

TMC-10

10-channel timer/counter board



Functional Description

The TMC-10 is a general-purpose timer/counter and digital I/O board. It provides eight 16-bit timer/counter channels, two cascaded 32-bit timer/counter channels, 8-channel digital output, and two internal clock sources (8M/1.6M; 0.8M/80K) which are jumper-selectable. The external clock input pin and gate control pin may be used as general-purpose TTL-level DI. Four 8254 chips provide various powerful timer/counter function modes to match the industrial and laboratory applications.

Applications

- Event Counting
- Wave Generator
- Frequency Measurement
- Pulse Width Measurement
- Time-delay generation
- Watchdog Timer
- Industrial Automation

Specifications

Logic inputs and outputs

- Input logic high voltage: 2.0V min / 5.0V max
- Input logic low voltage: -0.5V min / 0.8V max
- Input load current: -0.45 mA min / +70 μ A
- Output sink current: +24 mA max
- Output source current: -15 mA
- All outputs and inputs are TTL Compatible

Features

- On-board four 8254 timer/counter chips
- Eight independent 16-bit timer/counter
- Eight external clock inputs
- Eight external gate control signals
- Two cascaded 32-bit timer/counter
- 11 interrupt levels, jumper-selectable
- Programmable Interrupt sources: COUT6, COUT9, COUT12 or external
- Two internal clock sources: 8M/1.6M, 0.8M/80K
- 8-bit general purpose digital output

General Specifications

- I/O connector: one 37-pin D-Sub female
- Power requirements: +5V @ 500 mA typical
- Operating temperature: 0 ~ 60°C
- Operating humidity: 0 ~ 90% non-condensing
- Storage temperature: -20 ~ 80°C
- Dimensions: 121 mm x 106 mm

Pin Assignment

GND	1		20	GND
CLK1/DI0	2		21	GATE1/DI4
COUT 1	3		22	GATE2/DI5
CLK2/DI1	4		23	COUT 2
CLK3/DI2	5		24	GATE3/DI6
COUT 3	6		25	GATE4/DI7
CLK4/DI3	7		26	COUT 4
CLK7/DI8	8		27	GATE7/DI12
COUT 7	9		28	GATE8/DI13
CLK8/DI9	10		29	COUT 8
CLK9/DI10	11		30	GATE9/DI14
COUT 9	12		31	GATE10/DI5
CLK10/DI11	13		32	COUT 10
COUT 6	14		33	COUT 12
DO_0	15		34	DO_1
DO_2	16		35	DO_3
DO_4	17		36	DO_5
DO_6	18		37	DO_7
+5V	19			

Ordering Information

Standard

TMC-10: 10-channel timer/counter board

Optional

DN-37: Two 37-pin connector DIN-rail mounting terminal board

DB-37: 37-pin D-sub directly connector terminal board