V610

6-channel, 50 MHz Counter

The V610 is a single-width, C-size, register-based, VXIbus module that contains six independent 24-bit counters.

The maximum clock rate of the input signals is 50 MHz, and options are available for accepting either NIM or TTL level input signals.

Counts from dc to 50 MHz with TTL or NIM-level signals

APPLICATIONS

High energy physics experiments

High-frequency counting applications

FEATURES

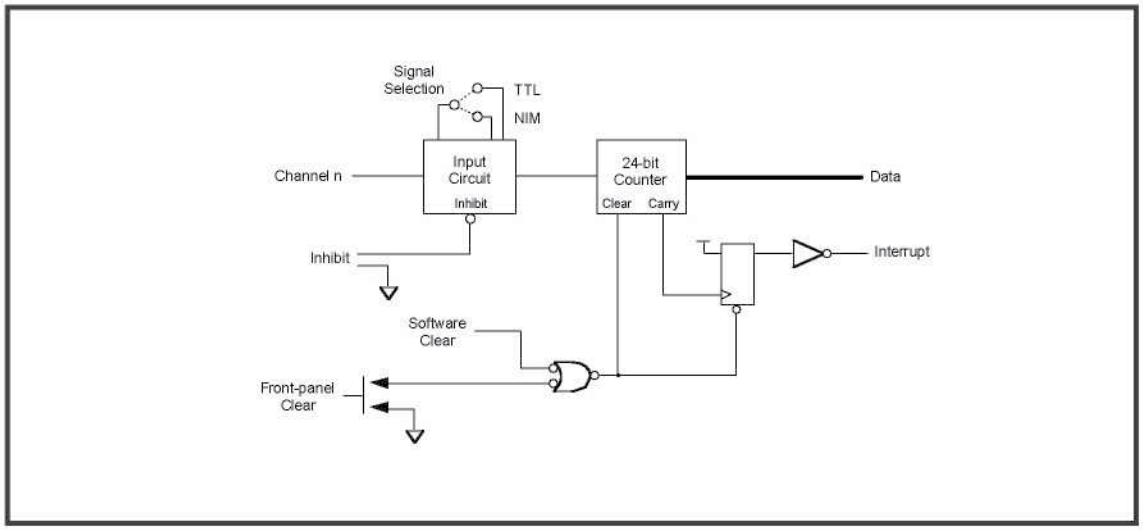
- Six counters
- Maximum count of 24 bits (16,777,215) on each channel
- TTL or NIM input
- Interrupt on overflow
- dc to 50 MHz count rate

GENERAL DESCRIPTION

The V610 is a single-width, C-size, register-based, VXIbus module that contains six independent 24-bit counters. The maximum clock rate of the input signals is 50 MHz, and options are available for accepting either NIM or TTL level input signals. (The nominal NIM signal input is -16 mA into 50 W for a logical "one", and 0 mA for a logical "zero".) An external Inhibit signal (of the same signal type as the inputs) can be used to gate off all counters. Each counter has an overflow bit which is set on a carry from bit 24, and generates an interrupt, if enabled. Counters continue to increment after the overflow condition has occurred. The pattern of overflow bits can be read via software. The counters can be individually cleared by software commands, or as a group by a software command or front-panel-mounted, manual, push-button switch. All inputs are protected for a ±50 V transient or ±4 V dc.

The V610 supports both static and dynamic configuration. Access to the data is through memory locations indicated by the Offset Register within the VXIbus Configuration Register set, using A24/A16, D16 data transfers.

A Typical Counter Channel



ITEM	SPECIFICATION
Number of Channels	6
Input Signal Levels	
TTL option	
Logic "0"	0.0 V to 0.8 V
Logic "1"	2.4 V to 5.0 V
NIM option	
Logic "0"	0 mA into 50Ω
Logic "1"	-16 mA into 50Ω
Input Protection	±4 V dc, ±50 V transient
Maximum Clock Rate (per channel)	50 MHz
Maximum Count Value	16,777,215 (24 bits)
Input Connector Type	Single-pin LEMO receptacle, shell size 00
Mating Connectors	KineticSystems Model 5910-Z1A
Power Requirements	
+5V	2.4 A, typical
-5.2 V	330 mA, typical
Environmental and Mechanical	
Temperature range	
Operational	0°C to +50°C
Storage	-25°C to +75°C
Relative humidity	0 to 85%, non-condensing to 40°C
Cooling requirements	10 CFM
Dimensions	340 mm x 233.35 mm x 30.48 mm (C-sized VXIbus)
Front-panel potential	Chassis ground

RELATED PRODUCTS

Model 5857-Axyz	Cable— 1-contact LEMO to Unterminated
Model 5857-Bxyz	Cable— 1-contact LEMO to 1 -contact LEMO
Model 5857-Hxyz	Cable— 1-contact LEMO to BNC shielded
Model 5910-Z1A	Connector— 1-contact LEMO

ORDERING INFORMATION

MODEL	DESCRIPTION
V610-LA11	6-channel 50 MHz Counter, TTL inputs
V610-LB11	6-channel 50 MHz Counter, NIM inputs

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