Update on the MWPCs preparation

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The main ongoing activities

Prototype MWPC chamber with the iFTDC based readout

- ✓ Digital FE preparation
- ❑ Analog FE preparation
- ✓ PS procurement
- ❑ Infrastructure preparation
- ❑ DAQ integration
- ❑ Monitoring software

Cooling for the standard chambers

- ❑ Concept validation
- ❑ Elements preparation
- ❑ Installation on the MWPC
- ❑ Feedback loop control
- ❑ Monitoring of the performance

Pulser for the rates tests

- ❑ Concept validation
- ❑ Installation
- ❑ Monitoring

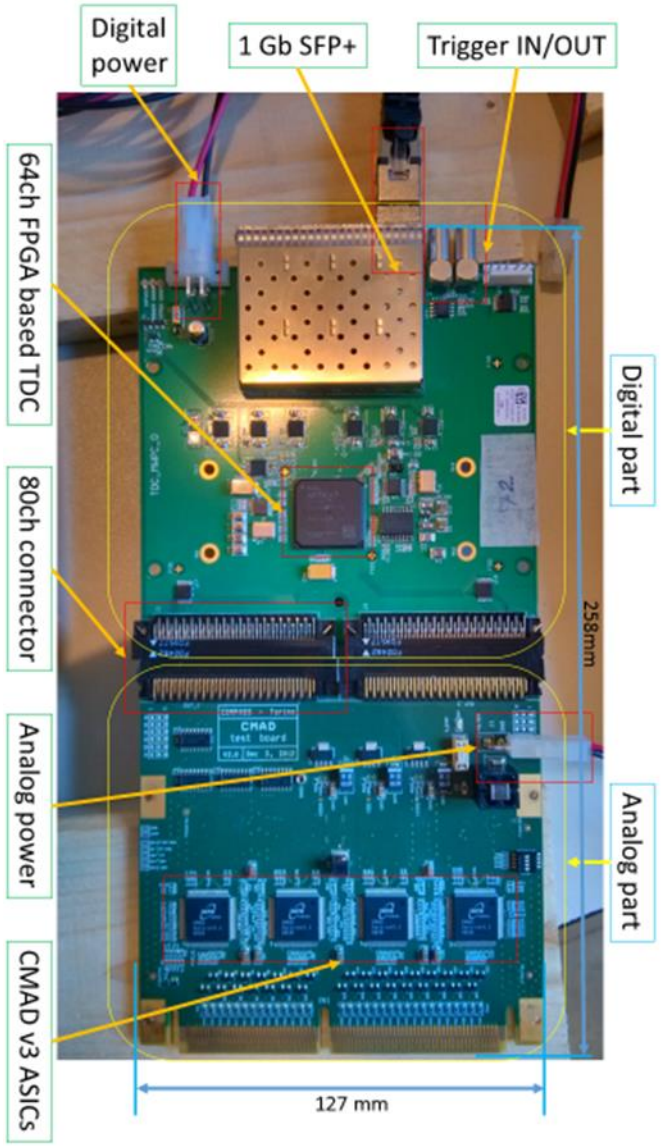
Prototype MWPC chamber with the iFTDC based readout

✓ Digital FE preparation

- During the week 27-31.07 Igor had tested all the 27 cards
- The only problem found were two wrongly mounted components
- During the week 7-11.9 the components were brought to Turin for the substitution

❑ Analog FE preparation

- The order for production has been sent, PCBs delivery expected by 15.10
- The calibration is planned within October



Prototype MWPC chamber with the iFTDC based readout

✓ PS procurement

- The order for 3 new PS (2x 6V x 25A) has been sent
- The expected delivery is in October

