



T680 ethernet time interval counter

Features

- Five-channel time-interval counter and time stamper
- Five channels usable as TIC start plus four stops, or five time stampers
- 12.2 picoseconds resolution with 48-bit (3236 second) range
- Common GATE input
- 1023 sample FIFO per channel
- External universal power supply or 12-volt DC power
- 100 Mbit Ethernet and USB interfaces
- Compact extruded enclosure with optional mounting flange



The T680 contains five wide-range time stampers. Each channel can snapshot the time of the rising edge of one electrical input, to 12.2 picosecond resolution with 48 bit range. In time-stamp mode, individual time stamps may be read. In TIC mode, channel 0 may be used as the "start" time reference for channels 1-4, with the option to acquire times after or before/after the start event.

Custom versions can include DRAM and perform internal histogramming or accumulate array data for applications like fluorescent decay and 2D delay line imaging.

Specifications : T680 ethernet time interval counter

FUNCTION	5-channel time interval counter/time stamper
TRIGGER INPUTS	Rising-edge trigger, 50 Ω input impedance, DC coupled Threshold is programmable from -2.5 to +2.5 volts Max safe input is \pm 3.3 volts
TIME RESOLUTION	12.207031 ps LSB (12.5ns/1024) 48 bit range, 3435.97 seconds
DEAD TIME	100 ns max
GATE INPUT	50 ohms, 2 volt minimum, active high
CLOCK	Internal 10 MHz, available as TTL output Lockable to external 10 MHz \pm 10 PPM reference, 1 volt p-p min
JITTER	< 50 ps typical, < 75 ps max RMS for time intervals below 1 ms < 10 ns/second for longer measurements using internal clock
RELATIVE CHANNEL ACCURACY	< 100 ps channel to channel
CONTROL	10/100 Ethernet and USB
POWER	+12 volts at 500 mA nom Highland model J12 power supply furnished
CONNECTORS	Ch 0-4, GATE, CLOCK: SMB RJ45 Ethernet Micro/AB for USB control 2.5 mm barrel for power, center positive
LED INDICATORS	Green POWER Blue TRIGGER Orange COMM
PACKAGING	Extruded anodized aluminum enclosure