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Counter/Clock Module Model VX491C

The VX491C is a single-slot register-based C-size VXIbus compatible special purpose counter/clock module designed for precise timing, counting, delayed pulse generation and event measurement applications. The module provides a stable 10 MHz clock source, a number of derived clock outputs, six 32-bit counters, and a time-of-day clock. Programmable interrupts on master clock drop-out, on counter roll-over and match conditions, at periodic times, and at a set time-of-day.



SPECIFICATIONS

10 MHz Stable Clock (OCXO)

Accuracy: $\leq 1 \times 10^{-8}$
Stability: $\leq 1 \times 10^{-8}$ /day
Trim range: $\pm 1 \times 10^{-7}$ minimum
Drop-out detect and switch-over (to backup clock): ≤ 500 ns
Output level: 0-2.5 V or 0-5 V into 50 Ω (selectable)
Output impedance: 7, 50, or 70 Ω (selectable)
Duty cycle: 50 \pm 10 %

Event Measurement

Programmable resolution to 50 ns
Simultaneous event count accumulation

Derived Clocks

Frequencies: 100KHz, 10 KHz,
Two (2) Programmable using 32-bit dividers
Output Level: TTL
Output Impedance: 50 ohm
Duty Cycle: 50 \pm 10%
Synchronous clock gating with a Gate to Clock Start: ≤ 50 ns

Counters

Quantity: Six (6)
Type: 32-bit preloadable up/down
Input Source: Programmable (clocks, VXIbus triggers, External Trigger)
Match Registers: Programmable
Frequency Range: DC to 10 MHz

Time of Day Clock

Resolution: 1 msec
Display: H:M:S and PM
Back-Up: Battery, 1 yr

Indicators

MODID, ACCESS, SYSRST, SYSFAIL, CLK (backup clock in use), GATE (one per output to indicate output active)

Connectors

SMB-F

Power

+5 V @ 1.5 A (typical)
+12 V @ 0.3 A (typical, 0.7 max)
-12 V @ 0.2 (typical)

-5.2 V @ 0.01 A (typical)
-2 V @ 0.01 A (typical)

VXIbus Compliance

Complies with ANSI / IEEE Std. 1014-1987, IEC 821, IEC 822 and VXIbus Rev. 1.4
A16:D16 DTB Slave
Register based
Programmable interrupt levels (RORA)
BRX tied to BGX
Synchronous (SYNC) trigger Protocol for TTL TRGx lines
Form Factor: Size C

Applications

Data Acquisition – Precise time-tagging, event counting and scheduling, real time synchronization
Test – Test scheduling

Ordering Information

VX491C (w/ OCXO)11026845-0001
VX491C (no OCXO)11026845-0002