

## PCI Timer/Counter Board

# PCI-TMC12A

### PCI bus 12-channel timer/counter board



#### Features

- On-board four 8254 timer/counter chips
- 12 independent 16-bit timer/counter
- 12 external clock input
- 12 external gate control input
- 12 timer/counter output
- All Signal are TTL compatible
- 16-bit timer/counter can be cascaded to 32/48-bit
- Gate input can be from external or previous timer/counter output
- 4 internal interrupt source: COUT3, COUT6, COUT9, COUT12
- 2 internal clock source: 8M/1.6M, 0.8M/80K
- 16-channel D/I; 16-channel D/O

#### Functional Description

The PCI-TMC12A is a PCI bus general purpose timer/counter and digital I/O board. It provides twelve channels of 16-bit Timer/Counter. Two internal clock sources (8M/1.6M and 0.8M/80K) are selected by jumper.

#### Applications

- Event Counting
- Wave Generator
- Frequency Measurement
- Pulse Width Measurement
- Time-delay generation

#### Comparison

	TMC-10	PCI-TMC12A
8254	4	same
16-DI	No	Yes
16-DO	No	Yes
16-bit Time/Counter	8	12
32-bit Time/Counter	2	0 (can be cascaded)
Internal clock source	2	Same
External clock source	8	12
flexible	flexible	More flexible

#### Specifications

##### Digital I/O

- All input & output are TTL compatible
- Input logic high voltage: 2.0V min / 5.0V max
- Input logic low voltage: -0.5V min / 0.8V max
- Output sink current: +24 mA max
- Output source current: -15 mA max

##### General Specifications

- I/O connector: one 37-pin D-Sub female  
two 20-pin ribbon male
- Power requirements: +5V@500 mA
- Operating temperature: 0 ~ 60°C
- Operating humidity: 0 ~ 90% non-condensing
- Storage temperature: -20 ~ 80°C
- Dimensions: 150 mm x 105 mm

#### Pin Assignment

CN1				CN2			
DO 0	1	○	2	DO 1	1	○	2
DO 2	3	○	4	DO 3	3	○	4
DO 4	5	○	6	DO 5	5	○	6
DO 6	7	○	8	DO 7	7	○	8
DO 8	9	○	10	DO 9	9	○	10
DO 10	11	○	12	DO 11	11	○	12
DO 12	13	○	14	DO 13	13	○	14
DO 14	15	○	16	DO 15	15	○	16
GND	17	○	18	GND	17	○	18
+5V	19	○	20	+12V	19	○	20

#### CN3

ECLK1	1	○	20	EXTG1
COUT1	2	○	21	ECLK2
EXTG2	3	○	22	COUT2
ECLK3	4	○	23	EXTG3
COUT3	5	○	24	ECLK4
EXTG4	6	○	25	COUT4
ECLK5	7	○	26	EXTG5
COUT5	8	○	27	ECLK6
EXTG6	9	○	28	COUT6
ECLK7	10	○	29	EXTG7
COUT7	11	○	30	ECLK8
EXTG8	12	○	31	COUT8
ECLK9	13	○	32	EXTG9
COUT9	14	○	33	ECLK10
EXTG10	15	○	34	COUT10
ECLK11	16	○	35	EXTG11
COUT11	17	○	36	ECLK12
EXTG12	18	○	37	COUT12
GND.	19	○		

#### Ordering Information

##### Standard

**PCI-TMC12A:** 12-channel timer/counter board

##### Optional

- DN-37:** 2x37-pin connector DIN-rail mounting terminal board
- DB-37:** 37-pin D-sub directly connector terminal board
- DN-20:** 2x20-pin header DIN-rail terminal board
- DB-16P:** 16-channel isolated D/I board
- DB-16R:** 16-channel relay board
- ADP-20/PCI:** 20-pin extender