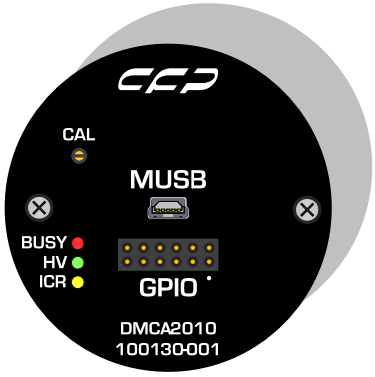
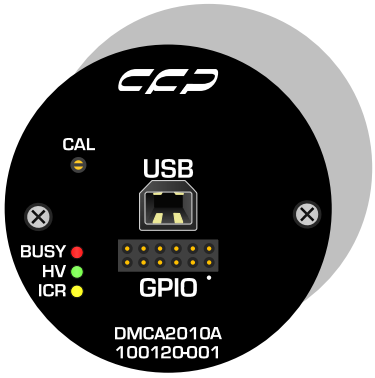
Features:



- Plug onto PMT
- Many PMT pin outs supported
- Control PMT high voltage
- Measure pulse energy, arrival time, triggering
- Measure perform pulse shape analyzer
- Three variants: USB, (Optional CAN, RS485, RS232)
- Active divider for highest linearity (Optional)

Description:

The MCA-base consists of a CFP multichannel analyzer and an integrated high voltage generator and divider to power the photomultiplier (PMT). It plugs directly onto the PMT and can be powered and controlled via USB.
The high voltage divider can deliver 50μA DC current and 10mA pulse current to the PMT anode while maintaining excellent gain stability.
The device is sealed and specified over a temperature range of -15°C to +50°C.



Short Specifications:

Construction:
MCA and high voltage unit are integrated into a single housing. The MCA-Base is potted and fully sealed.

Connectors:
PMT: 14-pin socket for DCMCA2010 base. Multiple PMT pin outs and custom pin outs are available.
USB: USB and mini-B USB connector. Thread lock is available (OPT).
GPIO: 8-position connector with bayonet locks (OPT).

MCA:
USB-powered and controlled
Digital-signal processing MCA
Using waveform digitizing ADCs
10-bit/20MSPS (power saver) to 12-bit/80MSPS (high performance).
One unit is suitable for all scintillators by varying programmable parameters.
4096 x 32-bit histogram memory
Very high maximum histogramming rate, up to 1Mcps (periodic)

Optional extended Functionality:

- Trace acquisition for oscilloscope-like display, 1024 samples
- List mode data acquisition stores energy, time-of-arrival and (optional) pulse shape parameter on event-by-event basis.
- Real-time pulse shape discrimination

High voltage unit:
0 to 1500 V, positive or negative, programmable in 1V steps.
Transistorized divider for highest linearity at lowest power consumption. (OPT)
Power consumption:
Depending on ADC and speed: between 200mA to 400mA at 1000 V.
Operating conditions:
Temperature: -15°C to +50°C
Software:
CFP-Pro / DAQ for evaluation software.

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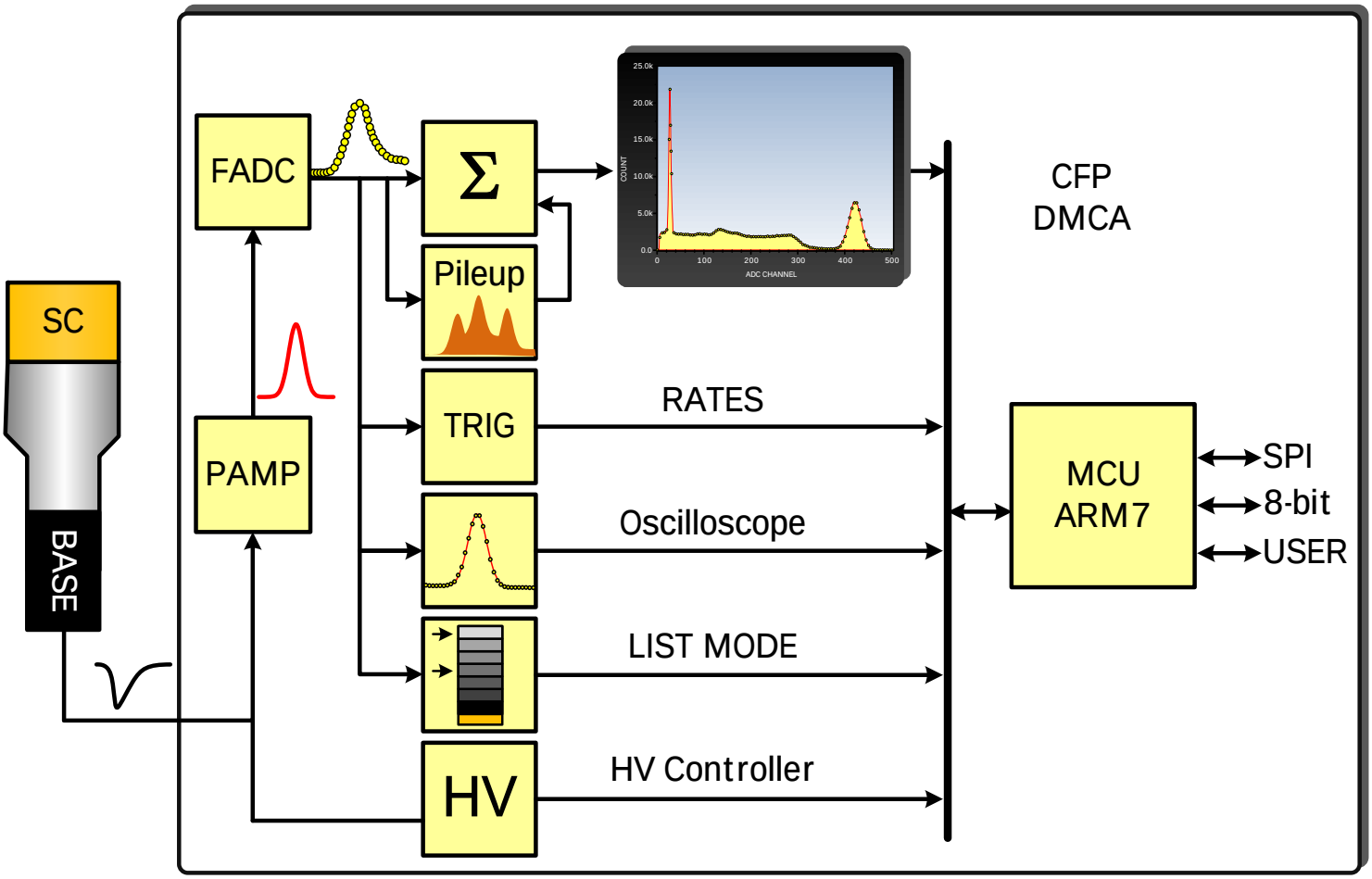

DMCA BASE 2010 BLOCK DAGRAM