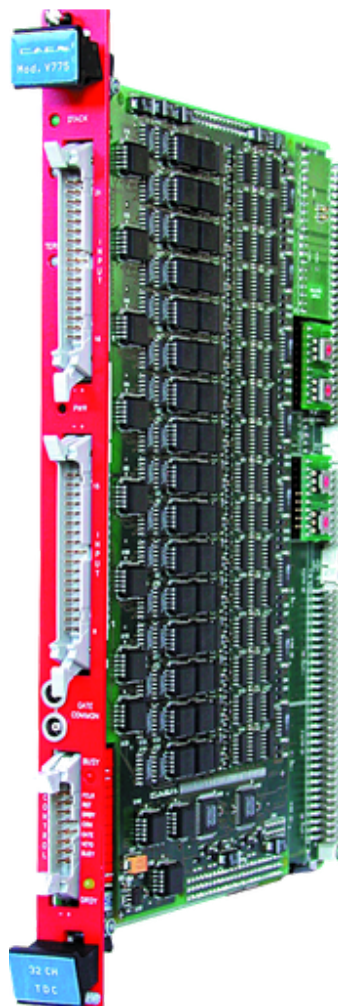
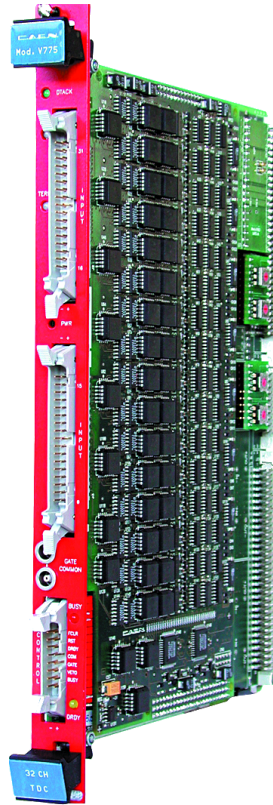


# V775

## 32 Channel Multievent TDC (35÷300 ps)



## Features



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

## Description

The CAEN **Mod. V775** is a **1-unit wide VME 6U module** housing **32 Time-to-Digital Conversion channels**.

The Full Scale Range can be selected via VME from 140 ns to 1.2  $\mu\text{s}$  with 8 bit resolution. The board can operate both in COMMON START and in COMMON STOP mode. Each time interval between the COM signal and the input signal is converted into a voltage level by the TAC sections. The outputs of the TAC sections are multiplexed and subsequently converted by two fast ADC modules (5.7  $\mu\text{s}$  conversion time).

The integral non linearity is  $\pm 0.1\%$  of full scale range (FSR), measured from 2% to 97% of FSR; the differential non linearity is  $\pm 1.5\%$  of FSR, measured from 3% to 100% of FSR. The ADCs use a sliding scale technique to reduce the differential non-linearity.

Programmable zero suppression, multievent buffer memory, trigger counter and test features complete the flexibility of the unit. The module works in A24/A32 ADDRESS mode. The data transfer occurs in D16, D32, BLT32 or MBLT64 mode. The unit supports also the Chained Block Transfer (CBLT32/CBLT64) and the Multicast commands. 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 AA requires the V430 backplane)

### Inputs

32 ECL inputs, 110  $\Omega$  impedance

### Full Scale Range

VME programmable from 140 to 1200 ns (if sliding Scale is used FSR is reduced from 4095 to 3840 counts)

### Resolution

12 bit

### LSB

VME programmable from 35 to 300 ps

### RMS Noise

0.8 counts typical, 2 counts maximum

### Integral non linearity

$\pm 0.1\%$  of FSR (measured from 5% to 95% of 3840 counts)

### Differential non linearity

$\pm 1\%$  (measured from 5% to 95% of 3840 counts)

### Interchannel Isolation

> 66 dB

### Power rejection

- 0.01 count/mV (+5V); 0.02 count/mV (-5V)
- 0.005 count/mV (+12V); 0.001 count/mV (-12V)

### Fast clear time

600 ns

### Conversion time

5.7  $\mu$ s for all channels

### Minimum Start/Stop delay

- Common Start mode: 14 ns
- Common Stop mode: 4 ns

## Zero suppression

Threshold values programmable in:

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

## GATE COMMON input

Two LEMO 00 bridged connectors, NIM signal, high impedance  
Common Start/Stop signal

## Control inputs

Active-high, differential ECL input signals:

- RST: resets PEAK sections, MEB status and control registers
- VETO: inhibits the conversion of the peaks
- FCLR: FAST CLEAR of TAC sections
- COM: Common Start/Stop signal

## Control outputs

Differential ECL 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, BLT21/MBLT64, CBLT32/CBLT64

## Ordering Options

Code	Description
WV775XACAAA	V775AC - 32 Channel Multievent TDC (No JAUX No 12VDCDC, No live ins) <span data-bbox="1380 250 1455 302">RoHS</span>

## Accessories

### A954



Cable assembly 2.54mm 34 pin female to two 2.54mm 16 pin female - 50 cm

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## Related Software

### CAEN Toolbox



Multi-Functional Software Suite for the Upgrade of Front-end Boards, Bridges and Power Supplies

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## Related Products

### VME8008X



4U 8 Slot VME64X Mini Crate

### VX4718



VME to USB 3.0/Ethernet/Optical Link Bridge

### V3718



VME to USB 2.0 / Optical Link Bridge

### VX3718



VME64 to USB 2.0/Optical Link Bridge

### VME8008B



4U 8 Slot VME64 Mini Crate

## VME8001



1U 2 Slot VME64 Mini Crate

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## V4718



VME to USB 3.0/Ethernet/Optical Link Bridge

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## VME8004X



2U 4 Slot VME64X Mini Crate

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## VME8100



8U 21 Slot VME64/64X Enhanced Crate Series

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## VME8011



7U 21 Slot VME64 Low Cost Crate

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### VME8010



7U 21 Slot VME64 Low Cost Crate

### VME8004B



2U 4 Slot VME64 Mini Crate

### VME8002



5U 9 Slot VME64 Mini Crate

### VME8200



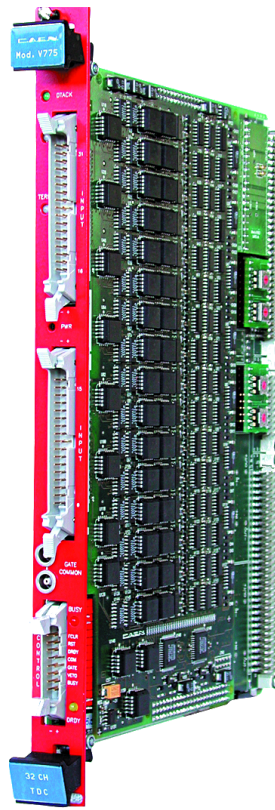
9U 21Slot VME64X Enhanced Crate series

### NV8020A



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

# Gallery



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