EMC front-end Electronics

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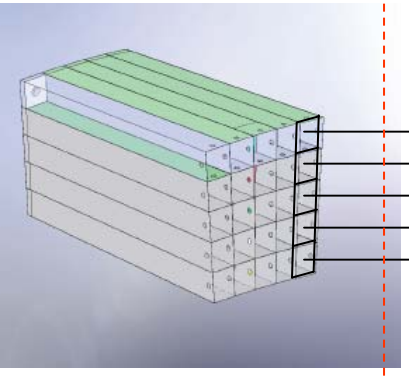
Radout electronic for a 25 crystals tower



Crystals Mechanics

X 5

X 5

X 5

4X

Ranges Lvds

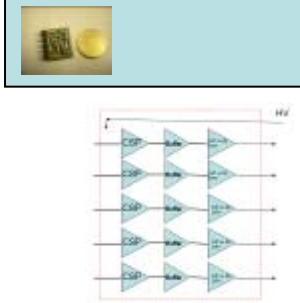
5

5

ranges
analog
Coded

ADC CLK

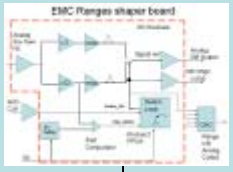
VFE Board



PIN
Or
APD

5

Shaper
Range
Board



Differential
ADC
Board

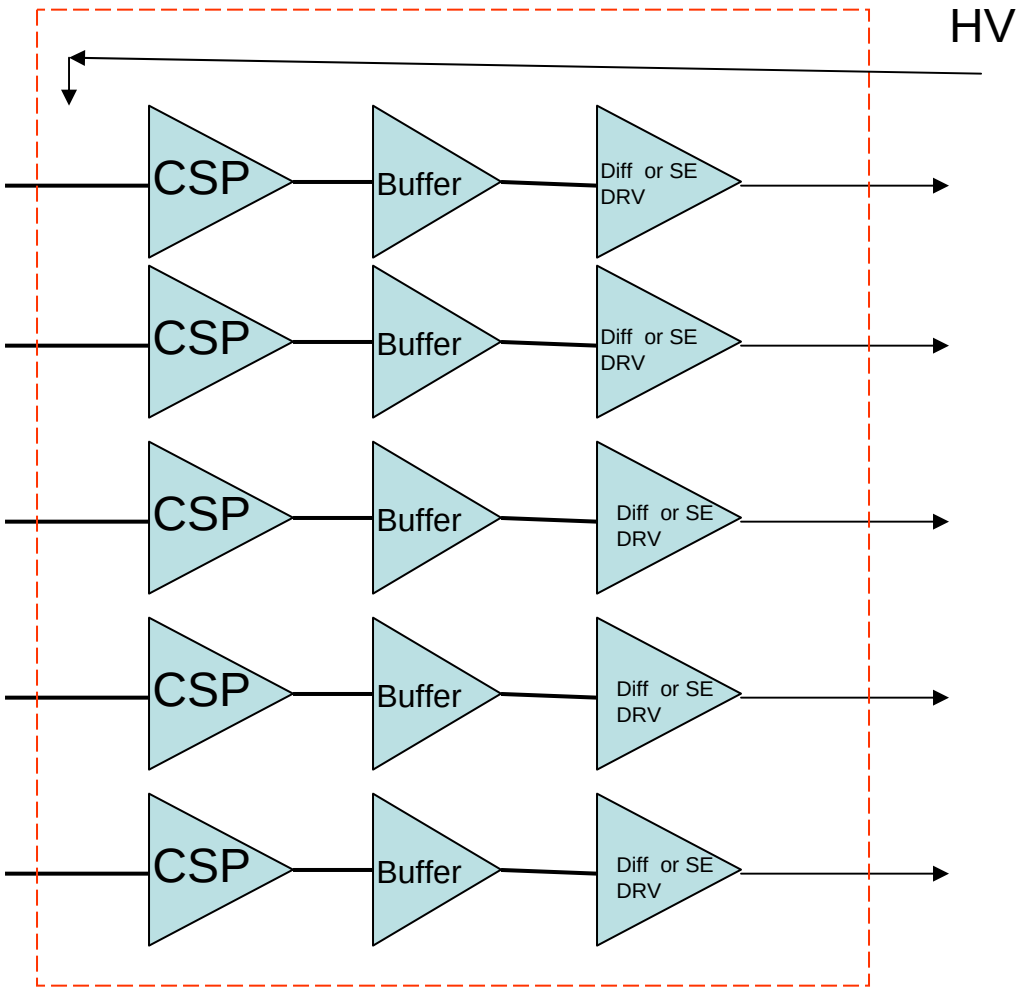
