PCI-TMC12A

PCI Bus, 12-ch Timer/Counter Board











Features >>>

- PCI Bus (5 V) interface
- 4 on-board 8254 timer/counter chips
- 12-ch 16-bit timers/counters
- 12 external clock inputs
- 12 external gate control inputs
- 12 timer/counter output channels

- 16-bit timer/counter can be cascaded to 32/48-bit timer/counter
- Gate input can be from external or previous timer/counter output
- 4 interrupt source
- 2 internal clock sources
- 16-ch 5 V TTL D/I; 16-ch 5 V TTL D/O

Introduction

The PCI-TMC12A is a general purpose timer/counter card that supports the 5 V PCI bus and "Plug & Play" functionality to automatically obtain I/O resources from the BIOS. This card contains twelve 16-bit timers/counters (four 82C54 chips x 3 timers/counters), 16 TTL digital input channels and 16 TTL digital output channels. The two onboard clocks (8 M/1.6 M and 0.8 M/80 K) are jumper selectable and provide a high-resolution clock source for timers/counters. Counters/timers can be used for industrial and laboratory applications such as pulse/event/switch-toggle counting, frequency readings, elapsed time measurement, pulse-width measurement, PWM (pulse-width-modulated) output, and pulse (square wave) and rate generation, etc.

Software _

- DOS Lib and TC sample program (with source codes)
- VB/VC/Delphi/BCB/VB.NET/C#.NET/VC.NET/MATLAB sample programs with source codes
- DLL and OCX SDK for 32-bit/64-bit Windows XP/2003/Vista/2008/7/8
- Support LabVIEW and Linux

Hardware Specifications –

| Digital I/O | | | |
|-----------------------|--|--|--|
| Channels | D/I: 16-ch, 5 V/TTL D/O: 16-ch, 5 V/TTL | | |
| Input Logic Low | 0.8 V max. | | |
| Input Logic High | 2.0 V min. | | |
| Output Source Current | 15 mA max. | | |
| Output Sink Current | 24 mA max. | | |
| Timer/Counter | | | |
| Channels | 12 x 16-bit | | |
| Reference Clock | Internal: 8 MHz | | |
| General | | | |
| Bus Type | 3.3 V/ 5 V Universal PCI, 32-bit, 33 MHz | | |
| Connectors | Female DB37 x1; 20-pin box header x2 | | |
| Power Consumption | 500 mA @ +5 V | | |
| Operating Temperature | 0 °C ~ +60 °C | | |
| Storage Temperature | -20 °C ~ +70 °C | | |
| Humidity | 5 ~ 85% RH, non-condensing | | |

Pin Assignments -

| | Q | No. | Pin Assign- ment |
|----|--|--|--|
| 01 | | 20 | EXTG1 |
| 02 | | 1 | ECLK2 |
| 03 | | 100000 | COUTS |
| 04 | | | EXTG3 |
| 05 | | 1000000 | ECLK4 |
| 06 | | 1000 | COUT4 |
| 07 | | | EXTG5 |
| 08 | | 100000 | ECLK6 |
| 09 | | 100000 | COUT6 |
| 10 | | | EXTG7 |
| 11 | | 1000 | ECLK8 |
| 12 | • | | COUT8 |
| 13 | • | | EXTG9 |
| 14 | | 1 | ECLK10 |
| 15 | | | |
| 16 | | 1000 | COUT10 |
| 17 | • | | EXTG11 |
| 18 | | | ECLK12 |
| 19 | | 3/ | COUT12 |
| | 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 | 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 | 02 20 21 22 23 05 24 25 06 27 26 28 29 11 30 12 13 15 34 16 35 17 36 18 37 |

| Pin Assign- ment | Terminal No. | | | Pin Assign- ment | |
|------------------------|--------------|----|----|------------------------|-------|
| DI 0 | 01 | 0 | 0 | 02 | DI 1 |
| DI 2 | 03 | 0 | 0 | 04 | DI 3 |
| DI 4 | 05 | 0 | 0 | 06 | DI 5 |
| DI 6 | 07 | Lo | 0 | 08 | DI 7 |
| DI 8 | 09 | 0 | 0 | 10 | DI 9 |
| DI 10 | 11 | 0 | 0 | 12 | DI 11 |
| DI 12 | 13 | 0 | 0 | 14 | DI 13 |
| DI 14 | 15 | 0 | 0 | 16 | DI 15 |
| GND | 17 | 0 | 0 | 18 | GND |
| +5V | 19 | 0 | 0 | 20 | +12V |
| | | CC | N2 | | |

| Pin Assign- ment | Terminal No. | | | Pin Assign- ment | |
|------------------------|--------------|------|---|------------------------|-------|
| DO 0 | 01 | 0 0 | 0 | 02 | DO 1 |
| DO 2 | 03 | 0 0 | 0 | 04 | DO 3 |
| DO 4 | 05 | 0 0 |) | 06 | DO 5 |
| DO 6 | 07 | 0 | | 08 | DO 7 |
| DO 8 | 09 | 0 0 | 0 | 10 | DO 9 |
| DO 10 | 10 | 0 0 | | 12 | DO 11 |
| DO 12 | 12 | TO 0 |) | 14 | DO 13 |
| DO 14 | 14 | 0 0 | | 16 | DO 15 |
| GND | 16 | 0 0 |) | 18 | GND |
| +5V | 18 | 0 | 0 | 20 | +12V |
| | | CON | 3 | | |

Ordering Information —

| PCI-TMC12A | PCI bus, 12-ch Timer/Counter Board Includes one CA-4002 D-Sub connector. |
|---------------|--|
| PCI-TMC12A CR | PCI bus, 12-ch Timer/Counter Board (RoHs) Includes one CA-4002 D-Sub connector. |