

TEL62/TDCB HW status



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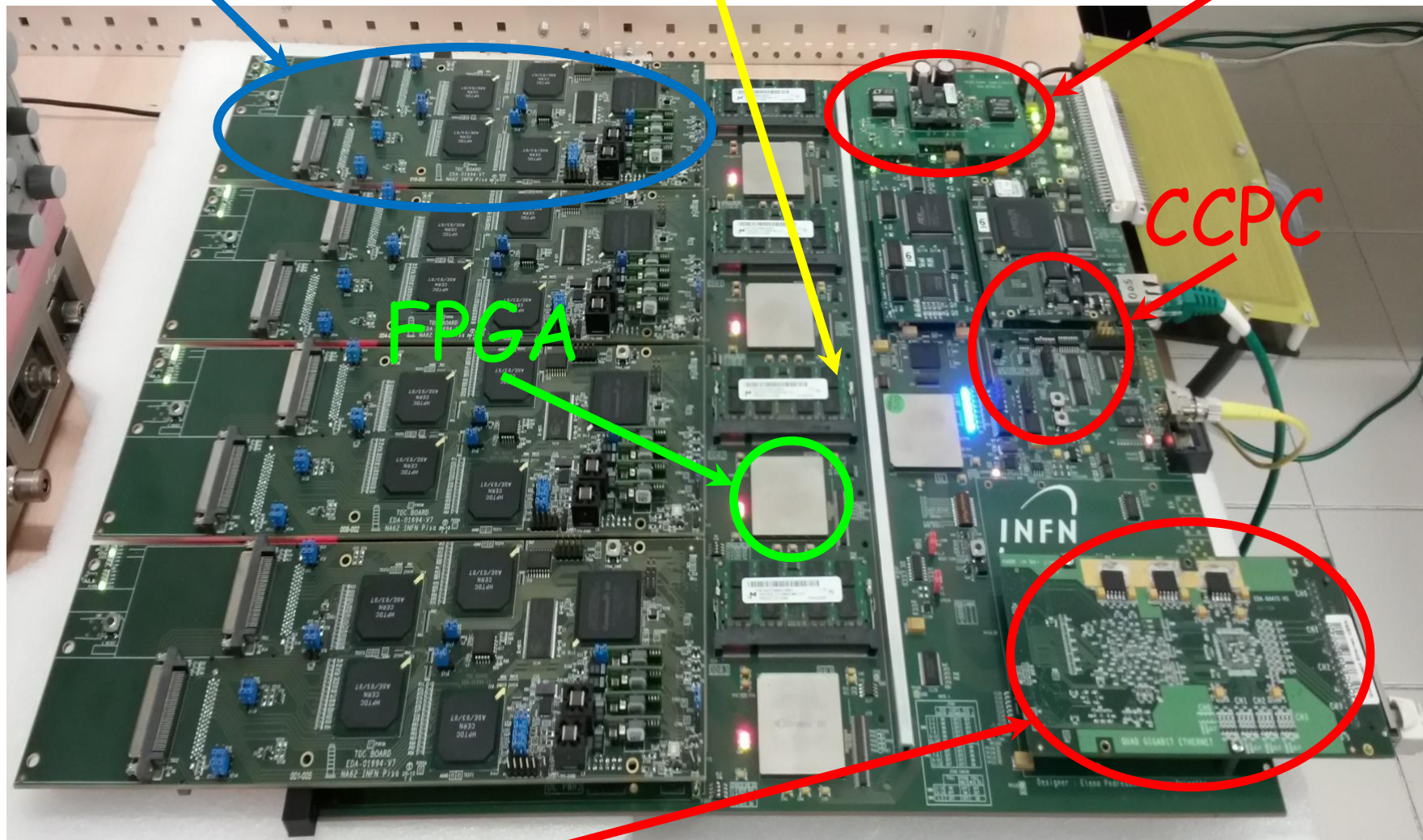
TDAQ WG Meeting