I2c

VME

- 25 channel (full module readout)
- All boards produced

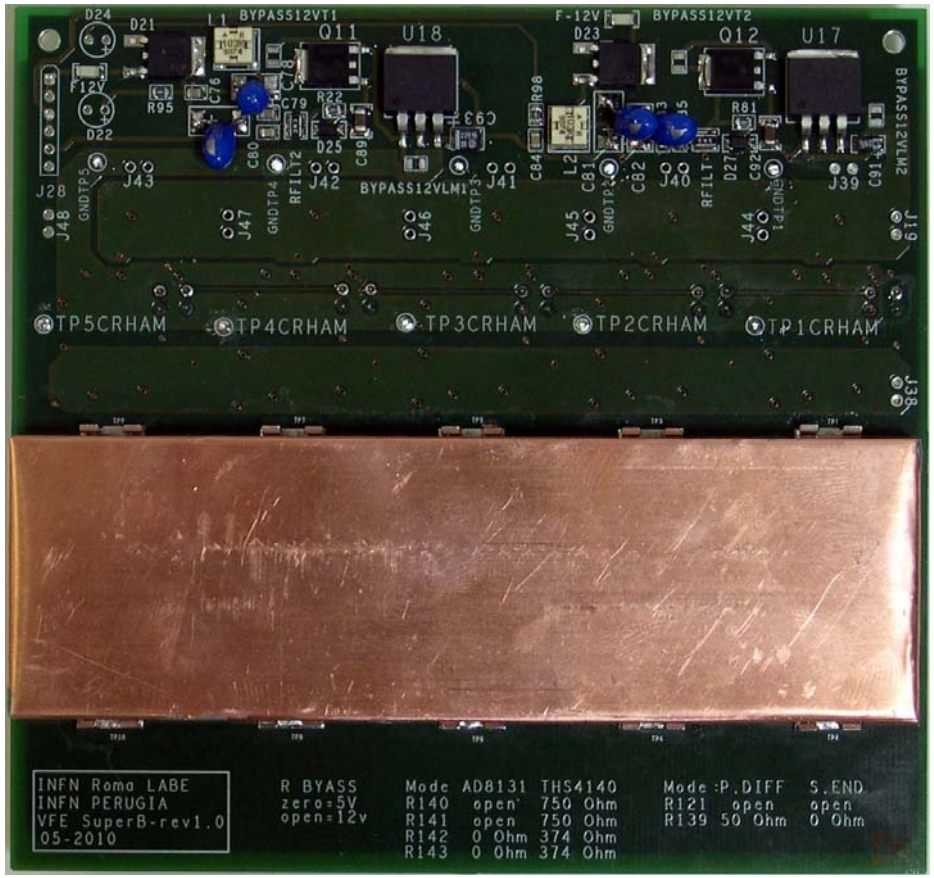
Very Front End Board

- EMC VFE Board
- 5 CSP Channels
- Enable to mount: Cremat, Hamamatsu, Home Made CSP
- HV distribution



Very Front End Board

- EMC VFE Board
- 4 Layers
- 5 CSP Channels
- Enable to mount:
  Cremat,Hamamatsu,Home Made CSP
- HV distribution
- Mounted on crystals
- Interface with EMC range Board

