SiPM readout board

DT5702

32 Channel SiPM readout Front-End Board BOXED

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Features

- Readout board for SiPM based on WeeROC CITIROC ASIC
- Provides bias voltage in the range of 20-90 V individually adjustable for each of 32 SiPMs
- Amplification and shaping of the SiPMs output pulse on each of 32 channels
- Discrimination of shaped signal at configurable level from 0 to 50 SiPMs photo-electrons
- Providing basic coincidence of signals from each pair of adjacent even-odd channels
- Allows to trigger only on events that happen in coincidence with event in a group of other DT5702/A1702 (event validation)
- Formation of the trigger for digitization of the signal amplitude
- Formation of the time stamp with respect to an input reference signal with 1 ns accuracy
- Digitization of signal amplitude of all 32 channels
- Data buffering
- Efficient back-end communication based on Ethernet standard
- ROOT-based readout software

- SiPM powering and readout board

- this is the system as we currently foresee it for the Cerenkovs in LUXE

- would be useful e.g. for advanced prototype with smaller channels and SiPMs

Pos.	Typ	Kurzbeschreibung	Anz.	Preis p. Stück (EURO)	Total (EURO)
1	**DT 5702**	32 ch SiPM readout frontend board, boxed	1	2.860	**2.860**

Lab multimeter

(For example):
Fluke Calibration 8845A Tisch-Multimeter digital
 CAT II 600 V Anzeige (Counts): 200000

1.276,00 €

- remote-controllable lab multimeter

- we have a very old one that can't talk to a PC

- useful for temperature and pressure monitoring!

Assorted Neutral density filters

(For example): Thorlabs

Mounted Ø25 mm Absorptive Neutral Density Filters

NE04A
🔍 Zoomen

Item #	Optical Density[a] (Transmission)	Transmission Data[b]	Item #	Optical Density[a] (Transmsision)	Transmission Data[b]
NE01A	0.1 (79%)	ⓘ	NE13A	1.3 (5%)	ⓘ
NE02A	0.2 (63%)	ⓘ	NE15A	1.5 (3%)	ⓘ
NE03A	0.3 (50%)	ⓘ	NE20A	2.0 (1%)	ⓘ
NE04A	0.4 (40%)	ⓘ	NE30A	3.0 (0.1%)	ⓘ
NE05A	0.5 (32%)	ⓘ	NE40A	4.0 (0.01%)	ⓘ
NE06A	0.6 (25%)	ⓘ	NE50A	$5.0\ (1\times10^{-3}\%)$	ⓘ
NE07A	0.7 (20%)	ⓘ	NE60A	$6.0\ (1\times10^{-4}\%)$	ⓘ
NE08A	0.8 (16%)	ⓘ	NE70A	$7.0\ (1\times10^{-5}\%)$	ⓘ
NE09A	0.9 (13%)	ⓘ	NE80A	$8.0\ (1\times10^{-6}\%)$	ⓘ
NE10A	1.0 (10%)	ⓘ			

a. Measured at 633 nm. See the *Specs* tab for optical density tolerances.
b. Click on ⓘ for a plot and downloadable data. The black dashed line indicates the designated optical density.

Entsprechend Ihrer Währungs-/Länderwahl erfolgt der Versand Ihrer Bestellung aus European warehouse

30 mm Cage Filter Wheel for Ø1" (Ø25 mm) Filters

CFW6
🔍 Zoomen

▶ Holds up to Six Ø1" (Ø25.4 mm) Filters
▶ Maximum Filter Thickness: 0.25" (6.4 mm)
▶ SM1-Threaded (1.035"-40) Through Ports on Main Body
▶ Includes Six SM1RR Retaining Rings
▶ Bottoms Taps for Post Mounting

The CFW6(/M) is designed for our 30 mm cage system and has six ⬚
click into place, centering the filter in the cage. The stationary input
Each cage rod through hole is accompanied by a side-located lockin
optomechanics, the bottom of the imperial version has two 1/4"-20
mounting holes.

