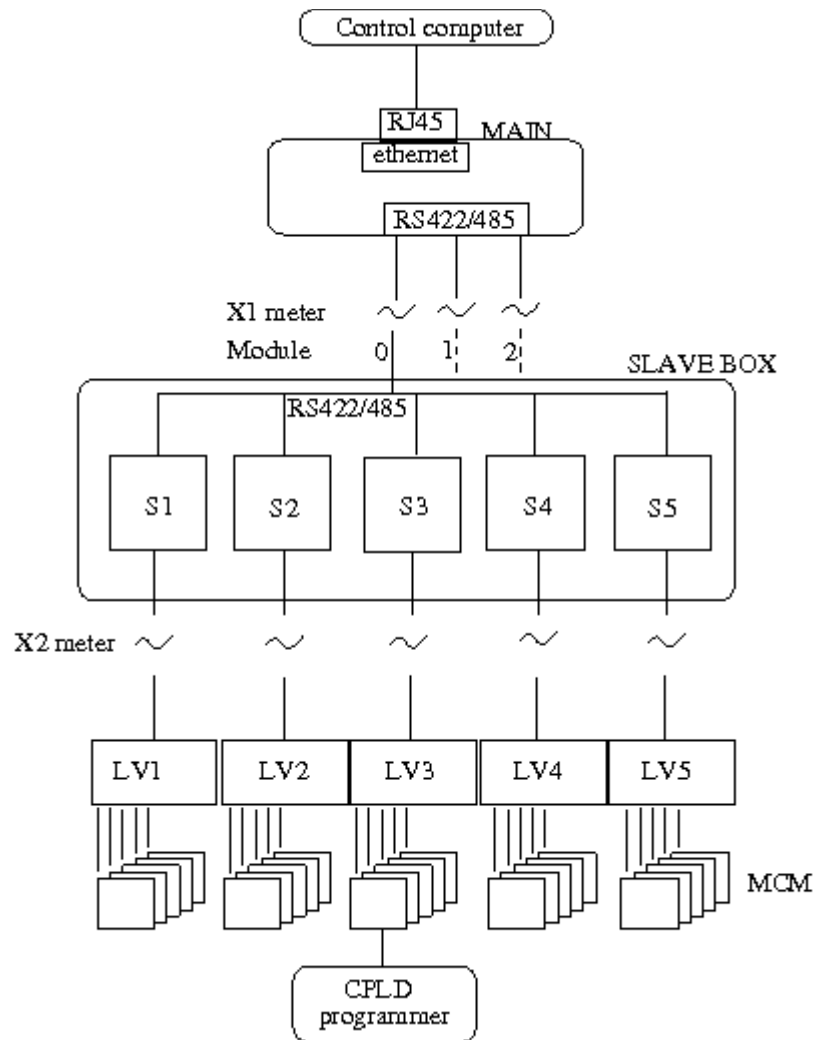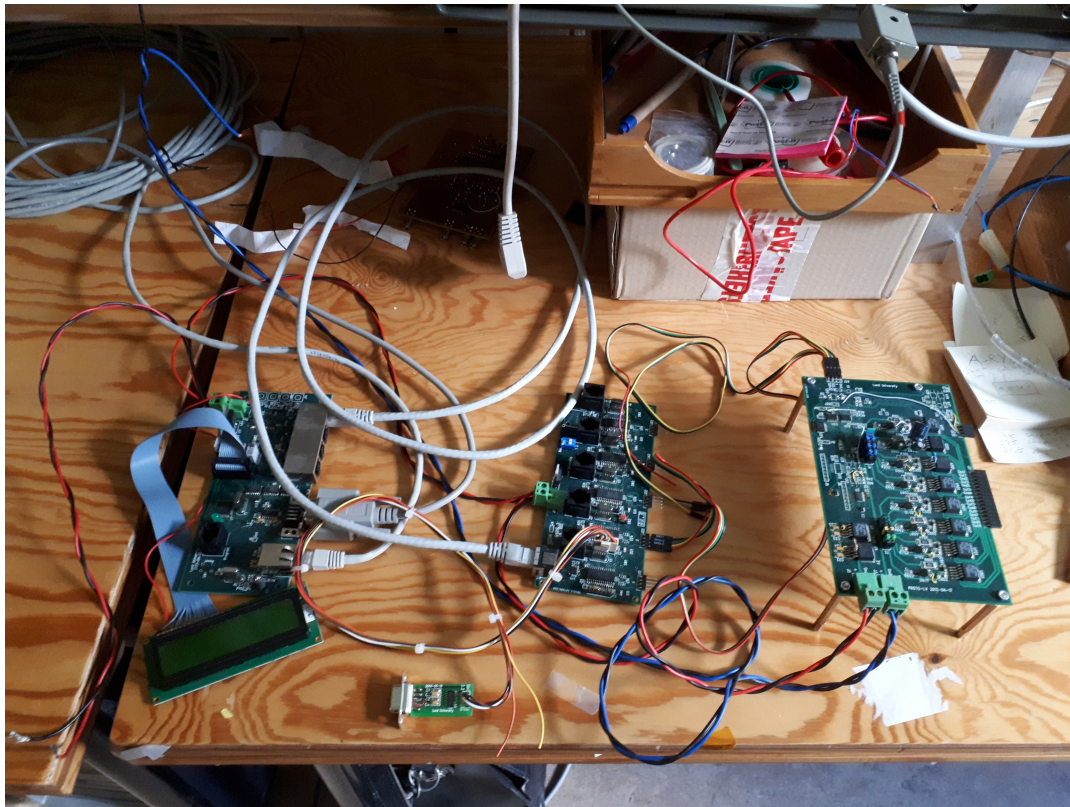Overview of detector control system.
MAIN Master card: interface to computer
Slave box 5to1: controls the low voltage card
Voltage card: power regulators, monitor of currents/voltages, throughput of SRU DTC.

