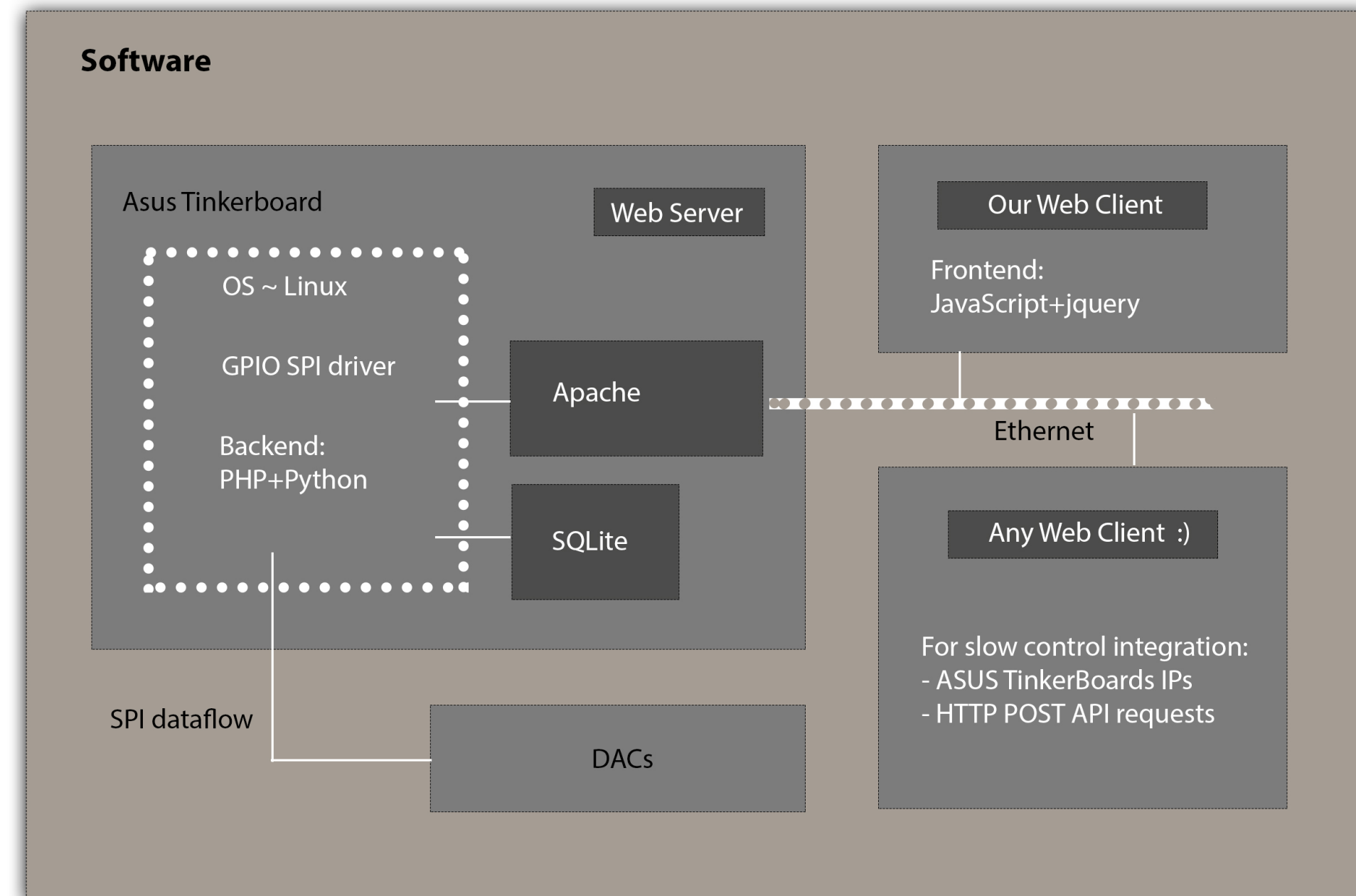# Light Readout system for 2x2
