

V1290N-2ESST

16 Channel Multihit TDC (25 ps)



Features

- 25 ps LSB
- 21 bit resolution
- 52 μ s full scale range
- NIM Input Signals
- 5 ns Double Hit Resolution
- Leading and Trailing Edge detection
- Trigger Matching and Continuous Storage acquisition modes
- 32 k x 32 bit output buffer
- MBLT, CBLT and 2eSST data transfer
- Multicast commands
- Live Insertion

Description

The CAEN **Mod.V1290N-2eSST** is a

16 channel Multihit TDC

, housed in a

1-unit wide VME 6U

module. The unit features

High Performance Time to Digital Converter

chips developed by CERN. LSB is

25 ps

(21 bit resolution, 52 μ s FSR). The module accepts NIM inputs.

The channels can be enabled for the detection of hits rising/falling edges. For each channel there is a digital adjustment for the zero-ing of any offsets. The data acquisition can be programmed in "Events" ("Trigger Matching Mode", with a programmable time window) or in "Continuous Storage Mode".

The module programming is performed via a microcontroller that implements a high-level user friendly interface. The VME interface allows the module to work in A24 and A32 addressing modes.

The board houses a 32 k x 32 bit deep Output Buffer, that can be readout via VME in a completely independent way from the acquisition itself.

The device supports MBLT, CBLT and 2eSST readout modes. Live insertion is also supported.

Technical Specifications

Packaging

6U-high, 1U-wide VME unit

Inputs

16 NIM, 50 Ohm impedance

Double hit resolution

5 ns

Acquisition modes

Trigger Matching Mode; Continuous Storage Mode

Built-in memory

32 kwords deep Output Buffer

Trigger Window Width

Programmable from 25 ns to 100 μ s

Dynamic Range

52 μ s

LSB

25 ps

RMS resolution

< 35 ps (typical)

Integral non linearity

< 2.5 LSB

Differential non linearity

< 3 LSB

Interchannel Isolation

\leq 3 LSB

Offset spread

< 2 ns

EXT TRIGGER input

Two LEMO 00 bridged connectors, NIM signal, 50 Ohm

Clock source

Internal (40 MHz) or External (on Control connector), dip switch selectable

Control inputs

NIM std. input signals:

- RST: resets Output Buffer, Status and Control registers.
- CLR: FAST CLEAR of TAC sections rising-edge active,differential

Differential ECL input signals:

- CLK: external clock
- TRG: trigger for the TDC latching

Control outputs

NIM std. signal:

OUT_PROG: control output signal, programmable via the out prog control register

Displays

- DTACK: green LED; lights up at each VME access.
- PWR: green/red LED; green: power ON, red: failure status.
- TERM: green LED; control bus termination ON.
- FULL: red LED; memory full.
- ERROR: red LED; TDC global error.
- DRDY: yellow LED; at least one datum in the output buffer

VME

Addressing modes: A24, A32, MCST Data transfer modes: D16, D32, BLT32, BLT64, CBLT, 2eSST

Ordering Options

Code	Description
WV1290BNXAAE	V1290N - 2ESST 16 Ch. Multievent Multihit TDC 25 psec NIM (no JAUX)

Related Software

CAEN Toolbox



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

Related Products

VME8004X



2U 4 Slot VME64X Mini Crate

VME8100



8U 21 Slot VME64/64X Enhanced Crate Series

VME8011



7U 21 Slot VME64 Low Cost Crate

VME8010



7U 21 Slot VME64 Low Cost Crate

VME8004B



2U 4 Slot VME64 Mini Crate

NV8020A



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

VME8008X



4U 8 Slot VME64X Mini Crate

VME8200



9U 21Slot VME64X Enhanced Crate series

VX4718



VME to USB 3.0/Ethernet/Optical Link Bridge

VME8008XB

V3718



VME to USB 2.0 / Optical Link Bridge

VME8001



1U 2 Slot VME64 Mini Crate

VX3718



VME64 to USB 2.0/Optical Link Bridge

VME8008B



4U 8 Slot VME64 Mini Crate

V4718



VME to USB 3.0/Ethernet/Optical Link Bridge

This document, or parts thereof, may not be reproduced in any form or by any means without written permission from Caen S.p.A. Although every effort has been made to ensure the accuracy of information presented in this catalog, Caen S.p.A reserves the right to modify its products specifications without giving any notice; for up to date information please visit www.caen.it © Caen S.p.A - 2024

CAEN S.p.A.

Via Vetraia 11
55049 - Viareggio
Italy

Phone +39.0584.388.398

Fax +39.0584.388.959

info@caen.it

www.caen.it

CAEN GmbH

Brunnenweg 9
64331 Weiterstadt, Germany

Phone +49 (0)212.254.4077

Mobile +49 (0)151.16.548.484

info@caen-de.com

www.caen-de.com

CAEN Technologies, Inc.

1 Edgewater Street - Suite 101
Staten Island, NY 10305
USA

Phone +1.718.981.0401

Fax +1.718.556.9185

info@caentechnologies.com

www.caentechnologies.com

CAENspa India Private Limited

B205, BLDG42, B Wing,
Azad Nagar Sangam CHS,
Mhada Layout, Azad Nagar, Andheri West
Mumbai, Maharashtra 400053, India

info@caen-india.in

www.caen-india.in