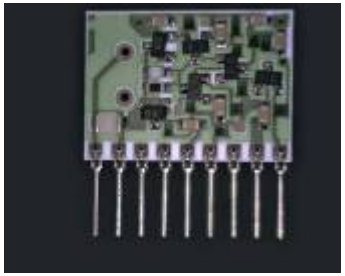


Three Type of CSP under evaluation

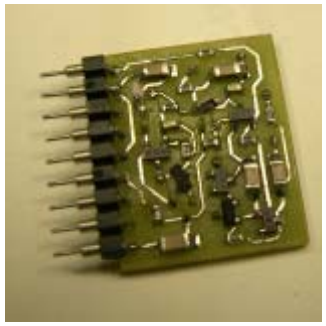
Cremat 1.4 V/pC

- Availibility
- Perfomance
- cost

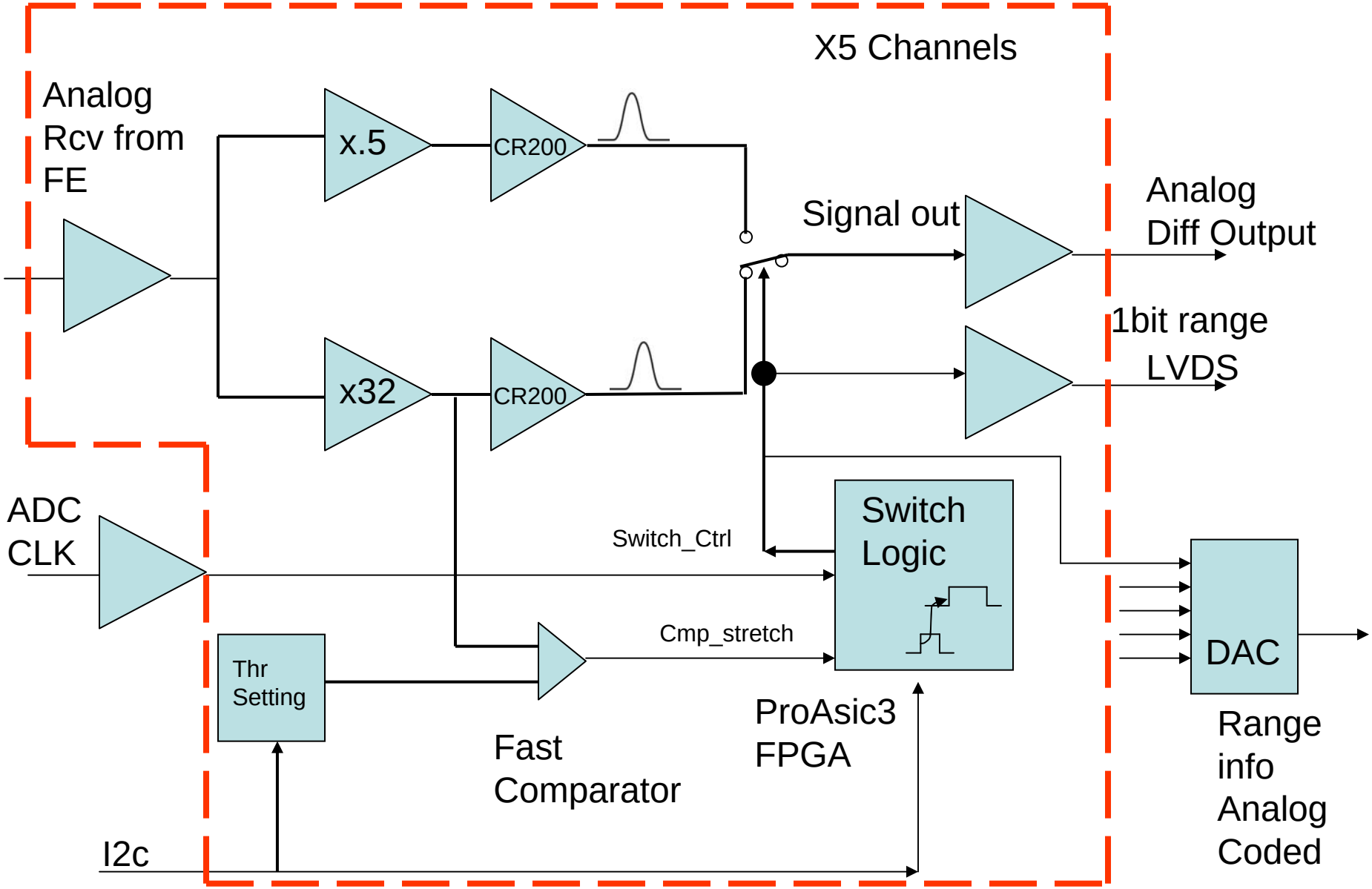
