

LMU München - Excellence Cluster Universe

PS and Services

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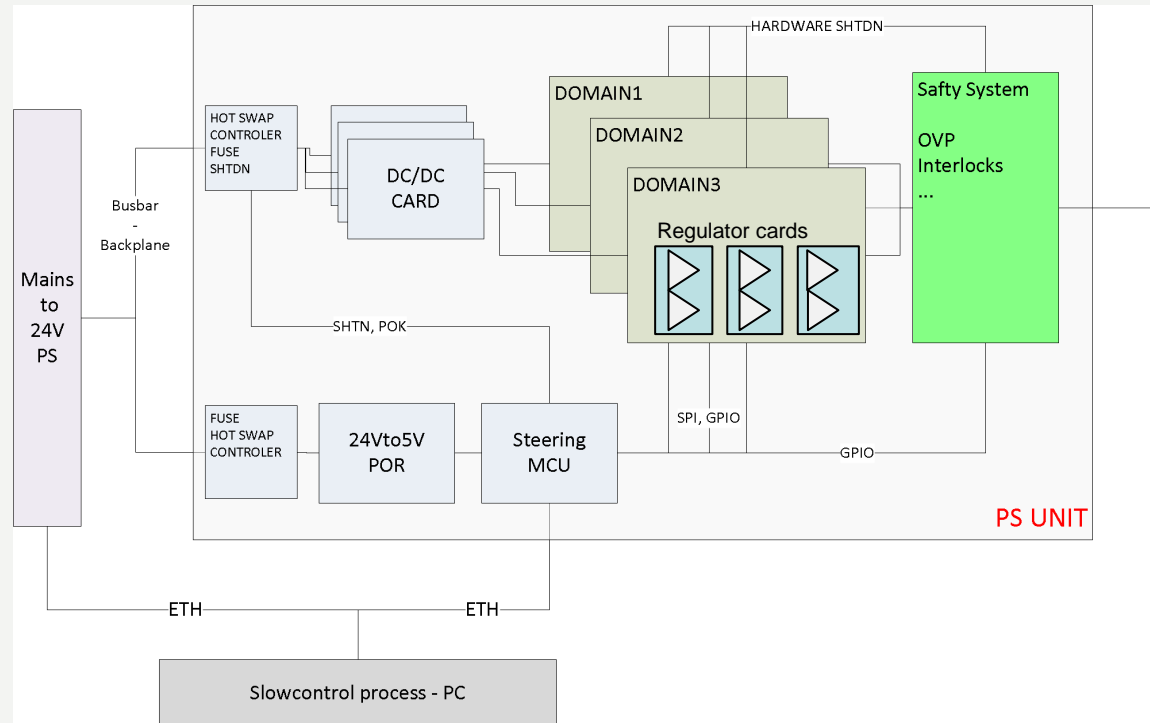
DEPFET Collaboration Meeting



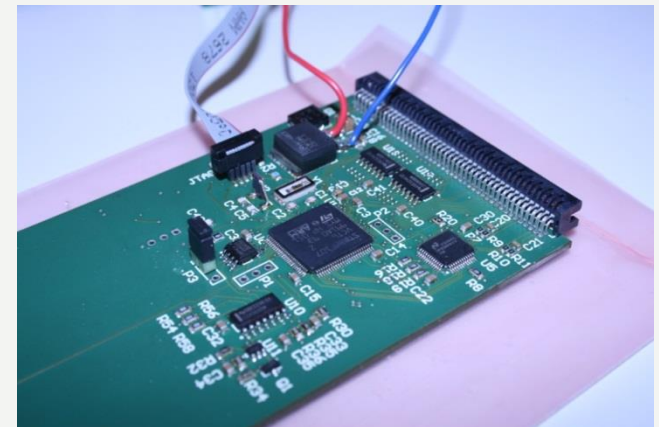
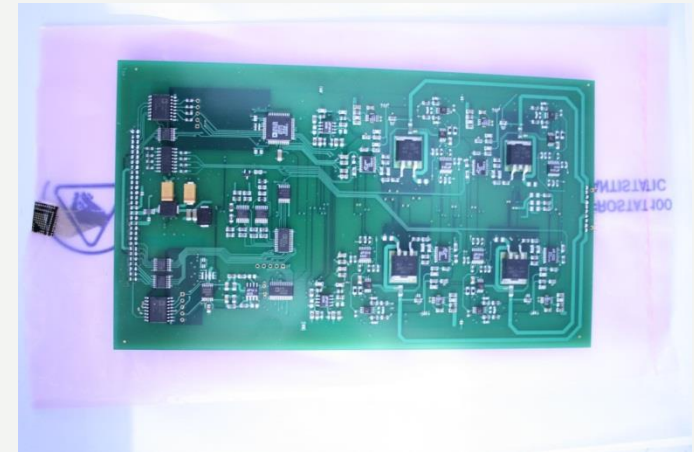