From left to right: master – slave (5to1) – prototype low voltage card
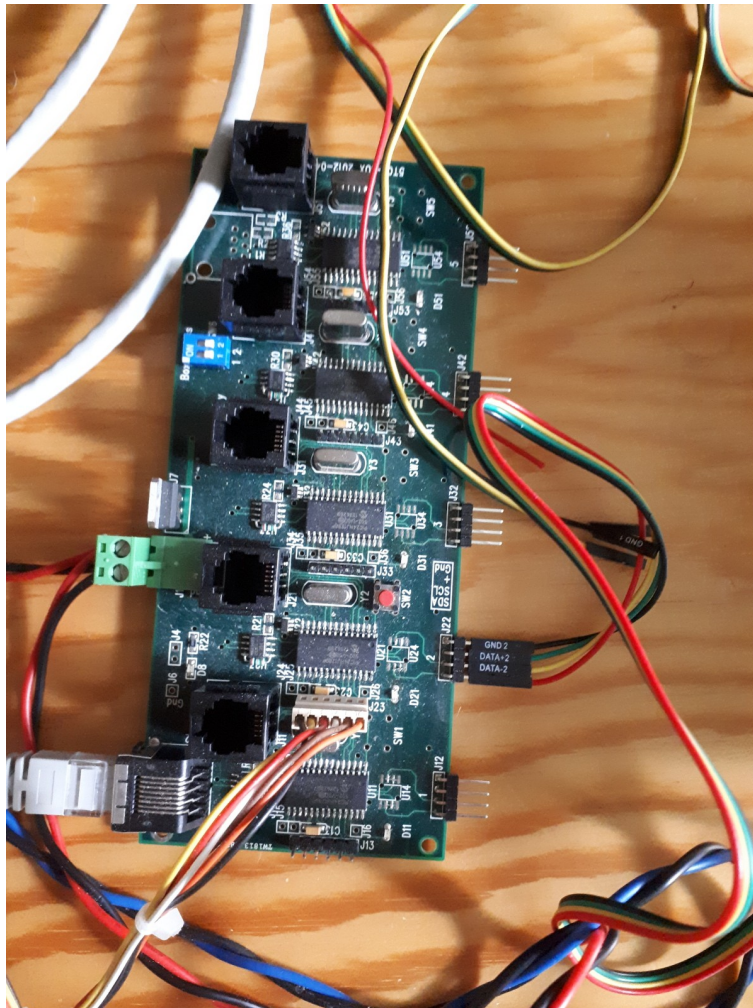
Master card:

