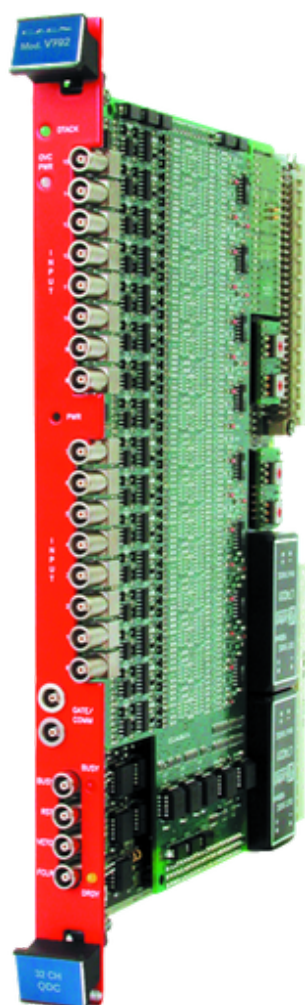
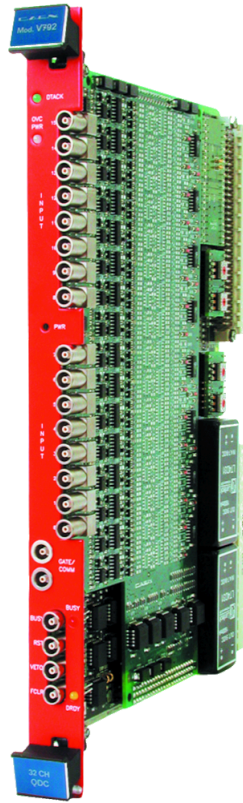


# V792N

## 16 Channel Multievent QDC



## Features



- High channel density
- 12bit resolution
- 2.8  $\mu$ s / 16 ch conversion time
- 600 ns fast clear time
- Zero and overflow suppression for each channel
- $\pm 1.5\%$  differential non linearity
- $\pm 0.1\%$  integral non linearity
- 32 event buffer memory
- BLT32/MBLT64/CBLT32/CBLT64 data transfer
- Multicast commands
- Live insertion
- Libraries, Demos (C and LabView) and Software tools for Windows and Linux

## Description

The CAEN **Mod.V792N** is a **1-unit wide VME 6U module housing 16 Charge-to-Digital Conversion channels** with current integrating negative inputs (50  $\Omega$  impedance).

For each channel, the input charge is converted to a voltage level by a QAC (Charge to Amplitude Conversion) section. Input range is 0  $\div$  400 pC.

The Model V792N features LEMO 00 connectors for both input and control signals. The outputs of the QAC sections are multiplexed and subsequently converted by two fast 12-bit ADCs. The integral non linearity is  $\pm 0.1\%$  of Full Scale Range (FSR) measured from 5% to 95% of FSR. The ADCs use a sliding scale technique to improve the differential non-linearity.

The Mod. V792N offers a 32 event buffer memory, A24/A32 addressing mode, D16, D32, BLT32/MBLT64 and CBLT32/CBLT64 data transfer mode. Multicast commands are also supported.

The board supports the live insertion that allows inserting or removing them into the crate without switching it off.

## Technical Specifications

### Packaging

1-unit wide 6U VME module (version NA requires the V430 backplane)

### Inputs

16 channels, 50  $\Omega$  impedance, negative polarity, DC coupling

### Input range

0 ÷ 400 pC (if Sliding Scale is used FSR is reduced from 4095 to 3840 counts)

### Resolution

12 bit

### Gain

100 fC/count

### Max. tolerated positive voltage input

15 mV

### Reflections

< 5% with 2 ns fall time input signals

### Input offset

$\pm 2$  mV

### RMS Noise

0.5 counts typical

### Integral non linearity

0.1% of FSR (=3840 counts)  
from 5% to 95% of FSR

### Interchannel gain uniformity

$\pm 4\%$

### Interchannel Isolation

> 60 dB

### Power rejection

- 0.002 count/mV (+5V); 0.01 count/mV (-5V)
- 0.0046 count/mV (+12V); 0.0012 count/mV (-12V)

### Fast clear time

600 ns

## Gate timing

the Gate signal must precede the analog input by  $> 15$  ns

## Conversion time

2.8  $\mu$ s for all channels

## Zero suppression

Threshold values programmable in:

- 16 ADC counts steps over the entire FSR
- 2 ADC counts steps over 1/8 of FSR

## Control inputs

NIM input signals:

- GATE: temporal window for current integration
- RST: resets QAC sections, MEB status and control registers
- VETO: inhibits the conversion of the QAC signals
- FCLR: FAST CLEAR of QAC sections

## Control outputs

NIM output signals:

- DRDY: indicates the presence of data
- BUSY: board full, resetting, converting or in MEMORY TEST mode

## VME interface

A24/A32

Geographical Addressing

Multicast commands

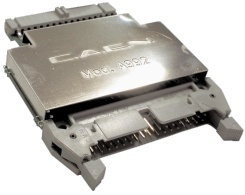
D16/D32, BLT32/MBLT64, CBLT32/CBLT64

## Ordering Options

Code	Description
WV792XNCAAAA	V792NC - 16 Channel Multievent Charge ADC (No JAUX, No 12V DCDC, live ins) <span data-bbox="1385 250 1465 302">RoHS</span>

## Accessories

### A992



16 Channel Impedance Adapter

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## Related Products

### VME8011



7U 21 Slot VME64 Low Cost Crate

### VME8004X



2U 4 Slot VME64X Mini Crate

### VME8100



8U 21 Slot VME64/64X Enhanced Crate Series

### NV8020A



7U CRATE VME/NIM 8 slot VME64 365W, 5 slot NIM 150W

### VME8004B



2U 4 Slot VME64 Mini Crate

### VME8008X



4U 8 Slot VME64X Mini Crate

### VME8010



7U 21 Slot VME64 Low Cost Crate

### VX4718



VME to USB 3.0/Ethernet/Optical Link Bridge

### VME8200



9U 21Slot VME64X Enhanced Crate series

### VME8002



5U 9 Slot VME64 Mini Crate

## VME8008XB

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## VME8001



1U 2 Slot VME64 Mini Crate

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## V3718



VME to USB 2.0 / Optical Link Bridge

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## VX3718



VME64 to USB 2.0/Optical Link Bridge

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## VME8008B



4U 8 Slot VME64 Mini Crate

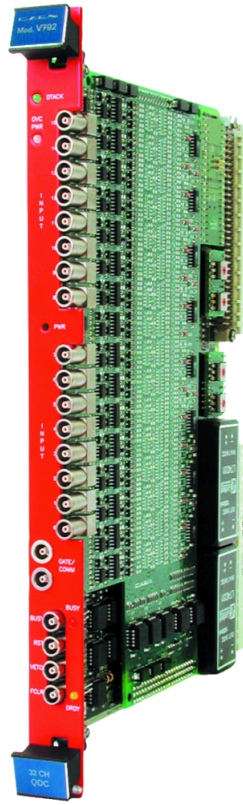
**V4718**



VME to USB 3.0/Ethernet/Optical Link Bridge

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## Gallery



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