



VX491C Counter/Clock Module

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:

10Mhz Stable Clock (OCXO):

Accuracy	$\leq 1 \times 10^{-8}$
Stability:	$\leq 1 \times 10^{-8}/\text{day}$
Trim Range:	$\pm 1 \times 10^{-7}$ minimum
Drop-out Detect and Switch-Over: (to backup clock)	$\leq 500\text{ns}$
Output Level:	0-2.5V or 0-5V into 50Ω (selectable)
Output Impedance:	7, 50, or 70 Ω (selectable)
Duty Cycle:	50±10%

Event Measurement:

Programmable resolution to 50ns
Simultaneous event count accumulation

Derived Clocks:

Frequencies:	100 Khz, 10 Khz Two(2) Programmable using 32-bit dividers
Output Level:	TTL
Output Impedance:	50Ω
Duty Cycle:	50±10%
Synchronous clock gating with a Gate Clock Start	$\leq 50\text{ns}$

Counters:

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

Time of Day Clock:

Resolution:	1ms
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:

+5V @ 1.5A typical
+12V @ 0.3A typical (0.7 max)
-12V @ 0.2 typical
-5.2V @ 0.01A typical
-2V @ 0.01A 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 TTLTRGx lines
Form Factor: Size C

Applications

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

Ordering Information:

Description	Part Number
VX491C(w/OCXO)	11026845-0001
VX491C(no OCXO)	11026845-0002