- Status of Demonstrator
- Preproduction
- Services
- Outlook

- Up to 24 channel
- Analog, Digital and DEPFET Steering voltages isolated
- 1 Slot for DC/DC converter card reserved
- Hardware OVP and interlocks
- Controlled by MCU
- Ready for integration into DAQ/Slowcontrol



- Demonstrator PS prototype ready, equipped with 16 channels
- Features incorporated:
 - 4 Channels in Digital part – 5V output capability
 - 4 Channels in Analog part – 10V output capability + Sink for AmpLow
 - 8 Channels in Steering part using the Unipolar- and the Bipolar regulator card
 - 26V output capability
 - HV channel to -45V
 - Source- and sink for the bipolar regulators
 - MIMA – PS DC/DC converter card
 - OVP not available yet – passive replacement card
- 2 units available



→ Commissioning for EMCM tests is ongoing

RJ45 for ETH

JTAG

Output on DSub



Status LED
and reset
button



- First test with digital part of Hybrid 5 done
 - Tests with full set of voltages showed issues with sense wires / calibration / channel assignment
- Investigations ongoing

- Goal: 10 Units, 24 Channels, full output power → Final designs specifications
- Output connectors adapted for final cables (mixed layout D-Sub)
- Final DC/DC converter cards
- Bug fixing / optimizing
 - MCU card finalized (Interlocks)
 - Regulator cards finalized (Temperature measurement on regulators, opt. SNR of ADC's)
 - Breakout boards adapted
 - OVP substitute
 - Layout of DC/DC card with final specs

- PCB's are delivered
- Components provided by us ordered 50%
- Hired student to test designs not used up to now – variable DC/DC converter as well as converter card

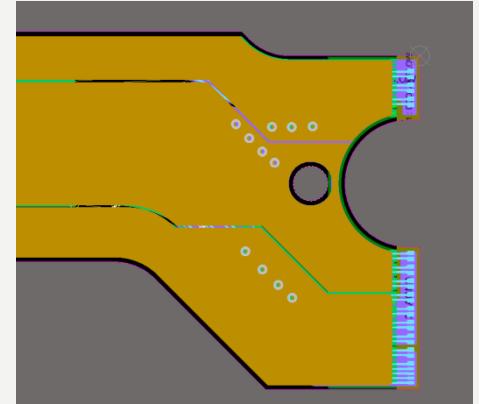
→ 20kE out of 31kE are spend, rest is fully assigned



Services

Kapton development:

- Design of Kapton transferred to MPI
 - Markus will report on MPI effort
- Goal: production at Taiyo

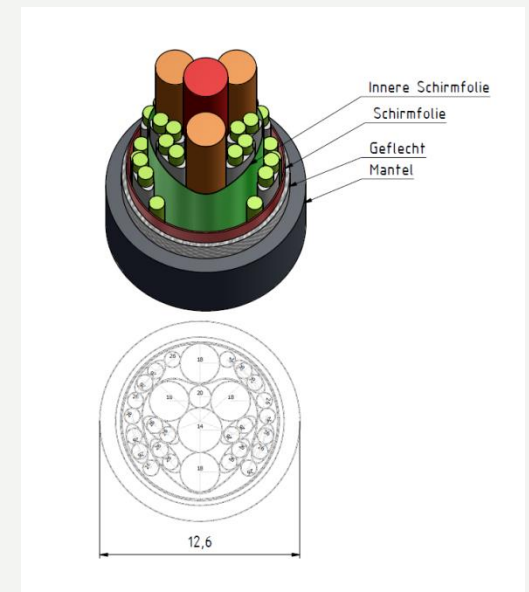


Cabling:

- 300m test batch of power cables received
- Diameter slightly smaller than predicted by company

Patch Panels:

- Design will start after mechanics of boards is finalized



- 10cm Kapton adapted from latest prototype
 - Production yield turned out to be low 4 of 20 worked
 - Identified issues together with IV Schaltungen
 - Tight mechanical tolerances on edge and limitations of milling of the outline
- Mitigation using laser cutting in the next round
- Second production was already ordered and will be delivered within the next weeks



- Demonstrator PS with 16ch is working
- Preproduction is of 10 units with final specs is under way
- Services: Kapton design is transferred to MPI, production at Taiyo in this FY
- First test batch of Power Cables arrived

Backup