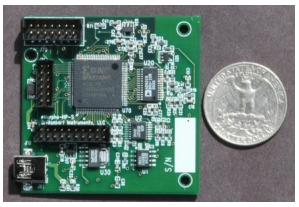
eMorpho MCA

MCA for scintillator detectors
Very fast — Very small — Low power

ONLY $1750

www.BridgeportInstruments.com

Overview



eMorpho 2-inch square board next to a US Quarter Dollar coin.

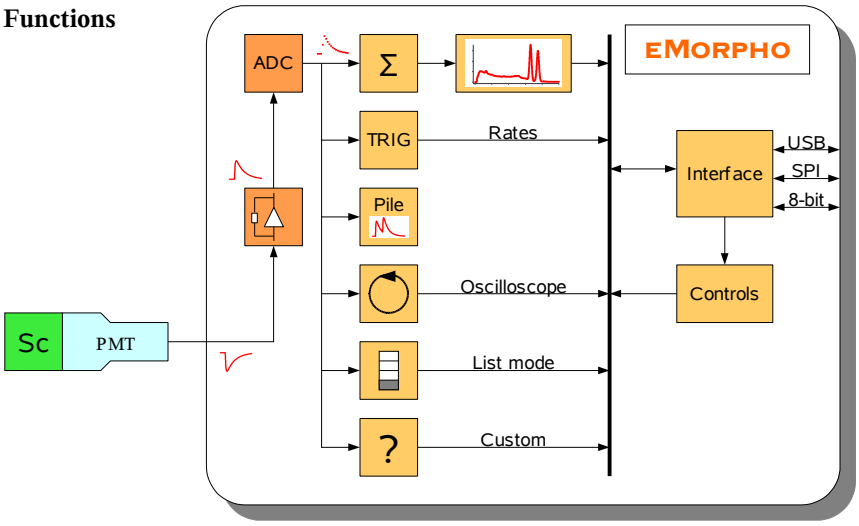
The eMorpho is a digital MCA for use with scintillator detectors. It has been developed to yield the maximum accuracy and throughput for any scintillator.

It can be used as a highly portable desktop unit or become part of a radiation detection instrument.

Open source software, modular firmware structure and plenty of resources in the on-board FPGA make the eMorpho an ideal component to create unique instrumentation.

- Small, low-power MCA
  - 2" x 2" or 2" diameter
  - Powered and controlled by USB
    250 mW for the MCA (min.)
    125 mW for the USB interface
- Easy to use and integrate
  - No preamplifier required
  - Open source software
  - Auxiliary I/O and interfaces

Functions



- MCA
  - 4096 channels, 32-bit
  - Best energy resolution and highest histogramming rate for any scintillator
  - Maximum rate: 16 Mcps
  - Uses pulse shape information for adaptive pile-up rejection
- Added features
  - Oscilloscope, List mode, n/γ, α/β discrimination
  - User-specified signal processing
- Daughter boards can add capabilities

Applications

Especially when used with a TwinBase HV-supply the eMorpho allows you to:

- Achieve the best accuracy and speed with your scintillator detector;
- Make full use of the great precision and speed of $LaCl_3$ and $LaBr_3$;
- Operate many detectors synchronously;
- Perform coincidence or gated spectroscopy;
- Add functionality to the MCA to create a unique instrument;
- Perform real time pulse shape analysis for particle discrimination.

- Easily portable desktop unit (with metal housing)
- Ideal for embedded systems:
  - Very low power consumption
  - Tight integration with HV supply
  - Programmable I/O for local communication and control
- Code extensions:
  - Split histogram memory
  - Gain stabilization
  - Multi-detector support