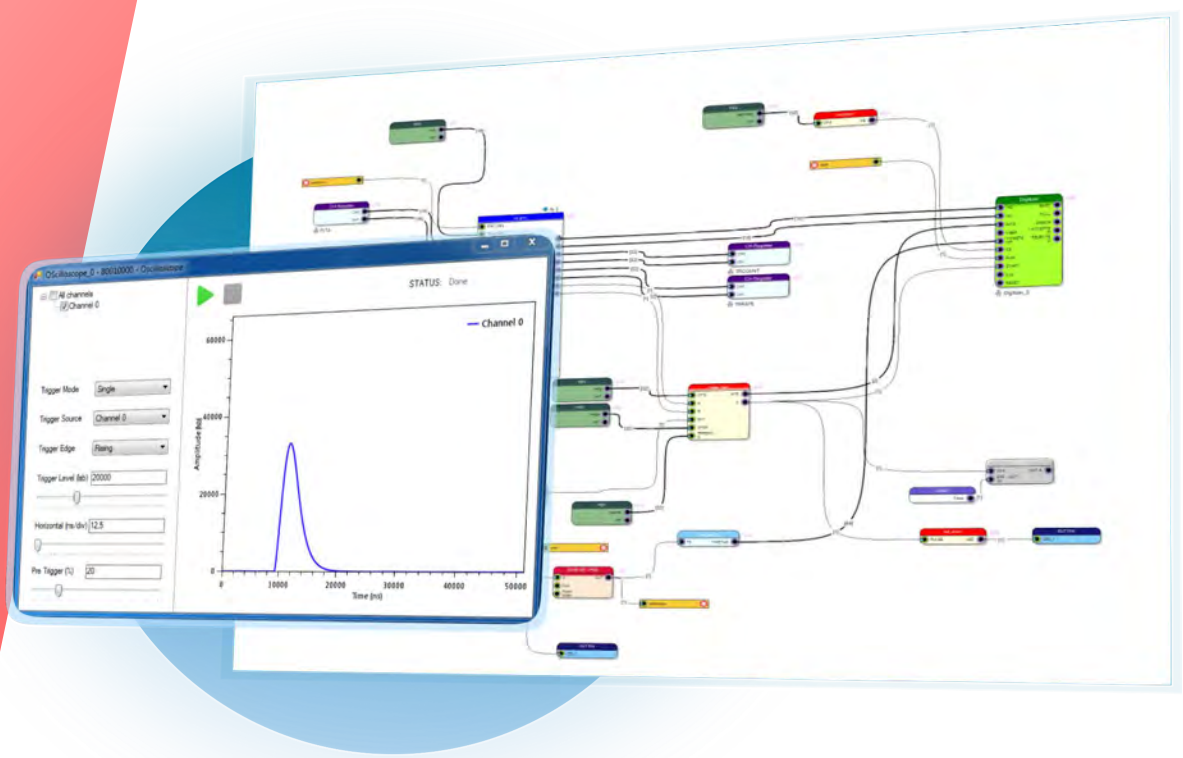
Nuclear Instruments

CAEN
Tools for Discovery

Sci-Compiler

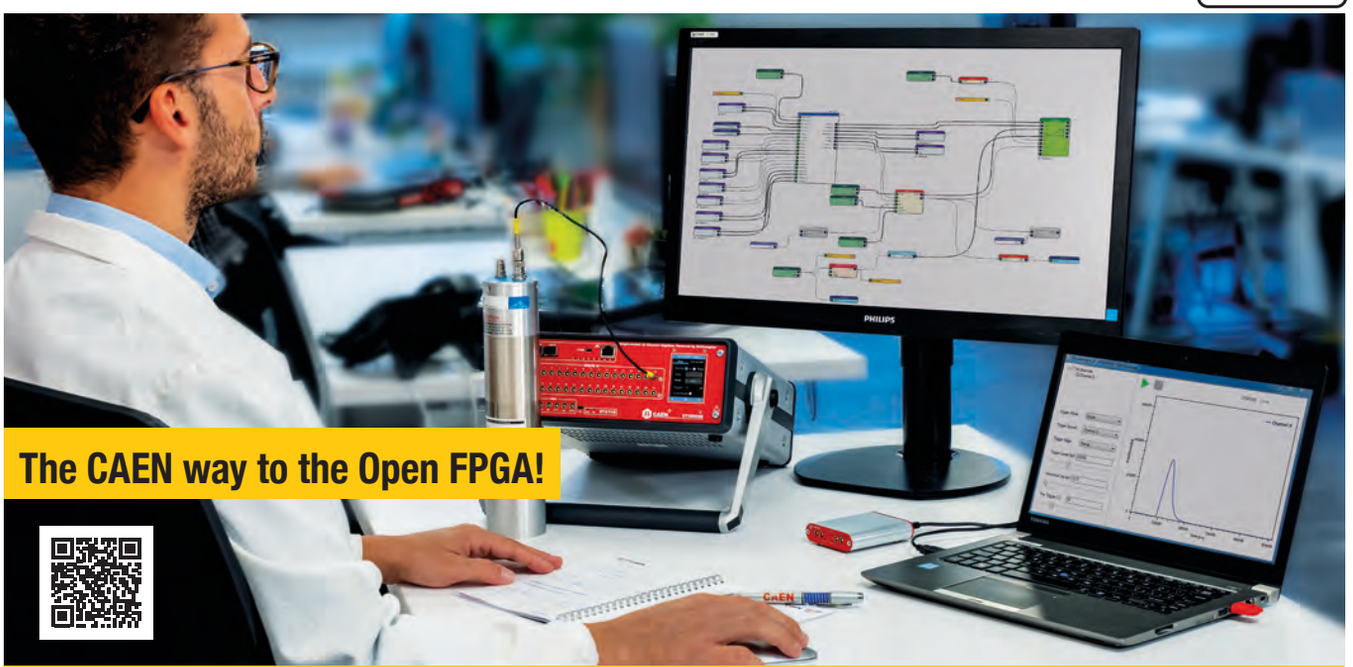
Graphical Programming Language for CAEN Open FPGA Boards



