

New

CAEN Toolbox

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



Toolbox

CAEN

Features

- Graphical (GUI) and Command Line Interface (CLI) for firmware upgrades of CAEN front-end boards, VME and CONET controllers, and power supply units
- Batch firmware upgrade for Digitizer 2.0 boards via a single bash or PowerShell script
- Integrated Licence Manager for DPP firmware activation (Digitizer 1.0) and Scaler firmware activation (V2495, DT5495, V1495)
- PLL editor for the generation and customisation of PLL configuration files (Digitizer 1.0)
- Manual Controller for direct register-level read/write access to connected boards
- Stand-alone application — no additional software dependencies required

Description

CAEN Toolbox is a multi-functional software suite developed in Python, designed to consolidate all firmware management and board configuration operations for CAEN front-end electronics into a single, unified environment. It supersedes the CAEN Upgrader, incorporating all of its functionality while extending the feature set with new tools for licence management, PLL configuration, and low-level board access. The application is available in both a graphical user interface (GUI) and a command-line interface (CLI), and runs as a stand-alone executable on Windows and Linux without requiring additional software dependencies.

The firmware upgrade module supports the full range of CAEN front-end boards, including VME and CONET controllers and power supply units. For Digitizer 2.0 platforms, batch firmware updates across multiple boards can be fully automated using a single bash or PowerShell script, streamlining the maintenance of large-scale detector readout systems.

The integrated Licence Manager provides a straightforward workflow for activating optional firmware features: DPP (Digital Pulse Processing) firmware licences for Digitizer 1.0 boards, and Scaler firmware licences for the V2495, DT5495, and V1495 programmable logic modules. PLL configuration files for Digitizer 1.0 boards can be generated and customised through the dedicated PLL editor, allowing precise control over clock and synchronisation settings.

The Manual Controller function provides direct register-level access to any connected board, enabling read and write operations on individual hardware registers. This tool is particularly valuable during system commissioning, hardware characterisation, and low-level debugging of front-end electronics.

Operating Systems	Windows, Linux
Supported Products:	VME, NIM and Desktop Digitizers, 780 and 781 Digital MCA families, DT5790 Digital Pulse Analyzer, V1x90 TDC family, V1495-x2495, V1718/V2718/V3718/V4718 VME Bridges, V65xx HV Power Supplies, DT55xx HV Power Supplies, A2818/A3818/A4818/A5818 PCI/PCIe Controllers
Communication Interfaces:	USB 2.0, USB 3.0, Ethernet, Optical Link, VME
Additional Software Required:	The software is stand-alone

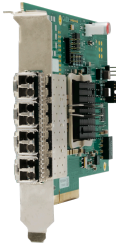
Technical Specifications

[object Object]

0.2 mV

Related Products

A5818



CONET2 Controller based on PCI Express Gen 3 interface

A3818



PCI Express CONET2 Controller

V3718



VME to USB 2.0 / Optical Link Bridge

VX3718



VME64 to USB 2.0/Optical Link Bridge

VX2730



32/16 Input Channel 14 bit 500 MS/s Digitizer with Programmable Analog Gain

V1725 / V1725S



16/8 Input Channel 14-bit 250 MS/s Digitizer

VX1720



8 Input Channel 12bit 250 MS/s Digitizer

V2745



64 Channel 16 bit 125 MS/s Digitizer with Programmable Input Gain

VX4718



VME to USB 3.0/Ethernet/Optical Link Bridge

VX1725 / VX1725S



16/8 Input Channel 14-bit 250 MS/s Digitizer

A4818



USB 3.0 to CONET2 Adapter

VX2745



64 Input Channel 16 bit 125 MS/s Digitizer with Programmable Input Gain

DT2740



64 Input Channel 16 bit 125 MS/s Digitizer

DT5725 / DT5725S



8 Input Channel 14-bit 250 MS/s Digitizer

V4718



VME to USB 3.0/Ethernet/Optical Link Bridge

A2818



PCI CONET Controller

V2740



64 Channel 16 bit 125 MS/s Digitizer

DT5730 / DT5730S



8 Input Channel 14 bit 500 MS/s Digitizer

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