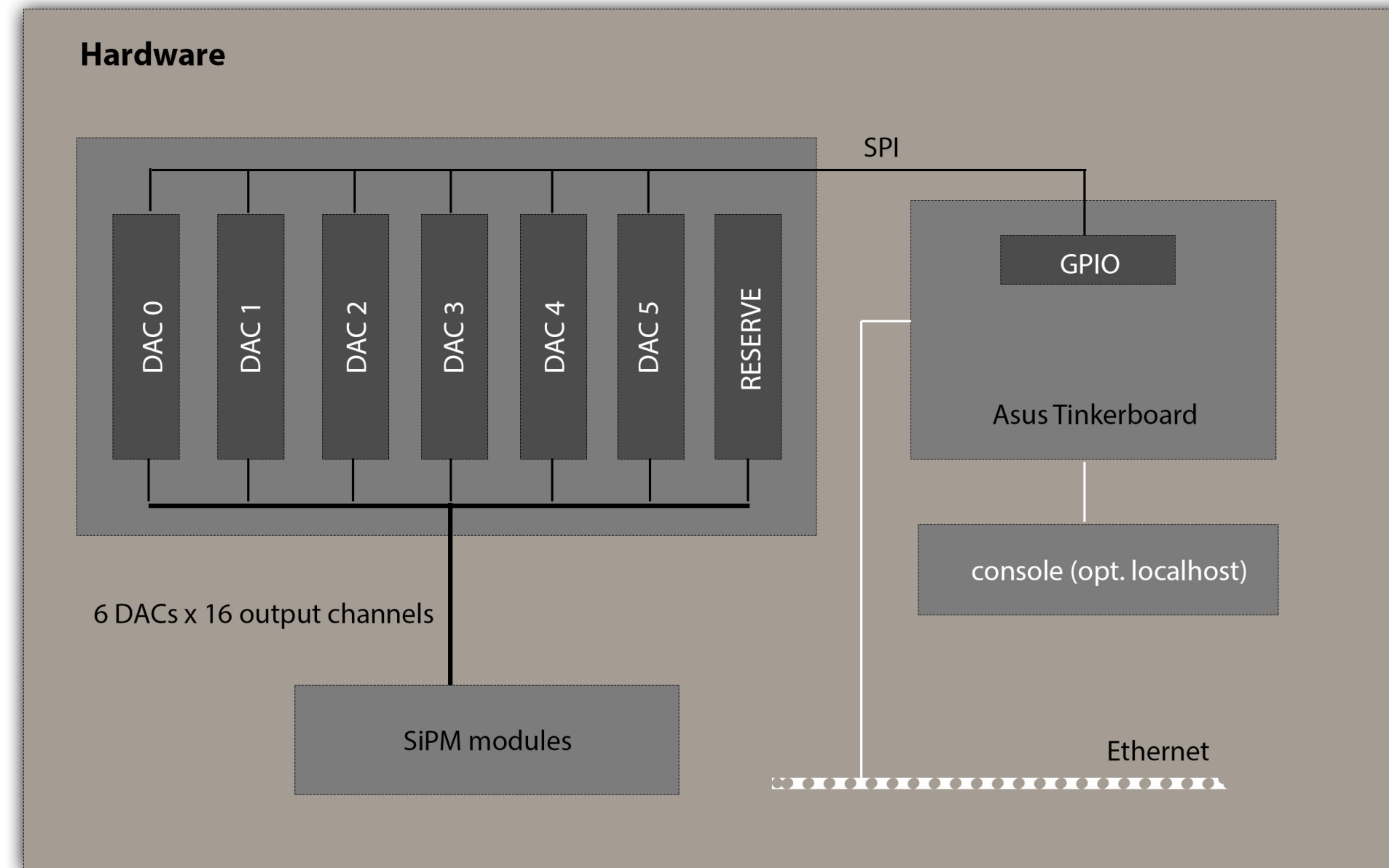
Alexandr Selyunin

