EP-DMCA1008

Multi-Channel Pulse Height Analyzer

1.Product introduction

The EP-DMCA1008 Multi-Channel Pulse Height Analyzer is a high-performance OEM multi-channel board, supporting energy-spectrum output up to 8192 channels. Integrated on-board functions include hardware-controlled programmable gain, DC offset adjustment and input attenuation. It can be powered via USB or DC 5 V, with built-in reverse-connection protection. Besides energy-spectrum analysis, it also provides oscilloscope mode and shaped-pulse viewing mode to satisfy diverse signal acquisition and observation requirements.

This product adopts high-speed, high-precision ADC for analog-to-digital conversion. It implements pulse filtering-denoising and accurate amplitude extraction through digital trapezoidal shaping-filtering with fast-slow dual-channel architecture, digital baseline restoration, digital pulse pile-up rejection and count-rate correction. An optional preamplifier high-and-low-voltage power board is available. It is applicable to scintillator-based measurement systems using NaI, $LaBr_3$, $CeBr_3$, as well as semiconductor detectors such as PIPS, gold-silicon surface-barrier detectors and CZT.

2.Functional indicators

1. Supports maximum 8192-channel energy-spectrum output for high-count-rate and high-precision energy-spectrum measurement
2. Supports hardware programmable gain, DC offset adjustment and input attenuation; features energy-spectrum mode, oscilloscope mode and shaped-pulse viewing mode
3. Communication interfaces: Ethernet, USB2.0 and serial port; supports multi-device networked measurement

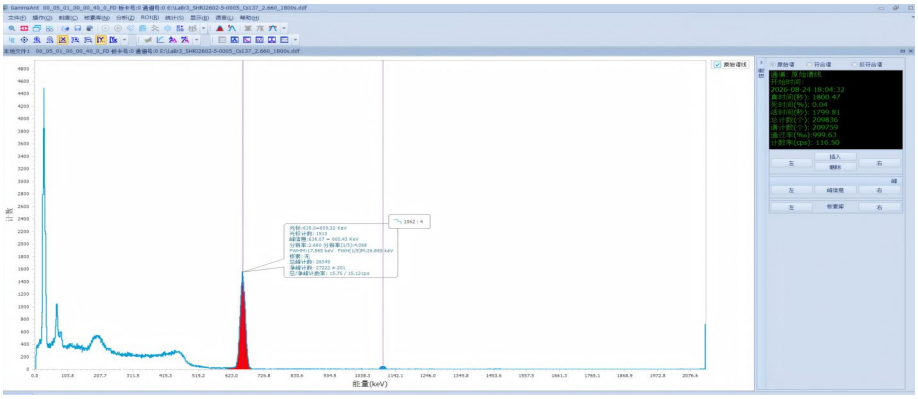
3.Application Scenarios

1. Energy-spectrum measuring equipment including portable spectrometers and gamma-ray spectrometers
2. Scintillator measurement systems (NaI, $LaBr_3$, $CeBr_3$) and semiconductor detection systems (PIPS, gold-silicon surface-barrier detectors, CZT)

4.Performance Parameters

Selectable energy channel numbers	256,512,1024,2048,4096,8192
Hardware gain	×1.0,×2.0,×4.0,×8.0
Software gain	4-byte
Shaping rise time	0.1 μs～25 μs, adjustable in 0.1 μs steps
Shaping flat-top time	0.1 μs～5 μs, adjustable in 0.1 μs steps
Digitization sampling rate	80 MSPS
Typical power consumption	1.6 W
Board dimensions	80 mm × 50 mm
Communication interfaces	Ethernet, USB2.0, serial port
Power supply	USB power supply or DC 5 V power supply
Additional features	Oscilloscope mode, shaped-pulse viewing mode, multi-device networked measurement

5.Energy-Spectrum Test



● Energy-Spectrum Test Interface

Web：www.epic-crystal.com Tel：+86 512-5013-5884 Email：sales@epic-crystal.com
Add：7# Building, No.1 Jinjie Road, Huaqiao Ecnomic Development Area, Kunshan City, Jiangsu Province 215332, China