Ferrara September 2, 2014

TDCB

TEL62

TEL62-PSB



CCPC

FPGA

INFN

QGBE

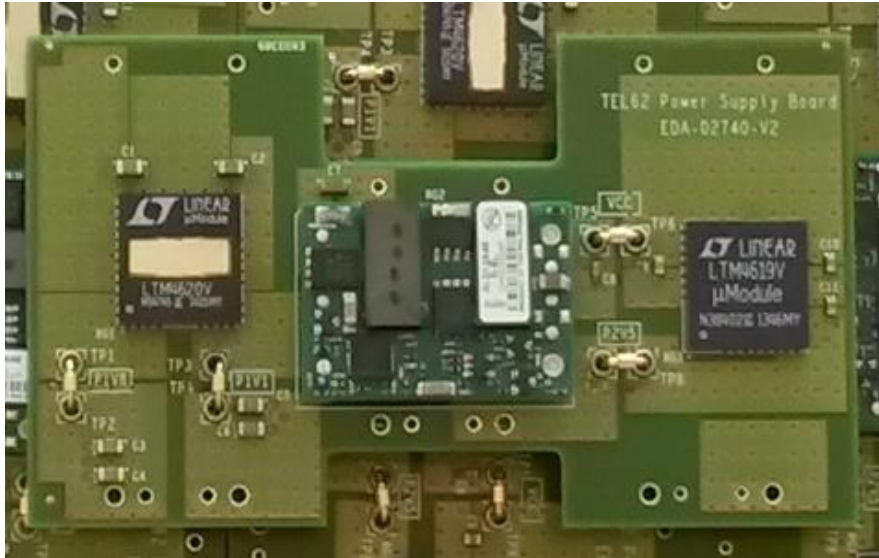
TDCB

- All PCBs produced (100 pcs)
- First batch - 10 boards:
 - Assembled and tested with no issues
- Second batch - 90 boards:
 - 50 assembled & tested (no issues)
 - 40 assembled & under test
- 50 TDCBs sent to CERN (July/August)

TEL62 Components & Mezzanine

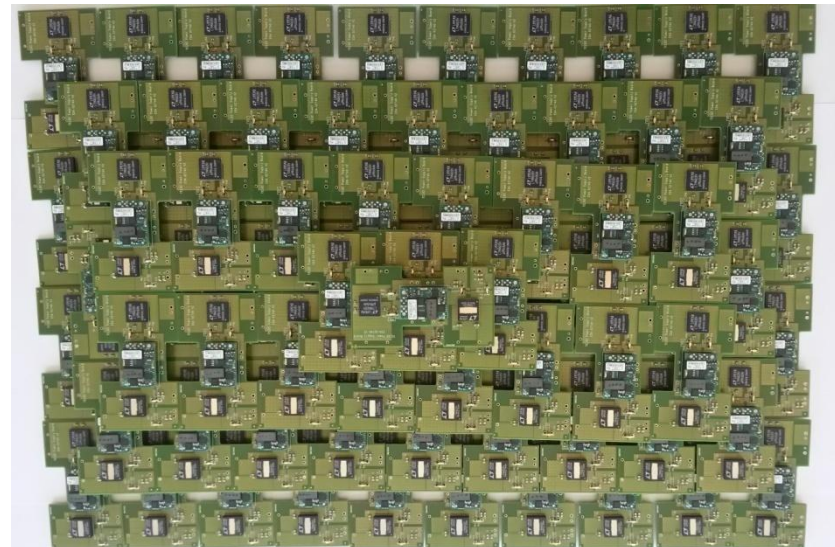
- EP3SL200F1152C4N (new FPGAs):
 - 364 pcs ready for assembly
 - 120 pcs ordered and will be delivered to CERN this week (September 4)
- CCPC and RAM:
 - All the CCPC (100 pcs) and a part of CCPC-RAM (76 pcs) are in stock (Pisa)
 - 24 pcs CCPC-RAM in order (Roma Tor Vergata)
- QGBE (40 pcs):
 - 23 pcs sent to CERN:
 - 9 pcs (Pisa)
 - 14 pcs (CERN)
 - 17 pcs (Roma Tor Vergata)

TEL62-PSB



- TEL62-PSB is the mezzanine providing 1.1V, 1.8V and 2.5V to TEL62

- 100 pcs assembled and tested with no issues



TEL62 Production (1)

- TEL62-V3 production (PCB and Board Assembly) has been assigned to a new firm (Link Engineering)
- All PCBs produced (94 pcs)
 - Board Assembly has been divided in 5 batches

TEL62 Production (2)

- First batch (5 boards, Dec 2013):
 - 3 boards: OK
 - 1 board: OK
 - had a problem on PPO-FPGA (BST), solved with replacement
 - 1 board:
 - had a problem on PPO-FPGA (BST), solved with FPGA replacement
 - -5VA shorted with GND, sent to Link Engineering for repair

TEL62 Production (3)

- Second batch (10 boards, May 2014):
 - 7 boards: OK
 - 3 boards: OK
 - QDR problems with TDSPY but no problems with BST
 - After various studies a firmware problem was detected and solved
- Third batch (9 boards, July 2014): OK

TEL62 Production (4)

- Fourth batch (31 boards, Sept 2014):
 - Will arrive in Pisa next week
- Final batch (39 boards):
 - The company will start the assembly as soon as FPGAs will be available
- Testing to be done together Roma Tor Vergata

TEL62 Production (5)

- In the past (old firm, version 2): 50% suffered of FPGAs soldering issues (1):
 - 4/16 NOT USABLE
 - 4/16 with FPGA(s) replacement
- Now: soldering issues have been mitigated 😊
 - Only 2/24 board with FPGAs replacements (*only on the 1st batch*)
- 15 TEL62 sent to CERN (June/August)

1. <https://twiki.cern.ch/twiki/bin/view/NA62/TDAQTel62Board>



THANK YOU