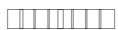


# DT5770

## Digital Multi Channel Analyzer



## A pocket-size, high performance and cost-effective solution for your spectroscopy applications.



- Compact portable 16k Digital MCA
- Suited for high resolution gamma spectroscopy
- Support continuous and pulsed reset preamplifiers
- Software selectable coarse and fine gains
- DB9 connector for preamplifier power supply
- Features Pulse Height Analysis firmware for energy calculation
- Different acquisition modes available: PHA and signal inspector for an easy setup and signal monitoring
- Software adjustable digital shaping filter, baseline restoration
- On-line pile-up rejection and software dead time evaluation
- USB and Ethernet communication interfaces
- Supported by CAEN MC2Analyzer software GUI for configuration, acquisition, and data plotting

The DT5770 is a compact portable 16k Digital MCA for gamma spectroscopy, integrating analog front-end with programmable gain and possible AC coupling. It is ideally suited for high energy resolution semiconductor detectors, like HPGe and Silicon, connected to a Charge Sensitive Preamplifier (CSP). The unit can also properly operate directly connected to a PMT with inorganic scintillators (e.g. NaI or CsI scintillators), provided exponential pulse shape and decay time above 200 ns.

The DT5770 is equipped with a FPGA featuring the real-time Digital Pulse Processing for Pulse Height Analysis (PHA) making the module a data acquisition system for Nuclear Physics and other applications involving radiation detection.

The DT5770 houses USB 2.0 and Ethernet interfaces.

Two ways of operation are foreseen:

- **“Pulse Height Analysis (PHA)”**: pulse height histogram (1k-2k-4k-8k-16k) built at board level
- **“Oscilloscope”**: input and internal filters waveforms

PHA settings, acquisition and mathematical analysis are performed through the MC<sup>2</sup> Analyzer software GUI, providing out energy spectra in ASCII and N42.42 compliant files.

CAEN provides moreover drivers for the supported communication links, DT5770 Upgrader tool and C libraries (CAENDPP library).

#### Ordering Option

Code	Description
WDT5770AXAAA	DT5770 - Digital MCA - 1 LVPS ±12V/100mA ±24V/50mA



#### MC<sup>2</sup> Analyzer (MC<sup>2</sup>A)

Digital MCA Data Acquisition and Analysis Software



MC<sup>2</sup>A is a software specifically designed to manage CAEN Digital MCA (780/781 family, DT5770 and *Ystream*) as well as CAEN digitizers running DPP-PHA (Digital Pulse Processing for the Pulse Height Analysis) firmware, like 724 or 730 families.

It allows the user to set the relevant parameters, to manage the HV channels configuration (x780 and *Ystream* only), to collect the spectra and perform mathematical analysis, like energy calibration, peak search, background subtraction, peak fitting, etc.

It is designed with multi-channel and multi-board capabilities: it can handle several boards and manage the data acquisition from each of them at the same time.



All CAEN Control Software are available for **free download** on the web site.



DT5770 rear view



News from Catalog web page  
[www.caen.it/news](http://www.caen.it/news)



Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.

**n** Small details  
Great differences



Copyright © CAEN SpA - 2016  
All rights reserved. Information in this publication supersedes all earlier versions. Specifications subject to change without notice.  
Printed in September 2016 - ADOCUME00112 - BF3264 - rev09

**CAEN SpA**  
Via Vetraia 11  
55049 - Viareggio - Italy  
Phone +39.0584.388.398  
Fax +39.0584.388.959  
info@caen.it  
www.caen.it

**CAEN GmbH**  
Klingenstraße 108  
42651 - Solingen - Germany  
Phone +49.212.2544077  
Fax +49.212.2544079  
info@caen-de.com  
www.caen-de.com

**CAEN Technologies, Inc.**  
1140 Bay Street - Suite 2C  
Staten Island, NY 10305 - USA  
Phone +1.718.981.0401  
Fax +1.718.556.9185  
info@caentechnologies.com  
www.caentechnologies.com