

DPP-CI Control Software

**Software interface
for DPP-CI
management**

DPP-CI Control

Software

Features

- Demo software for the handling of digitizers running **DPP-CI** firmware
- Supported by 720 digitizer family (12 bit @ 250 MS/s)
- Java GUI interface
- Two operating modes (Oscilloscope and Histogram)
- Configurable CI parameters
- Real time plotting of Waveforms and Histograms (Charge and Time)
- Import / Export of customized parameter settings
- Data saving in Waveforms, Histograms and List mode

Description

DPP-CI Control Software⁽¹⁾ is a demo application introducing the user to understand the principle of operation of the Digital Pulse Processing for the Charge Integration (DPP-CI). It can manage single-board communication and acquisition of CAEN **720 Digitizer series (12 bit @ 250 MS/s)** running DPP-CI firmware.

DPP-CI Control Software is based on a Java Graphical User Interface for the parameters setting (connection, DPP algorithm, acquisition, etc.), a C console application working as an acquisition engine (DPPRunner) and a third-party graphing utility (Gnuplot: www.gnuplot.info). The GUI directly handles the acquisition engine through run time commands and generates also a textual configuration file that contains all the selected parameters values. This file is read by DPPRunner, which programs the Digitizer according to the parameters, starts the acquisition and manages the data readout.

The software can operate in the Oscilloscope mode, where digitized input waveforms and digital signals from the internal filters are monitored in order to better tune the DPP parameters, and in the Histogram mode, where energy (i.e. charge) and time histograms (built by the software) can be monitored.

According to the operating mode, raw data like waveforms or charge and time stamp lists, as well as charge or time histograms can be saved to output files for off-line analysis.

DPP-CI Control Software Supported Boards⁽²⁾:

Model	<u>V1720</u>	<u>VX1720</u>	<u>DT5720 N6720</u>
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Channels	8	8	4/2	4/2
Max Sampling Rate	250 MS/s	250 MS/s	250 MS/s	250 MS/s
Resolution	12-bit	12-bit	12-bit	12-bit
Form Factor	VME 6U module	VME 6U module	module	VME 6U module

(2) The indication "size 1/ size 2" denotes different model versions while "size 1 - size 2" denotes different model operating modes

- Windows OS (XP / Vista / 7) 32 and 64-bit
- Linux OS (kernel rel. 2.4 - 3.6) 32 and 64-bit
- Java Runtime Environment 6 (or later)

(1)

Note:

DPP-CI Control Software is developed to work only with 720 Digitizer series running DPP-CI firmware.

This software is not provided with data analysis features.

**This SW is no longer in use. It has been replaced
by the new DPP-PSD firmware and software**

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