❑ Infrastructure preparation

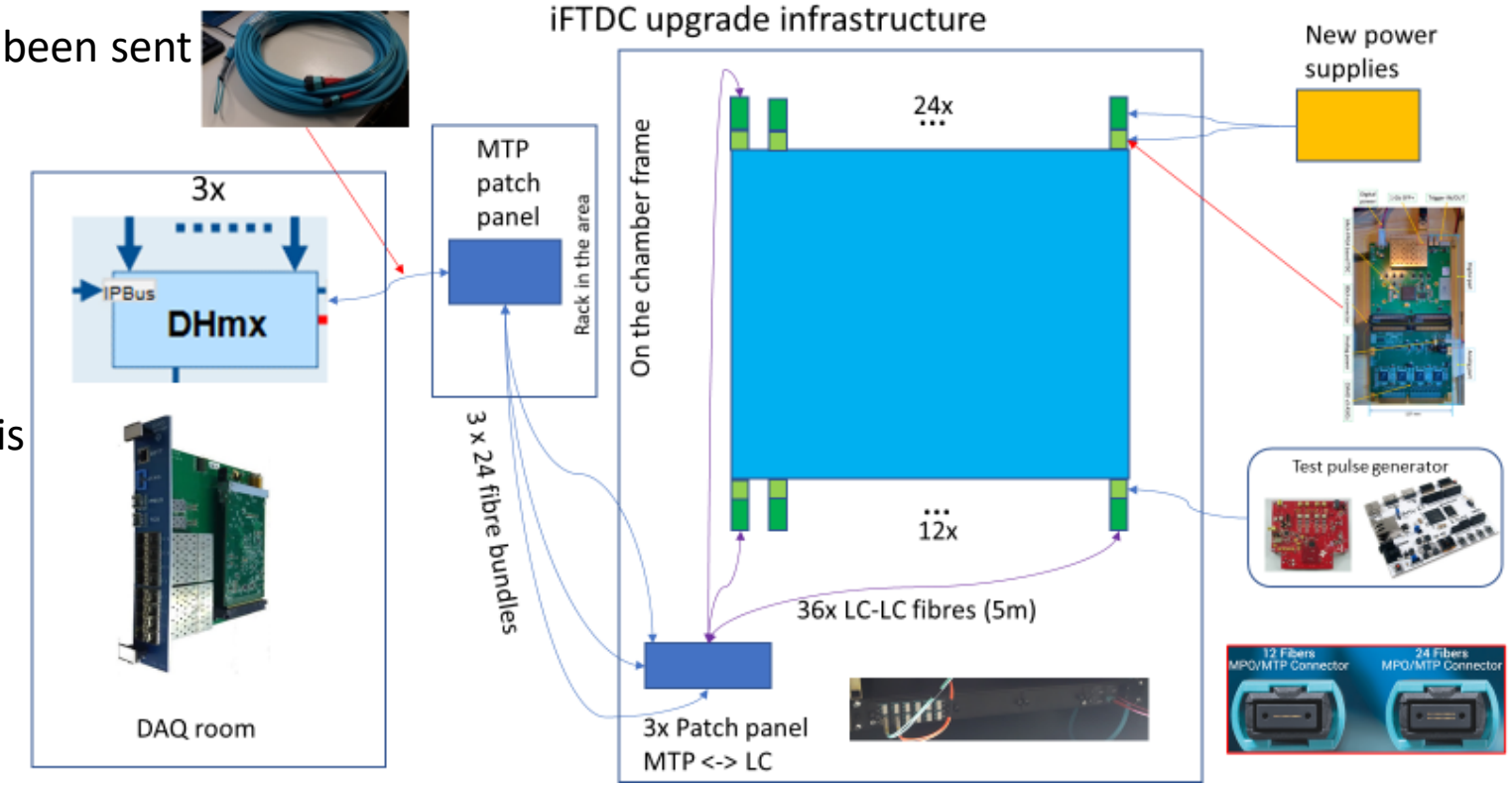
- Revision of the cable trays and initial preparation for the installation of the PS is expected during 29.09-02.10

❑ DAQ integration

- DHmxs has been acquired
- The delivery of the fibres is expected within October

