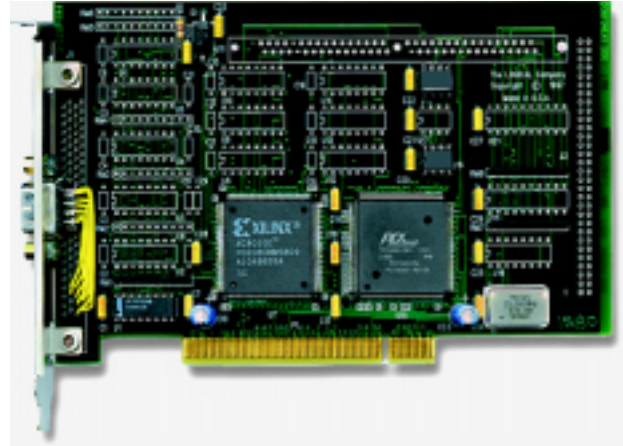# TMI-2000

Dual Programmable Timer

The TMI-2000 is a PCI local bus controller with two independent program-controlled timers. Each timer can be programmed to generate a PCI local bus interrupt at the completion of the selected time interval.

Two pulse timer output signals are provided for user connection to external equipment. The outputs can be programmed for positive or negative polarity and pulse width duration. Each pulse timer can be coupled with an interval timer to generate a repeating pulse that occurs whenever the internal timer overflows.

Two user input signals are also available for generation of one or two PCI local bus interrupts from an external source(s). The input signals can be programmed for positive or negative edge detection.

An OpenVMS device driver provides the application interface to the TMI-2000. Source code is supplied to accommodate the possible need for user modification of the driver to support a unique application.

Two Independent Timers. Each timer can be independently programmed for an interval ranging from 50 microseconds to over 214 seconds in increments of 50 nanoseconds.

Two User Output Signals. One output signal is provided from each pulse timer for user connection to external equipment. The two output signals are user programmable for a pulse width from 100 nanoseconds to 3.276 milliseconds in increments of 50 nanoseconds and are available to the user from an on-board DE9 connector.

Two User Input Signals. Two user input signals are provided for generation of one or two PCI local bus interrupts from external sources. The two input signals are user programmable and are available to the user from an on-board mounted DE9 connector.

Easy to Use. The installation and operation of the TMI-2000 can be easily verified by using the supplied diagnostic. The diagnostic verifies the driver is installed correctly and the TMI-2000 is operating properly.

Specifications

Ordering Information

Physical Dimensions

Controller PWB	PCI short card (5 volt only) measuring 6.875 in by 4.2 in (17.46 cm by 10.67 cm)

Electrical

Power Required:

+5 volts DC	1.0 amp
±12 volts DC	Not used
+3.3 volts DC	Not used

PCI Local Bus

Signaling	5 volt
Addr/Data	32-bit
Clock Rate	33 MHz
Compliance	2.1

Interface

Signals Supported:	Eight user signals: PULSEA, PULSEB, EXTINTA, EXTINTB, and four GND pins.
Connector	DE9-S
Levels	TTL, Open collector, 180/390 termination

Programmed Parameters

Timer Interval	Timer interval from 50 micro-seconds to over 214 seconds in 50 nanosecond increments.
Timer Pulse	Pulse width duration from 100 nanoseconds to over 3.2 milliseconds at 50 nanosec-ond increments.
Pulse Polarity	Positive or negative
EXT Detection	Positive or negative edge

Environmental

Operating Conditions:

Temperature	5° to 50° C (41° to 122° F)
Relative Humidity	20% to 80% noncondensing

Storage Conditions:

Temperature	-48° to 66° C (-48° to 150° F)
Relative Humidity	10% to 95% noncondensing

Hardware

TMI-2000-AA	PCI controller and owners manual

Software Driver

MED-0053-A	OpenVMS driver on TK50 with owner's manual
MED-0053-B	OpenVMS driver on 4mm DAT with owner's manual
MED-0053-C	OpenVMS driver on 3-1/2" floppy diskette with owner's manual

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