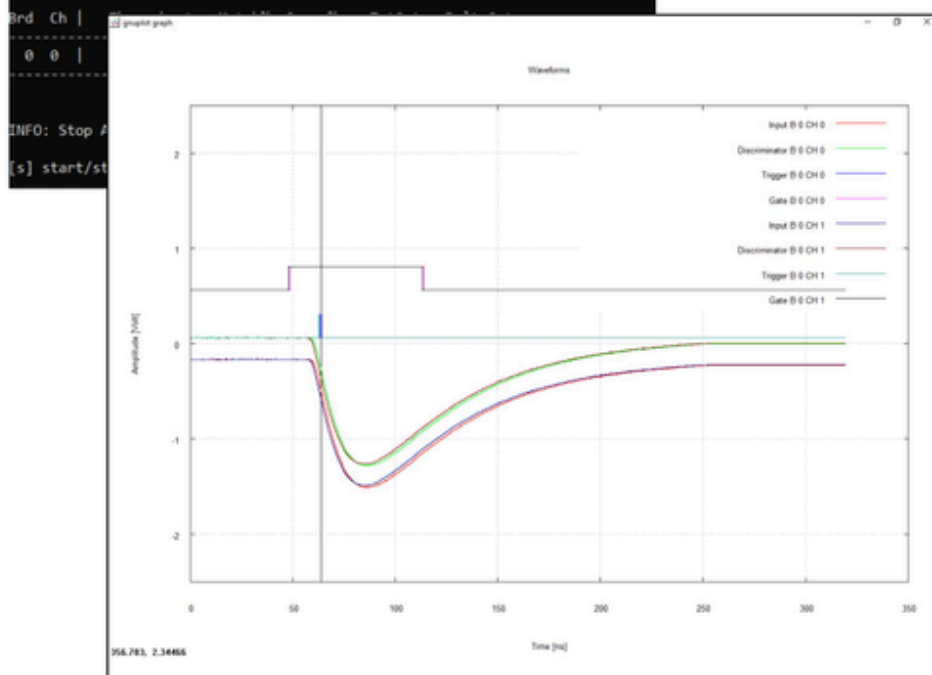


New

WaveDemo x743

CAEN x743 Digitizer Readout Application

```
--- WaveDemo for x743 Digitizer Family (version: 1.2.0) ---  
Press [?] for help  
  
Acquisition started at 2022-03-15 12:04:03  
All Data Corrections are enabled  
Enabled Output Files: Raw TDCList Lists Waveforms Histograms (ET) Info  
Enabled Waveform plot: only output data of board 0 [continuous plot << - >>]  
Enabled Histogram plot: ENERGY board 0 - channel 00  
Statistics Mode: Instantaneous  
Total processed events = 11565  
Total bytes = 48.1757 MB  
RealTime (from boards) = 199.97 s  
Readout Rate = 0.23 MB/s
```



Features

- Basic Console application exclusive for x743 CAEN digitizers
- Single and multi-board complete control
- Synchronized mode management of V1743/VX1743
- Multichannel waveform plot
- Advanced mode configuration:
 - Common board settings
 - Individual settings for threshold and DC offset adjustment
- Advanced mathematical functions: amplitude spectra and FFT
- Multi format (ASCII, binary) data saving
- Source files and Visual Studio project open source for developers

Description

WaveDemo x743 software is a C-based console application for the specific support of the **x743 CAEN digitizers** basing on the **CAENDigitizer library**.

This software can control multiple digitizers and, particularly, it can be used as a demonstrator of the synchronization of the **V1743 / VX1743** digitizers. Specifically, WaveDemo can perform the following operations:

- Connect one or more digitizers through a physical communication interface (USB, Optical Link or VME).
- Program the digitizer according to parameters written in a configuration file (text file).
- Perform SAMLONG chips calibration.
- Start and stop the acquisition (run on/off).
- Configure the Trigger mode (software, external or on channel self-trigger).
- Read the event data and display the acquisition statistics.
- Perform some simple data analysis (post-processing) such as the histograms of energy and time of the events.
- Save the waveforms samples to ASCII or binary output files, as well as the histograms and the run information.
- Plot and process the acquired waveforms.
- Manage the configuration and acquisition of multiple boards in synchronized mode.

Besides being a ready-to-use software, WaveDemo is provided with C source files to let the users customize the code for personalized solutions.

The program core is a C application that configures the digitizer, starts/stops the acquisition, and manages the data readout according to a set of parameters as reported in the configuration text file. Data (waveforms or histograms) are plotted using Gnuplot, an external plotting tool, or saved to output text files. The configuration text file can be found in the installation folder, inside the bin folder.

Supported Operating Systems: Windows, Linux
Language: C
Supported Products: VME, NIM and Desktop x743 Digitizers
Supported Comm. Interface: USB, Optical Link, VME
Additional Software Required: **CAENDigitizer, CAENComm, CAENVMELib**, Gnuplot (Linux only)

Applications

- Signal inspection and waveform recording
- Research and development of prototypes
- Data collection for offline statistical analysis
- Sensors readout and detectors' performances

Related Products

DT5743



8 Input Channel 12bit 3.2 GS/s Switched Capacitor Digitizer

VX1743



16 Input Channel 12bit 3.2 GS/s Switched Capacitor Digitizer

V1743



16 Input Channel 12bit 3.2 GS/s Switched Capacitor Digitizer

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