Slow control system

Hardware

SPI

| DAC 0 | DAC 1 | DAC 2 | DAC 3 | DAC 4 | DAC 5 | RESERVE |

GPIO

Asus Tinkerboard

console (opt. localhost)

6 DACs x 16 output channels

SiPM modules

Ethernet

Software

Asus Tinkerboard

Web Server

OS ~ Linux

GPIO SPI driver

Apache

Backend:
PHP+Python

SQLite

SPI dataflow

DACs

Our Web Client

Frontend:
JavaScript+jquery

Ethernet

Any Web Client :)

For slow control integration:
- ASUS TinkerBoards IPs
- HTTP POST API requests

B. Gromov

View of the FE electronics for single TPC

twisted pairs to ADCs rack

Feedthrough PCB

microcoaxial cables

Thinker PC

Crate with VGAs, DACs and micro PC
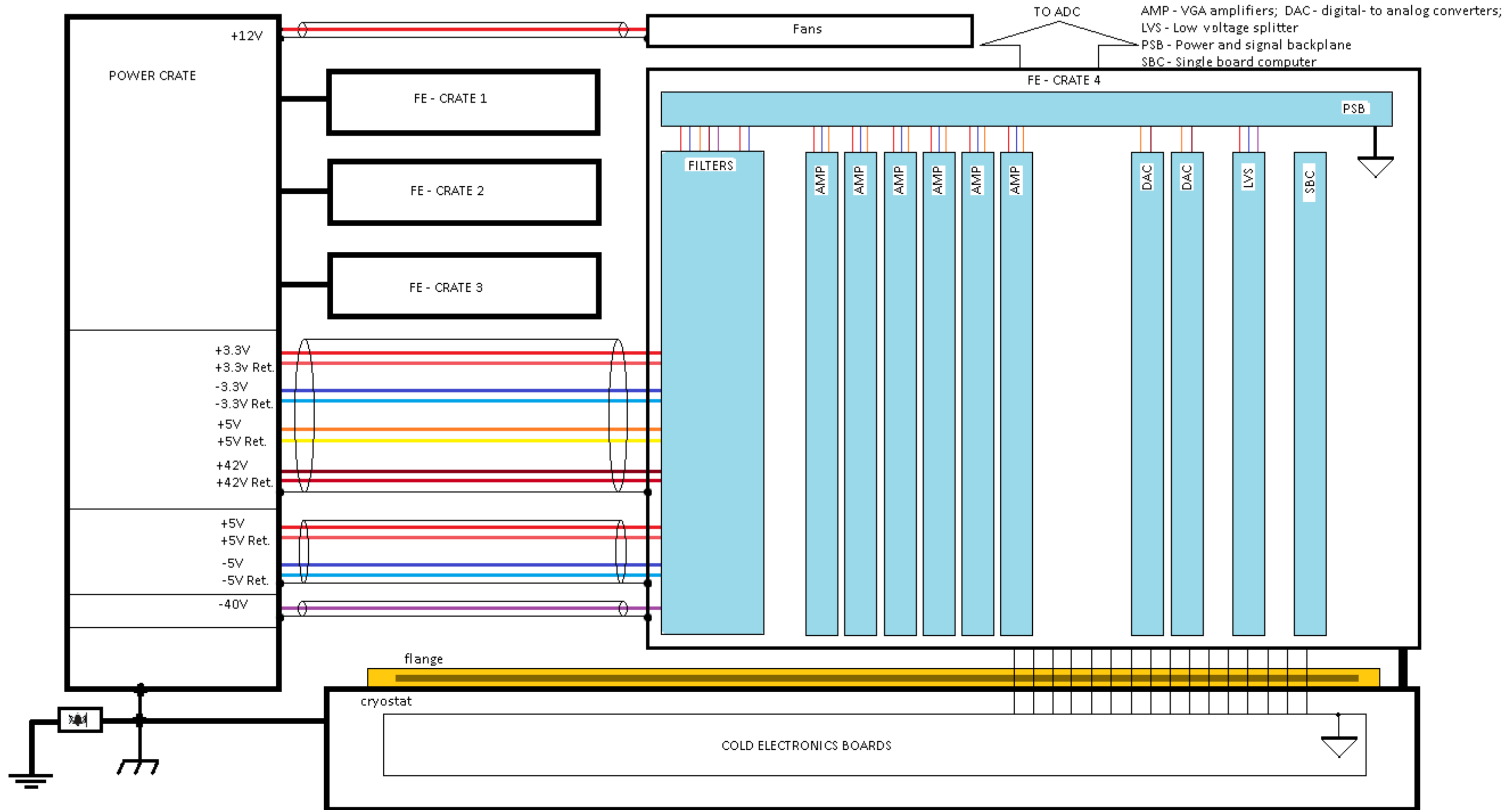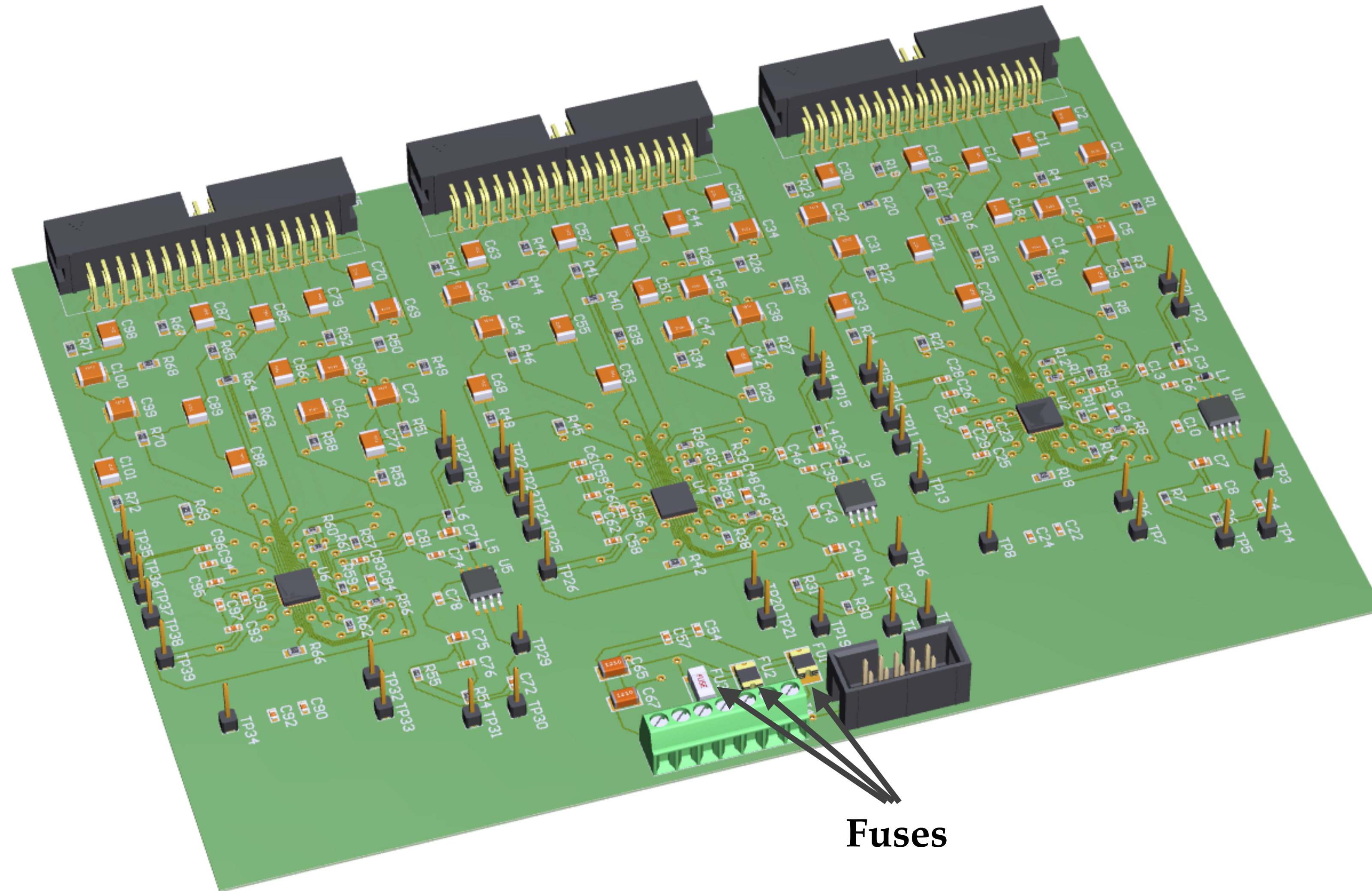
- For 2x2 there are 4 of such the crate. Each has the Thinker board micro PC.
- Thinker PC is connected to switch by means of an optical cable **???** (We have not checked yet an adapter from copper ETH to Optical line (COVID-19))

S. Sokolov

System distribution

D. Fedoseev

DAC module

Fuses

- **DAC module (48 CH) based on DAC81416 (16 CH) from Texas Instruments. 3 DAC81416 per module.**

A. Chetverikov