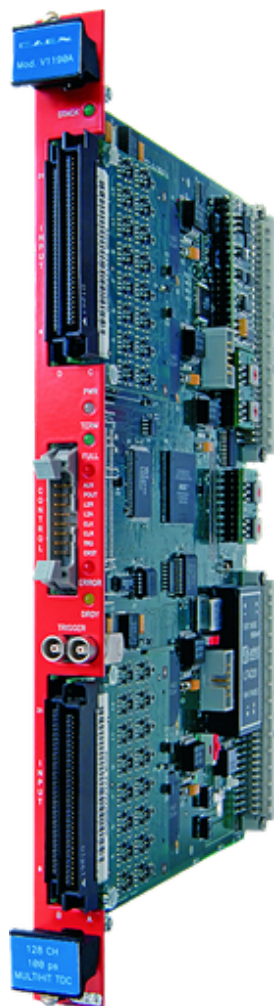


V1190A-2ESST

**128 Channel
Multihit TDC
(100/200/800 ps)**



Features

- 3 programmable ranges: 100 ps LSB (19 bit resolution), 200 ps LSB (19 bit) and 800 ps LSB (17 bit)
- ECL/LVDS inputs automatically detected
- 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
- Libraries, Demos (C and LabView) and Software tools for Windows and Linux

Description

The CAEN **Mod. V1190A-2eSST** is a

128 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 can be set at

100 ps

(19 bit resolution, 52 μ s FSR),

200 ps

(19 bit, 104 μ s FSR) or

800 ps

(17 bit, 104 μ s FSR).

Robinson Nugent Flat connector

1-unit wide VME 6U for Mod. V1190A-2eSST

Consult our **connectors reference page** for technical information.

The channels can be enabled for the detection of hits rising/falling edges or for their width measurement (both the edges' timing, and the hit width can be measured with the selected resolution). 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". Both ECL and LVDS input signals are supported.

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

128 ECL/LVDS inputs, 110 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

LSB

800, 200, 100 ps (selectable)

Dynamic Range

104 μ s (200 ps and 800 ps LSB); 52 μ s (100 ps LSB)

RMS resolution

<320 ps @ 800 ps res.

<140 ps @ 200 ps res.

<80 ps @ 100 ps res.

Integral non linearity

<0.3 LSB @ 800 ps res.

<1 LSB @ 200 ps res.

<1 LSB @ 100 ps res.

Differential non linearity

<0.2 LSB @ 800 ps res.

<0.3 LSB @ 200 ps res.

<0.5 LSB @ 100 ps res.

Interchannel Isolation

\leq 0.7 LSB

Offset spread

<2 ns

EXT TRIGGER input

Two LEMO 00 bridged connectors, ECL signal, 110 Ohm

Clock source

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

Control inputs

active-high, differential ECL input signals:

- RST: resets Output Buffer, Status and Control registers.
 - CLR: FAST CLEAR of TAC sections
- rising-edge active, differential ECL input signals
- CLK: external clock
 - TRG: trigger for the TDC latching
 - L2_A; L2_REJ.

Control outputs

differential ECL output 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
WV1190AEXAAE	V1190A - 2ESST 128 Ch. Multievent Multihit TDC 100-200-800 psec ECL/LVDS (no JAUX)

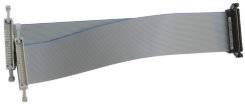
Accessories

A966



Cable assembly 68 pin P50 to four 2.54mm 16 pin male - 25 cm

A967



Cable assembly 68 pin P50 to two 2.54mm 34 pin male - 25 cm

Related Software

CAEN Toolbox



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

Related Products

VME8008XB

VME8200



9U 21Slot VME64X Enhanced Crate series

VX4718



VME to USB 3.0/Ethernet/Optical Link Bridge

VME8004B



2U 4 Slot VME64 Mini Crate

VME8010



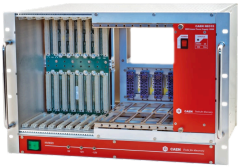
7U 21 Slot VME64 Low Cost Crate

CAEN Upgrader



Firmware Upgrade Tool for Front-end Boards Bridges & VME Power Supply

NV8020A



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

VME8008X



4U 8 Slot VME64X Mini Crate

VME8004X



2U 4 Slot VME64X Mini Crate

VME8011



7U 21 Slot VME64 Low Cost Crate

VME8100



8U 21 Slot VME64/64X Enhanced Crate Series

V4718



VME to USB 3.0/Ethernet/Optical Link Bridge

VX3718



VME64 to USB 2.0/Optical Link Bridge

VME8001



1U 2 Slot VME64 Mini Crate

V3718



VME to USB 2.0 / Optical Link Bridge

VME8008B



4U 8 Slot VME64 Mini Crate

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