○ ○	16	DO 15	DI 14	15	○ ○	16	DI 15
GND	17	○ ○	18	GND	DI 17	17	○ ○	18	GND
+5V	19	○ ○	20	+12V	+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