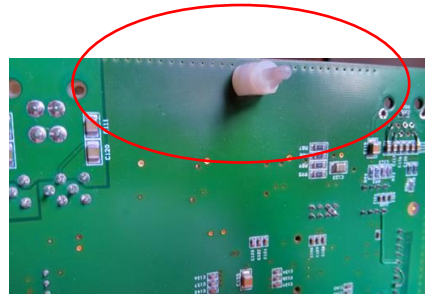
❑ Monitoring software

- We will have one dedicated person starting 10.2020 on the task

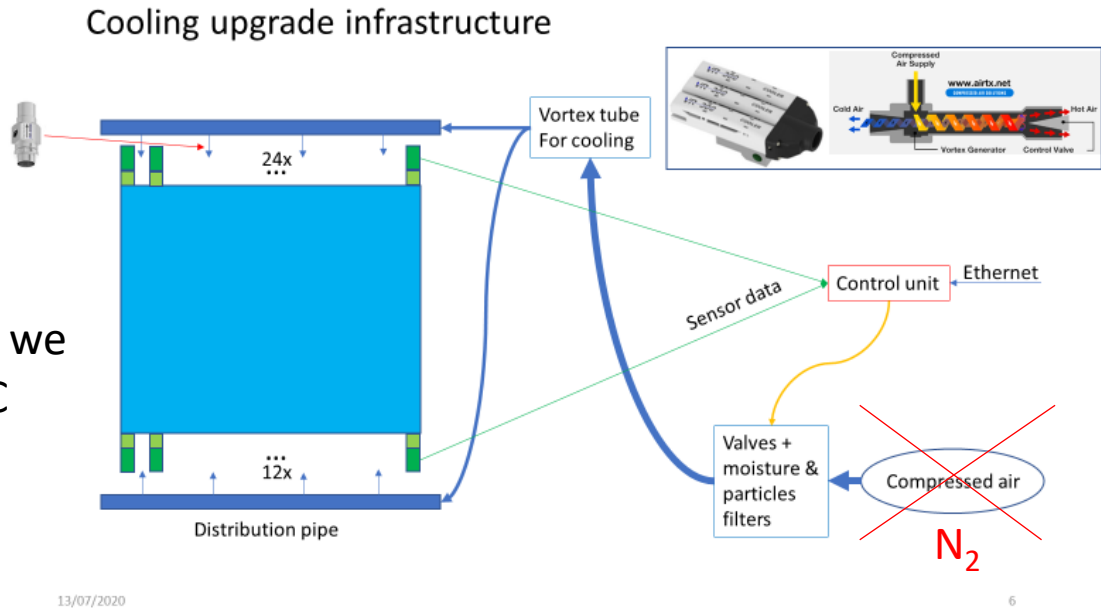


Cooling for the standard chambers

- Concept validation
  - We have been assigned a nitrogen source in 888 to supply the vortex cooling for a first test
  - The first test is planned during the week 28.09-02.10

