

CPCI6U64-HVDI32MI-A

32 Galvanically-Isolated Digital Input Channels *with Built-in Selftest (BIST) and dual thresholds*

Features Include:

- 32 galvanically isolated digital inputs
- Built-in selftest provides two detection thresholds for each channel, with three detection states of "Below Low threshold", "Above High threshold", or "Between thresholds" (Fault)
- Isolation Voltage: 1000VRMS; channel-to-channel and channel-to-bus
- Threshold adjustment range of 0.1V to +60V in increments of 0.02V; specified with order
- Minimum loading; less than 0.5mA
- Fast response, typically 2us, with selectable debounce times
- 66MHz 64-bit PCI support, with universal 5V/3.3V signaling
- Software Programmable clock debounce rate
- Software Programmable Change of State detection. Rising edge or falling edge per input channel.
- Software Programmable Interrupts on any or all Change of State bit(s)
- Software Pre-loadable Event counter on Input Bit 31
- Programmable Interrupt on event counter overflow
- Programmable Little Endian / Big Endian swapping
- PCI cycles Asynchronous to local bus cycles
- Software Controlled Test LED
- True 6U CPCI form factor

Functional Overview:

The CPCI6U64-HVDI32MI-A board provides 32 isolated digital input channels. Each channel is galvanically isolated from all other channels and from the host control bus for voltages up to 1000VRMS. Change-of-State Interrupts allow for an interrupt to the host to be generated from any level change on any input. Built-in-self-test, selectable debounce times, input pulse counter, and input voltages up to 100 Volts makes for a versatile digital interface board.

Each channel contains two voltage comparators and a precision voltage reference, which together with resistor dividers provide precision High and Low detection thresholds from 0.1V up to 60V in increments of approximately 0.02V. Two signals are derived from each channel, corresponding to "Input below Low threshold" and "Input above High threshold". These signals are converted by the local controller into a digital state that can be read by the host. For system fault detection, or Built-in Selftest (BIST), the local controller also provides an alarm status bit for each channel if the corresponding input is between the two thresholds.

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