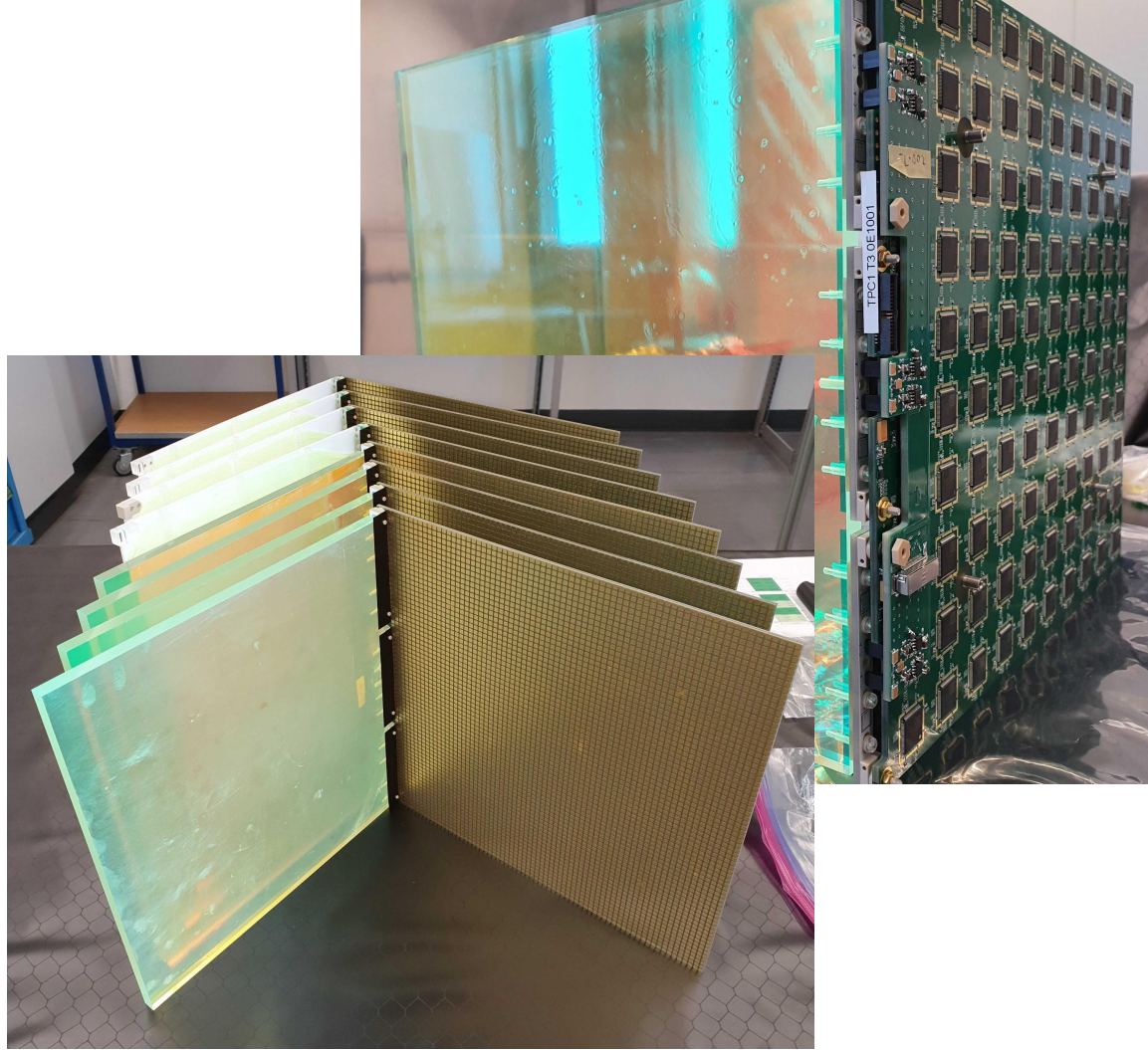# Charge Readout Status

Armin Karcher
March 18 2021
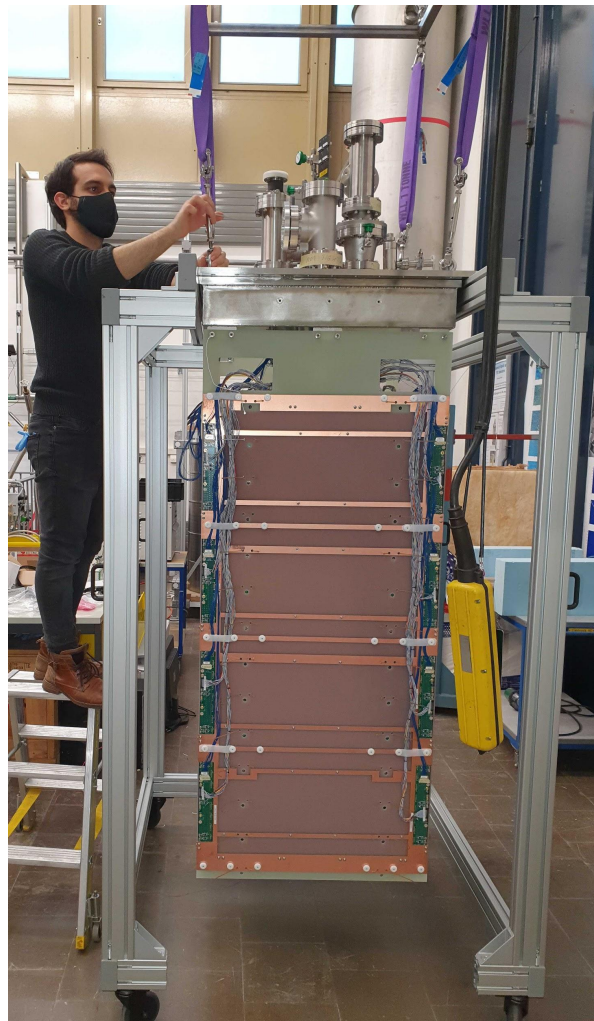
20 Pixel tile PCBs have been assembled and tested.

2000 LArPix ASICs

98000 Pixels