Ethernet to computer.
Can handle four slave 5to1 cards (i.e. in total 100 MCM boards).
Communicates with slave cards with RS422/RS485.
Have a few I/O for trigger/busy etc purpose.
Software have automatic update of values read from LV card.

Slave 5to1 card:

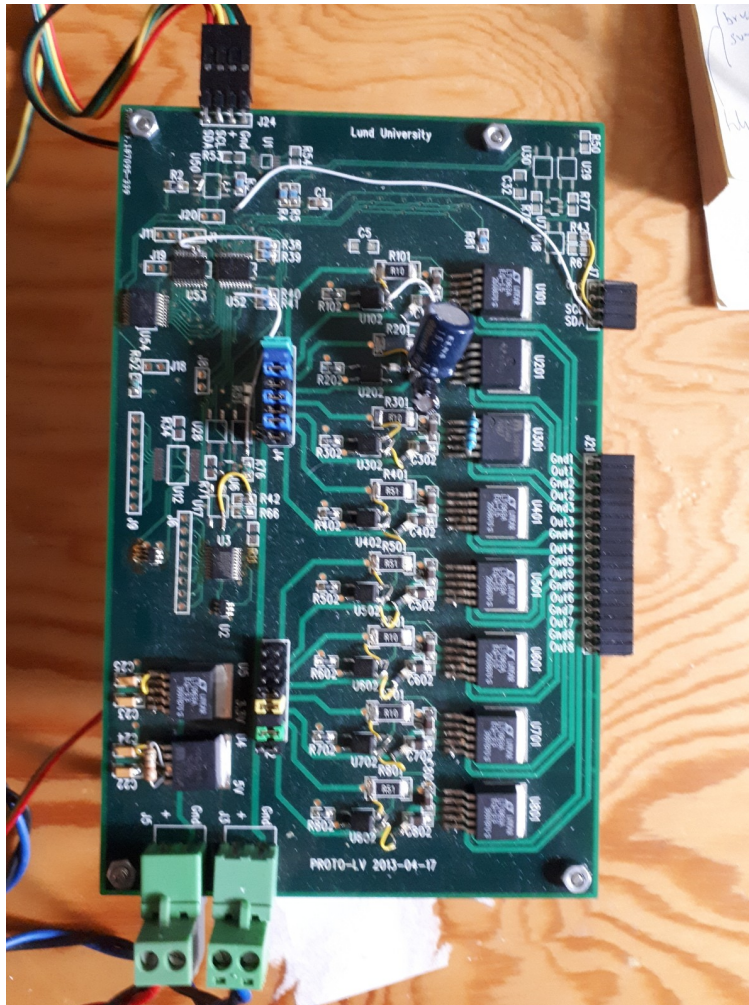Controlled by the master card via RS422/RS485.
Can handle five low voltage cards.
Have five processors, one for each low voltage card.
Connector to low voltage card contain: I2C (data & clock), GND, +5V.

Prototype low voltage card:

Designed for one carrier board test card.
Do not have any SRU DTC throughput.
Regulators for carrier board test card.
I2C ADCs for monitoring of currents/voltages.
I2C registers for power on/off.
MCM emulator of DAC and temperature sensor.
I2C connection to carrier board test card.

Final low voltage card should handle five MCM boards.