



M385 250 MHz Universal Counter/Timer M Module

The M385 is a universal counter/timer M Module with two (2) measurement channels. Its frequency range is up to 250MHz. Extensive input signal conditioning control is available and the normal complement of measurement functions are included.

Specifications:

General Characteristics:

- Frequency measurement up to 250MHz
- Period measurement from 4ns to 20 sec on either input
- Time interval measurement between 2 inputs from 20ns to 20 sec
- Frequency ratio of two signals
- Totalize measurements, 32 bits, on either input
- Rise and fall time measurements from 20ns to 20 sec
- Pulse width measurements from 20ns to 20 sec
- Voltage measurements: AC, DC, minimum and maximum

Bandwidth:

DC Coupled = 0 to 250MHz
AC Coupled = 10Hz to 250MHz

Input Connector: 15 pin DSUB with 2 coax pins

AC/DC coupling: programmable

Temperature:

Operating: 0°C to 60°C
Storage: -20°C to 70°C

Power: +5V @ 0.65 A with DC/DC

M Module Compliance

Complies with ANSI/VITA Std 12-1996 for single-wide M Modules.

Data Transfers 16 bit

Interrupts INTA

IDENT supported

Compatible with VXI, VME, PCI, PXI, CPCI & Ethernet Carriers

Applications

- Test & Measurement Functions

Ordering Information

Part Number 11029640-0001

Additional Information

User Manuals for C&H carriers and this module can be found on our website at www.chtech.com.



Input Characteristics:

Input Impedance: 50Ω

Dynamic Range: 10V p-p

Signal Operating Range: +/-5V

Input Sensitivity: 35mV_{rms}, 100mV_{pk-pk}

Trigger:

- Level: programmable -5V to +5V, 2.5mV steps
- Hysteresis: programmable 10mV to 60mV, steps of 2.5mV

Isolation: Galvanic isolation up to 50 MHz
Use pre-scalers above 50 MHz to achieve isolation

Software Programmable Pre-scalers: 1, 2, 4, 8, 16

Operating Mode Specifications:

Frequency:

- Range: 0.05 Hz to 250 MHz
- Resolution: (5ns/Gate Time) x Frequency

Period:

- Range: 5 ns to 20 sec
- Resolution: (5 ns/Gate Time) x Period

Time Interval:

- Range: 20 ns to 20 sec
- Resolution: 5 ns

Time Interval Average:

- Range: 20 ns to 20 sec
- Resolution: 5 ns
- Frequency: 0.05 Hz to 50 MHz

Frequency Ratio:

- Range: 0.4E-9 to 2.5E+9

Totalize:

- Range: 0 to $1 \times 2^{32} - 1$
- Resolution: 1 count of input signal
- Types: Software or hardware (gate on Input B)

Rise/Fall Time:

- Range: 20 ns to 20 sec (single shot)
- Resolution: 5 ns

Positive/Negative Pulse Width:

- Range: 20 ns to 20 sec
- Resolution: (5 ns/Gate Time) x Pulse Width

Voltage Measurement:

- Types: AC, DC, Max and Min
- Range: +/-5 V
- Waveforms: Sine
- Method: Done through successive approximations using varying trigger levels and 4 to 40 waveform cycles (no A/D)

TCXO Time Base:

Frequency: 50 MHz

Stability:

- Aging Rate: $<1 \times 10^{-6}$ per year
- Temperature: $<1 \times 10^{-6}$ from 0°C to +60°C