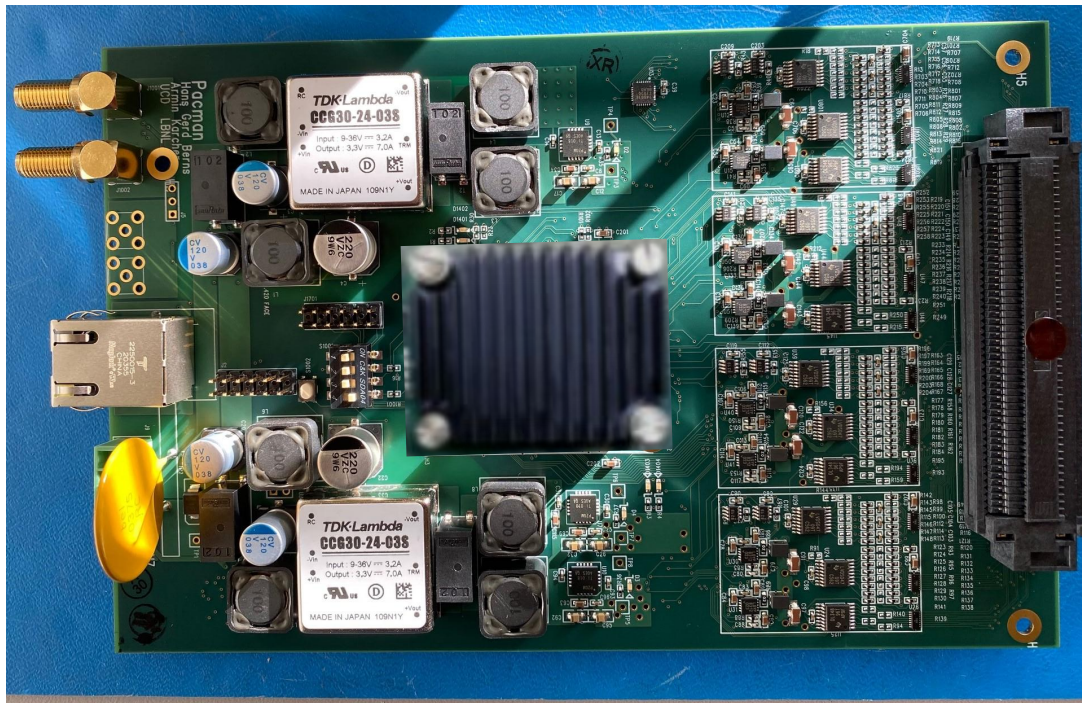Assembly of Module 0 is complete

Charge Readout

Pacman rev 3

Reads out 8 tiles

Some issues in power distribution

Interfaces

- Power: 24V 2A peak
- Ethernet 1G base T
- Trigger, Clk isolated SMA, 3.3V TTL

Pacman connectivity

Dataflow:

