

TMI-2001

Dual Programmable Timer



The TMI-2001 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-2001. 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 maintain. A module exerciser supplied with any purchased device driver allows the user to verify TMI-2001 operation.

Specifications

Physical

Dimensions PCI short card measuring
6.875 in by 4.20 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* Universal, +3.3 volt and +5 volt
Addr/Data 32-bit
Clock Rate 33 MHz
Compliance 2.1

Interface

Signals Supported: Nine user signals: PULSEA,
PULSEB, EXTINTA, EXTINTB,
EXTINTB1 and four GND pins.

Connector DE9-S

Levels TTL, Open collector, 180/390
termination. Input Signal
EXTINTB1 has a 1K ohm series
resistor and can receive input
levels in the range of ±12V
(such as an RS-232 input).
EXTINTB and EXTINTB1 are
two sources for the same input
signal and each can receive a
different electrical level, but only
one signal may be used at a
time.

Programmed Parameters

Timer Interval Timer interval from 50
microseconds to over 214
seconds in 50 nanosecond
increments.

Timer Pulse Pulse width duration from 100
nanoseconds to over 3.2
milliseconds at 50 nanosecond
increments.

Pulse Polarity Positive or negative

EXT Detection Positive or negative edge

* Revisions before AA2 only provide +5 volt signaling support.

Pin Assignments

<u>Pin</u>	<u>Signal</u>
1	PULSEA
2	GND
3	GND
4	PULSEB
5	GND
6	EXTINTA
7	EXTINTB
8	EXTINTB1
9	GND

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

Ordering Information

Hardware

TMI-2001-AA	PCI controller, loopback test cable and owner's manual
TMI-2001-A	PCI controller.

Software

MED-0053-B	OpenVMS driver on 4mm DAT with owner's manual
MED-0053-C	OpenVMS driver on 3½" floppy diskette with owner's manual

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