OPEN FPGA

Sci-Compiler

GRAPHICAL PROGRAMMING LANGUAGE FOR CAEN OPEN FPGA BOARDS



An innovative programming software tool to generate custom firmware for open FPGA CAEN boards. Even accessible by non-experts of VHDL/Verilog languages. A unique tool to generate and compile FPGA firmware.

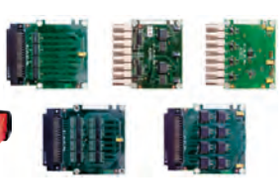
Sci(entific)-Compiler, is a graphical software tool designed to ease and accelerate the firmware implementation in physics for open FPGA CAEN boards. Drawing a block diagram, the software can automatically generate a firmware that can be directly deployed on the chosen compatible hardware. In this way, even a non-expert user can write his own firmware code without having any knowledge of VHDL/ Verilog programming language. A unique tool to generate and compile FPGA, download it on the target device, and run the real-time solution acquiring data on a host computer.

Sci-Compiler tool includes 100+ virtual blocks implementing complex functions used in physics applications, like waveform recording, logic gates, TDC, spectrum reconstruction, pulse shape discrimination, and more.

In addition to the firmware, Sci-Compiler automatically also generates the related libraries and C++/Phyton software example codes for Windows® and Linux®.

Sci-Compiler supports the following Open FPGA CAEN boards (DT: Desktop / VX: VME64X / V: VME64 / R: Rack)

DT5495 - V2495 Programmable Logic Units



R5560 128 Ch.14 bit 125 MS/s Digitizer with differential inputs

R5560SE 128 Ch.14 bit 125 MS/s Digitizer with single-ended inputs

DT5560SE 32 Ch.14 bit 125 MS/s Digitizer

DT2740 - VX2740 - V2740 64 Ch. 16 bit 125 MS/s
DT2745 - VX2745 - V2745 64 Ch. 16 bit 125 MS/s
DT2730 - VX2730 32 Ch. 14 bit 500 MS/s
DT2751 - VX2751 64 Ch. 14 bit 1 GS/s

DT5550 DAQ System with User Programmable FPGA and sequencer

DT5550W Weeroc ASICs Development system

Processing Algorithm

Navigate through hundreds of blocks designed for Digital Pulse Processing

Firmware

Generate your firmware starting from a block diagram

SCI-COMPILER

Open FPGA

DOWNLOAD

DAQ

Use the automatically generated Software Development Kit to build your own DAQ

Resource Explorer Tool

Check the basic functionalities of your firmware using the Resource Explorer Tool

SERVICES

UPDATE...

Upgrade

Stay up-to-date with the newest SCI-Compiler features

Remote Customization

Remote customization service allows to generate the firmware code with minimal local resources

Using a single Sci-Compiler license, it is possible to compile and deploy firmware for multiple compatible boards that have been activated through a runtime license*. A different runtime license is needed for each board.

*Firmware generated by SCI-Compiler runs for 30-minutes only if no runtime license is installed onboard

WANT TO START?

DOWNLOAD

Evaluate the Sci-Compiler software with the **Smart Kit!**

Do you need to teach FPGA programming? Have a look at the **Sci-Compiler Educational Kit!**

Sci-Compiler

Graphical programming language for
CAEN OPEN FPGA Boards

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www.caen.it/products/sci-compiler/