Hamamatsu 1 V/pC



Homemade 1 V/pC

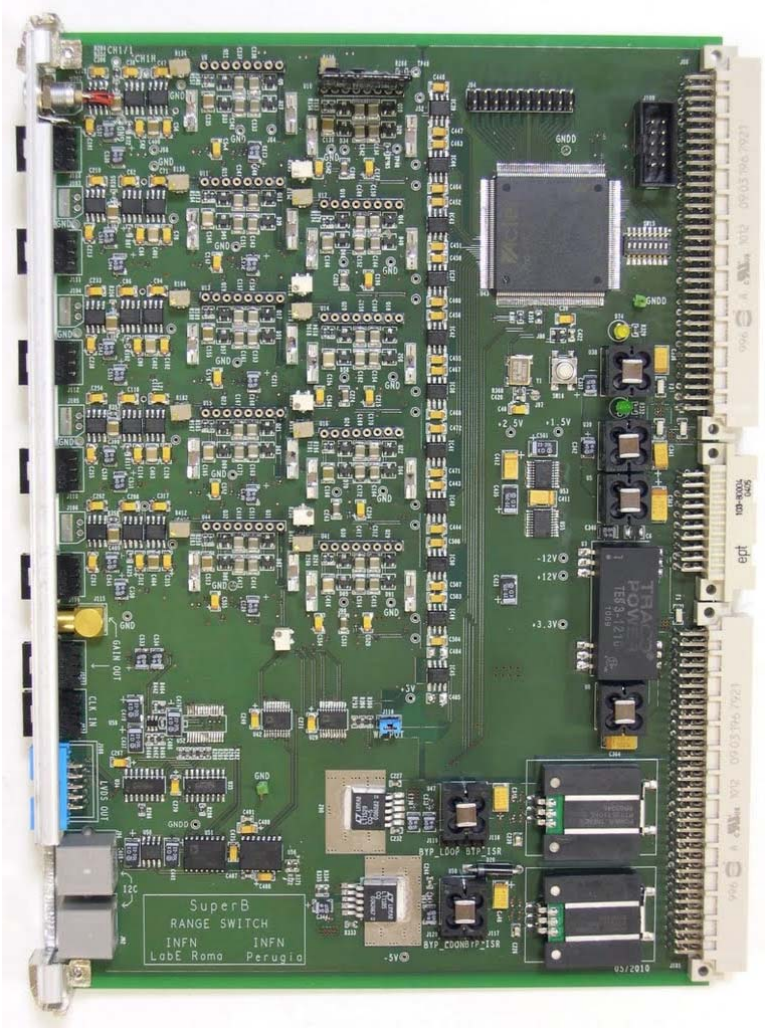


EMC Ranges shaper board

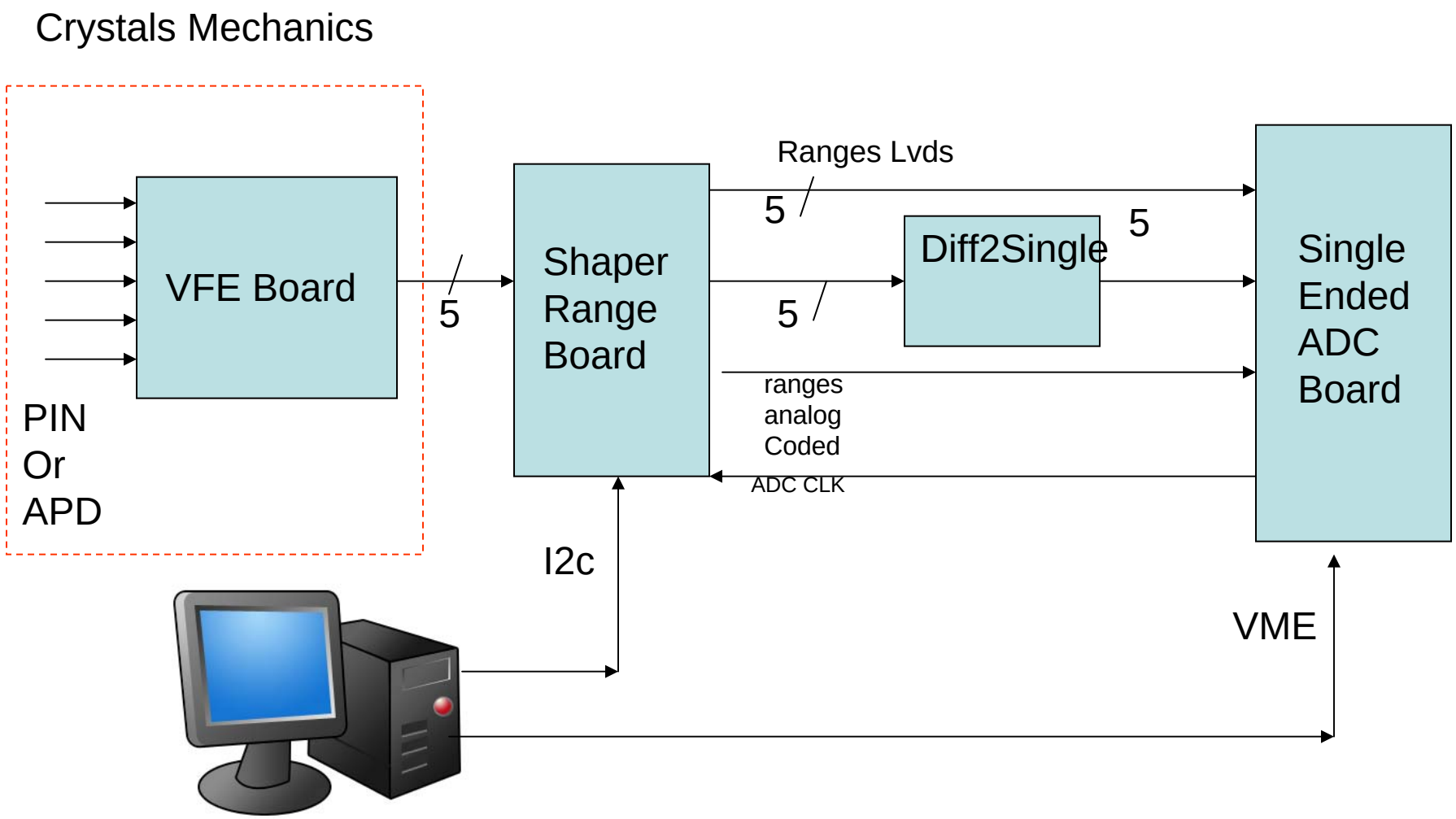


EMC Range Board

- EMC Range Board
- 8 Layers VME size
- 5 Channels Analog Differential input
- 5 Channles Analog Differtial output
- 1 Main clock input
- Long line I2c control input
- Range info analog coded
- Lvds output for Range bit

