Status FEC tester

Topics:

- electronics: prototype finished
- Mechanics: prototype finished
- burn in tester
- readout: RCU II
FEC Tester Prototype

- Signal generator board
- Controller board
- Fanout board
- Measurement board
- To PC
- To FEC
FEC Tester Prototype
FEC Tester Prototype

Subcards of tester are tested individually

Final test of complete system pending: delay due to inadvertent connection to power with reversed polarity.

Still missing: bar code reader: in the process of being purchased

question: at the test points only one voltage accessible
Is it sufficient to read out the other voltages via the DCS features of the FEC? Otherwise we need an additional needle tester.
Mechanics

Original idea:

Power, readout
Needle tester
Bar code reader
FEC
Flat cables
Piston
Tester
Support
Cable guide
FEC tester prototype
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FEC tester prototype
FEC tester prototype
Detail 1
Detail 2
Detail: cables
Burn in Tester

Problem: mechanics gets very elaborate with 20 – 30 cards to connect
--> size problem

Proposal: get away from burnin test under power
--> do only passive burnin before cards are tested.
Readout: RCU II

One problem solved with firmware: program for flash PROM (permanent memory) was different from version used for non permanent storage (loaded via JTAG connection and “Jamplayer”/”Byteblaster” software).

One RCU II had problem with a trigger signal not being there.
One daughtercard had contact problems. More daughter cards are available from Bergen/Oslo.

For the time being there are 4 RCU II + 1 spare for GSI/Da/FRA foreseen (more motherboards would be helpful but not available).

Pulser part of the tester at the moment operated with LabView under WINDOWS. Has to be migrated to LINUX since driver for RCU II readout exists only under LINUX. It was a bit tedious to install the software for the control of the Natl. Instr. Card which controls the pulser part of the tester (open source software, not directly supported by LabView).

--> still not finally tested.
Conclusions

Progressing well

test software still needs attention

should be ready for larger scale test in ~ December