

Dual Programmable Timer for PCI Express

Model TME-2001



The TME-2001 is a PCIexpress (PCIe) local bus controller designed to replace Logical's TMI-2001 PCI controller for use in newer platforms with a PCIe bus. Like the TMI-2001, the TME-2001 has two independent program-controlled timers. Each timer can be programmed to generate a PCIe 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 PCIe local bus interrupts from an external source(s). The input signals can be programmed for positive or negative edge detection.

Software, connector and signal compatible with Logical's TMI-2001 timer.

Features

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 PCIe 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 TME-2001 operation.

Compatibility. Compliant with PCIe specification 3.0.

Specifications

Physical Dimensions	
Controller PWB	PCIe full height, half length card 4.376 in by 6.60 in (11.515cm x 16.765cm)
Electrical	
Power Required:	
+3.3 volts DC	0.4 amp, max
+12 volts DC	1.0 amp, max
+3.3 volts aux	Not used
Bus Loading	2 ac loads, 1 dc load
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 level in the range of $\pm 12V$ (such as the RS-232 input). EXTINTB and EXTINTB1 are two sources for the same input signals 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 μ sec to over 214 seconds in 50 nsec increments.
Timer Pulse	Pulse width duration from 100 nsec to over 3.2 msec at 50 nsec increments.
Pulse Polarity	Positive or negative
EXT Detection	Positive or negative edge

PCI Express Bus	
Lane Size	x1
Compliance	3.0
Pin Assignments	
Pin	Signal
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	-40° to 66° C (-40° to 150° F)
Relative Humidity	10% to 95% noncondensing

Ordering Information

TME-2001-AA	PCIe controller, loopback test cable and manual.
TME-2001-A	PCIe controller only.