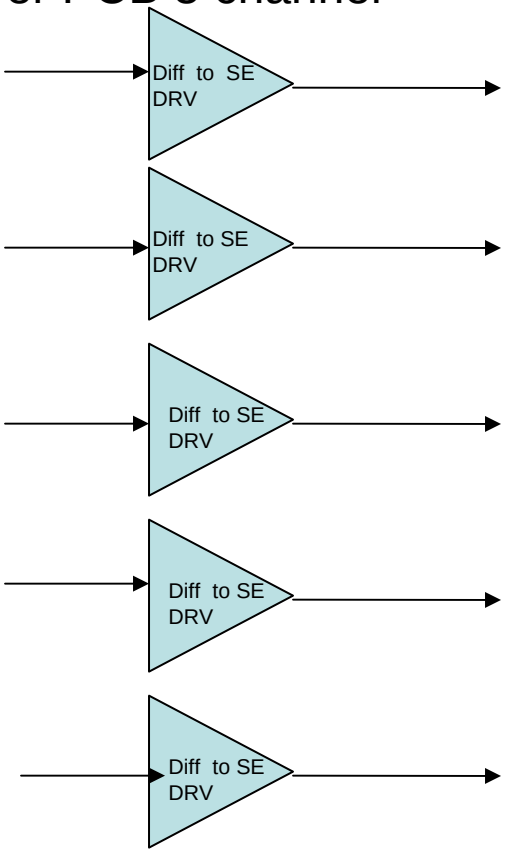


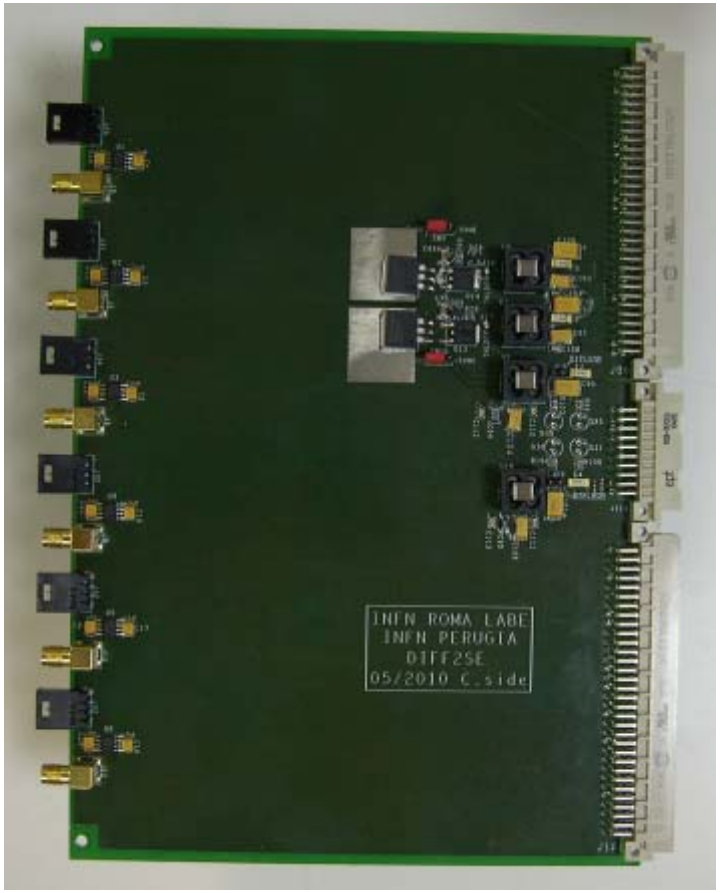
EMC 5 Channel readout protoype (single ended ADC)



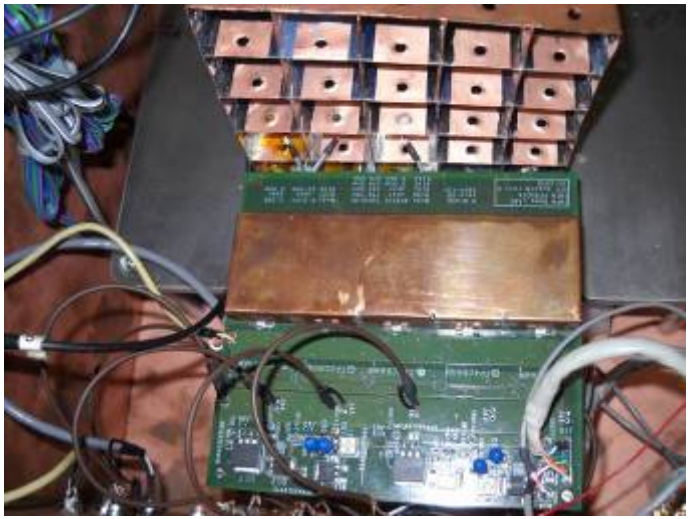
Differential2Single ended Board

Utility board to convert differential signals
to Single Ended signals.
Four layer PCB 5 channel