    Configuration and DAQ via ZeroMQ over TCP/IP

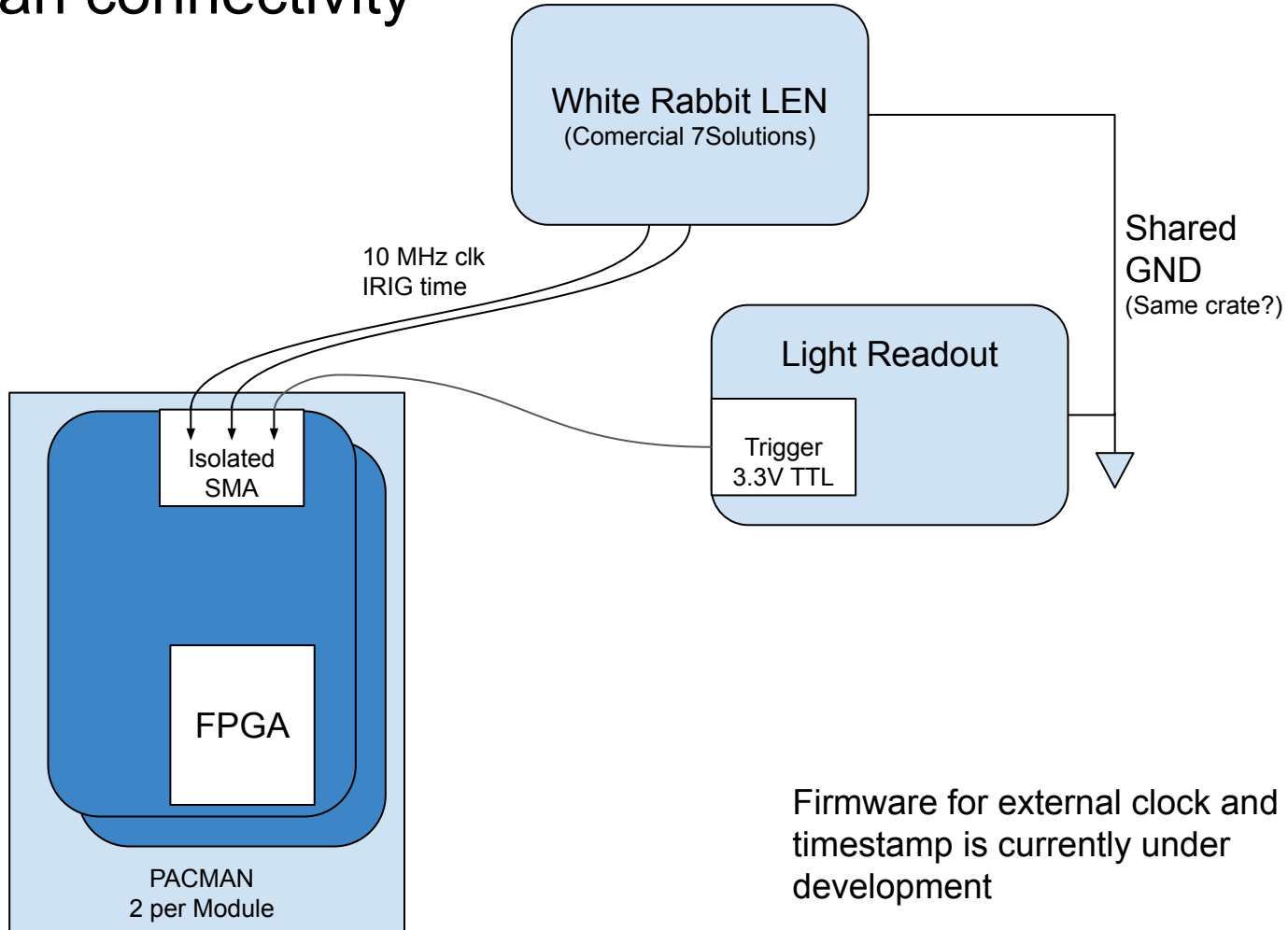   No separate slow control interface. All voltage/current telemetry is via ZMQ

    For 2x2 we will have 8 Pacman controllers

Power:

    24V @2A

    Proposed use of PL506 supply with 2 modules (this has separate slow control)

Pacman connectivity

Charge Readout Grounding

Pacman is designed to minimize grounding issues

- Power input through isolating DC-DC converters
- Filtering of input common mode and reflected ripple current
- Trigger / CLK through isolated SMA
- Transformer coupled Ethernet
- Filter on all data lines to/from dewar
- Additional filter between Pacman GND and dewar GND