- want to use ND filters to reduce light yield in Cerenkovs
- measure linearity of different filters
- coatings etc.?
  (Rajendra's advice would be helpful here!)
- test filter stacking etc.

1 mounted filter: ~50€
+ mounting: 150€ /piece

PCI express card for VME bridge
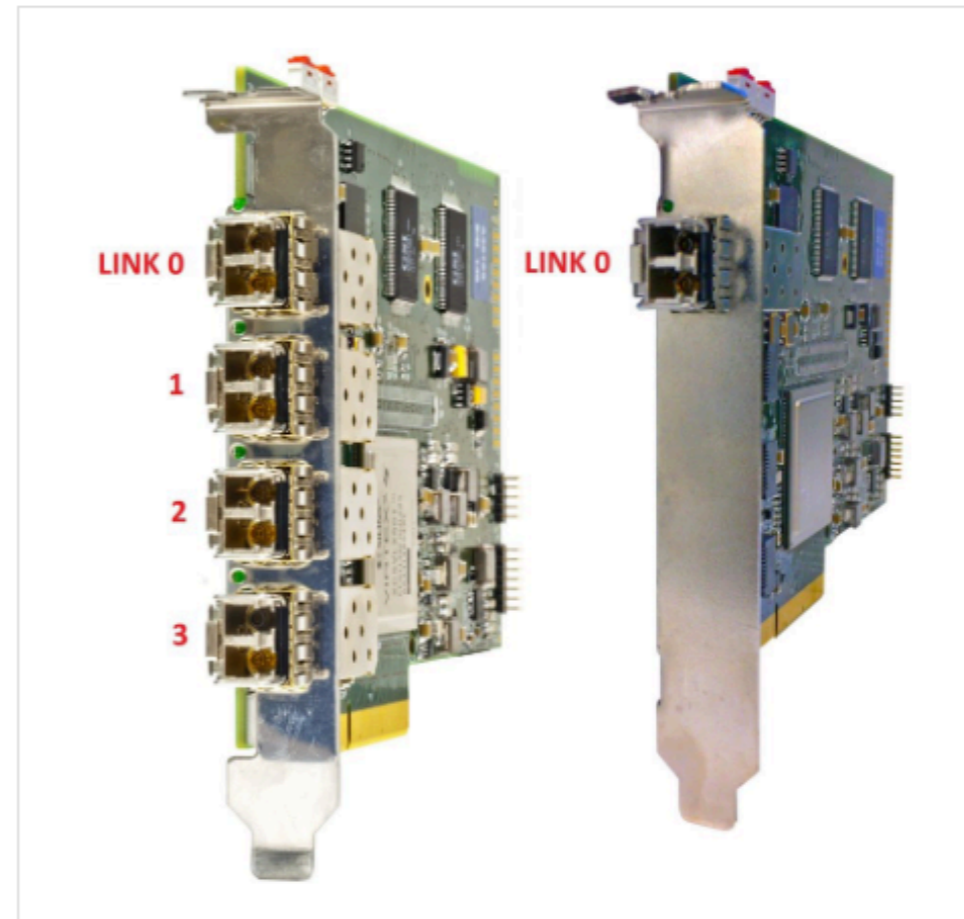

A3818

PCI Express CONET2 Controller

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Features

- PCI Express 1.1 x8 card up to 4 indipendent optical links
- 1,2,4 Links available
- **CONET2** CAEN Proprietary Optical link Compatible
- Up to 32 CAEN CONET2-compliant Optical slave cards (CAEN VME Bridges or Waveform Digitizer) controlled by a single A3818
- API/Drivers for:
  - Linux
  - Windows (warning: unsigned driver)

- for PC to talk to VME crate
- currently we have PCI card — it's increasingly difficult to find PCs with PCI slot and not PCIe
- at the moment we have a PC setup that works (we think…) with the PCI card we have

Didn't get a quote for this from Caen, but I assume ~0.5-1k€