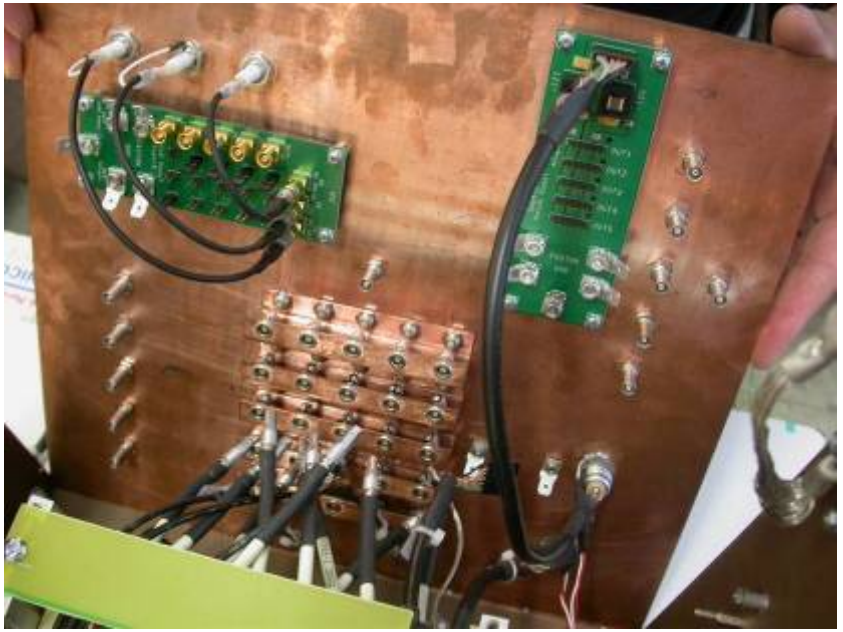




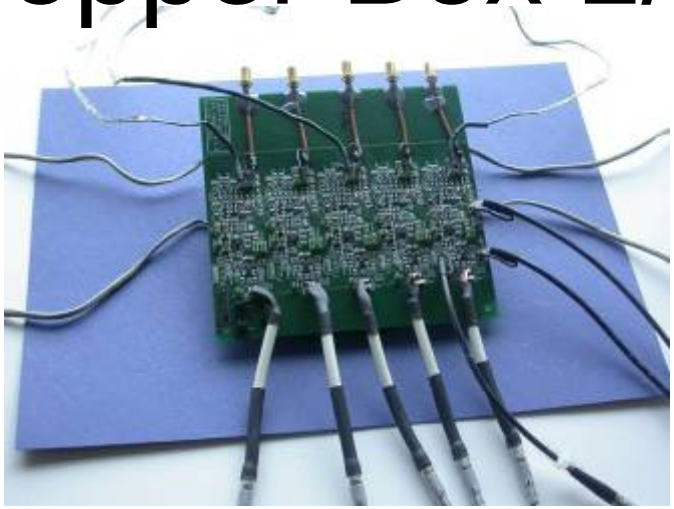
BTF setup

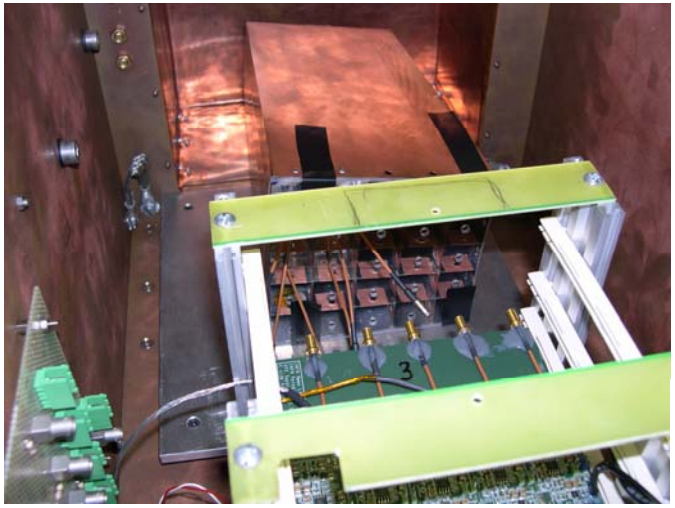


Front Panel Cabling



VFE inside the copper Box 1/2





VFE inside the copper Box 2/2