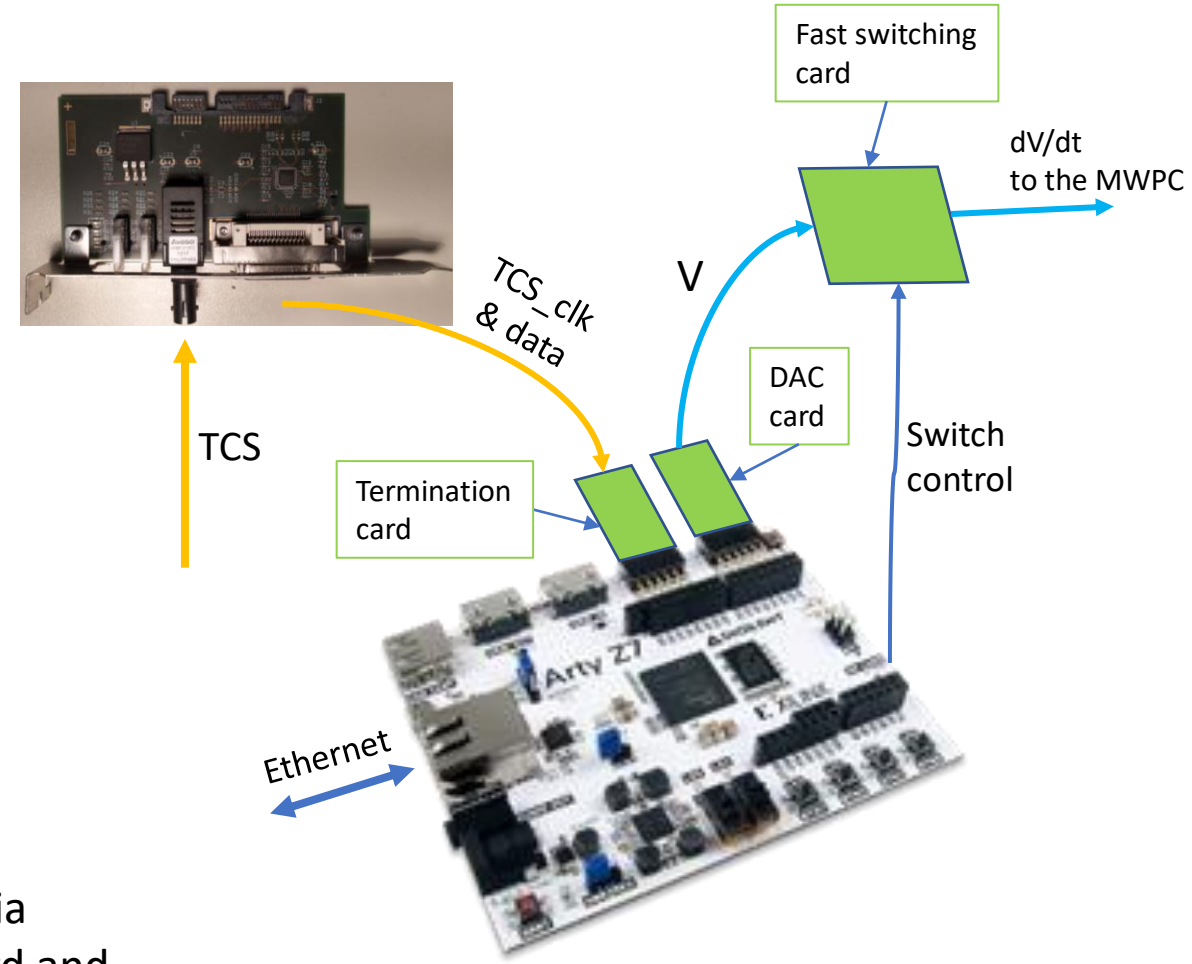


- Elements preparation
  - If the test will be successful we will prepare the distribution, fixation and piping during 10.2020
- Installation on the MWPC
  - The installation on the chamber is expected in the first weeks of 11.2020
- Feedback loop control
  - The system will be controlled by 3 thermal probes and a valve, we plan to use the elements already developed for the TIGER ASIC cooling system
- Monitoring of the performance
  - To control the performance we will need to add a PC to the network that would communicate via USB with the controller



Pulser for the rates tests

- Concept validation
  - We work towards the voltage pulse generation within the next weeks
  - We would like to test the communication with the TCS within 15.10
- Installation
  - We plan to install the pulser during the DryRun, probably in the second half of the running
- Monitoring
  - Monitoring and configuration of the system are expected via network through the emulation of a core on the FPGA board and the installation of Linux on the system. One person is dedicated to the task.



Conclusions

- We are progressing well to be ready with the new iFTDC based FEs for the Dry Run
- Some support might be needed for the software part of the integration of the monitoring
- The test cooling system is now in a testing state, if no major problems are found it will be installed on the chamber in time for the Dry Run
- The preparation of the pulser to inject trigger synchronous hits into the data is progressing with the target to install it in the area mid 11.2020