

Agenda Power and cabling meeting 04.02.2019

Overbooked

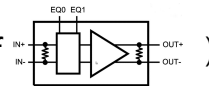
Nik & Frank
not here

Main topics:

- Power cabling to the SSW and FEB crates
- Power to and from the Power crates
- Mechanical design of the power crate / power board
 - How to arrange 2 (US/DS) x 2 x (14-16 power boards + one controller) on the SSW
 - IO connectors
 - Backplane with power distribution, control, common **ground** connection, **cooling**
- Power cabling ↔ Data cables ↔ Water cooling interference
- Controller design

Other discussion topics

- FEB power (inductor footprint, reminder of the 850 kHz for the 1.1 VDC, 3.3 VDC ...)
- Grounding scheme
- T diode readout
- Maraton power supply in area (crate)
- Micro twisted pair data cables (Nik order a Eval board of

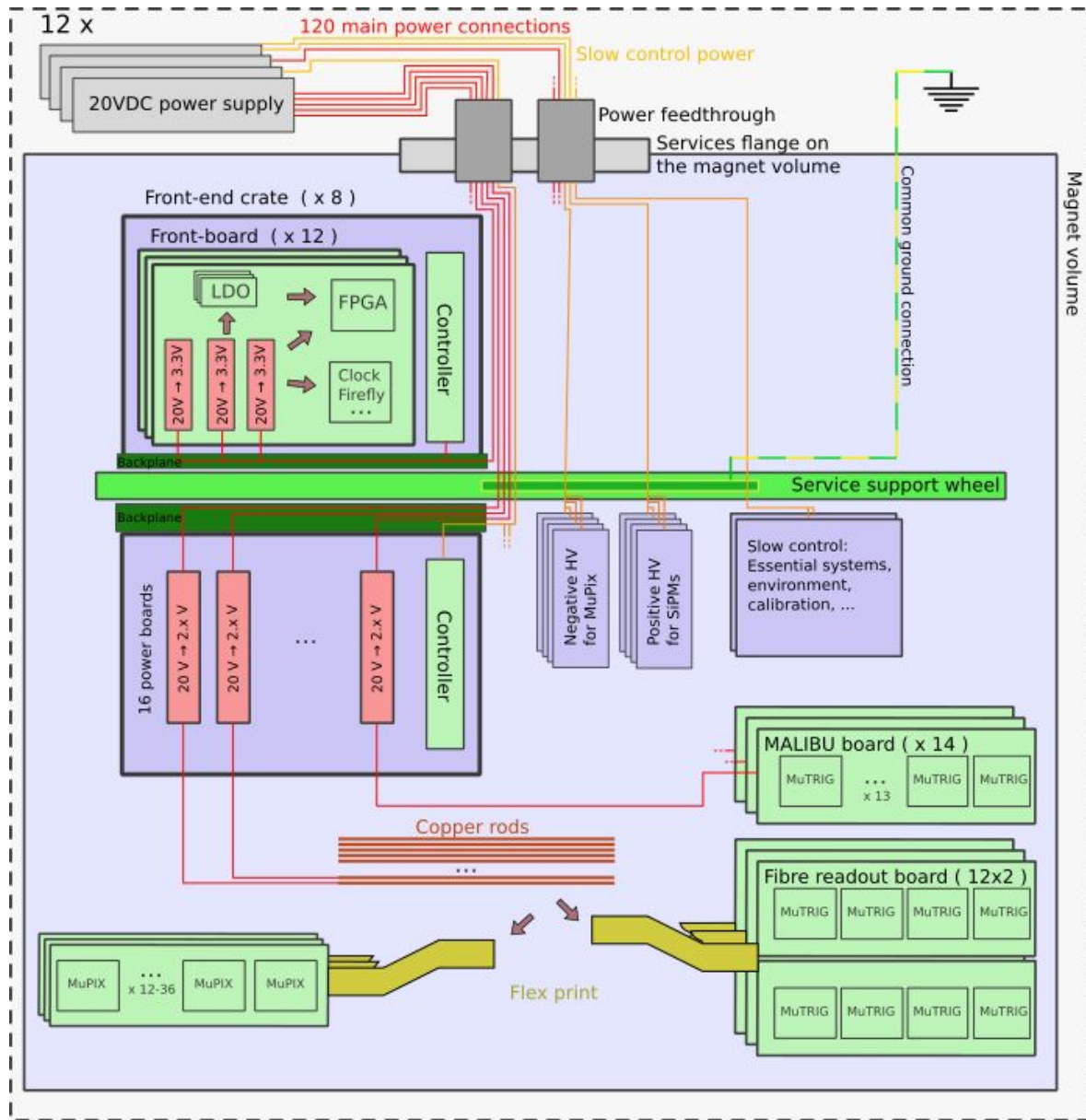


Goals:

(concepts / path forward to)

- Agree on form factors for power board, path forward to V2 board
- Integration of power boards / crate into the mechanical design
- Wengen points
- ...

Power distribution walkthrough



- ❑ Maraton power supply/rack
 - ❑ Power feedthrough (2 plugs ?)
 - ❑ Ground, other signals?
 - ❑ Fanout to
 - ❑ 4 FBC
 - ❑ HV box
 - ❑ 4 Power crates
 - ❑ Other Slow control
 - ❑ (2 x ?) power connection to FBC
 - ❑ FEB power / LVDS / Controller
 - ❑ Power crate / controller
 - ❑ Power boards
 - ❑ 17 connections to Power crate
 - ❑ Ground connections (backplanes to central point ?)
 - ❑ Power to Cu rods
 - ❑ Power to Malibu / outer layer $\frac{3}{4}$
- Other:** Twisted pair routing, Interlock cabling, ...