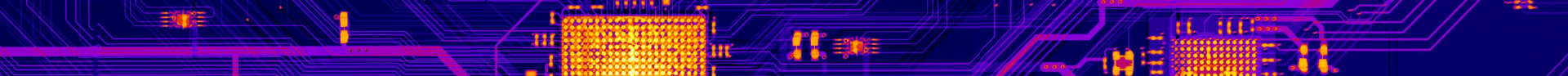


AMBoard Report

Saverio Citraro

PhD Student University of Pisa & I.N.F.N. Pisa



Outline

- AMBSLP_V3: Associative Memory Board
Serial Link Processor
 - PCB Design, changes after review
- LAMBSLP_V2: Little Associative Memory Board
Serial Link Processor
 - PCB Design
- Measures, Tests, Schedule
- Firmware and Software status



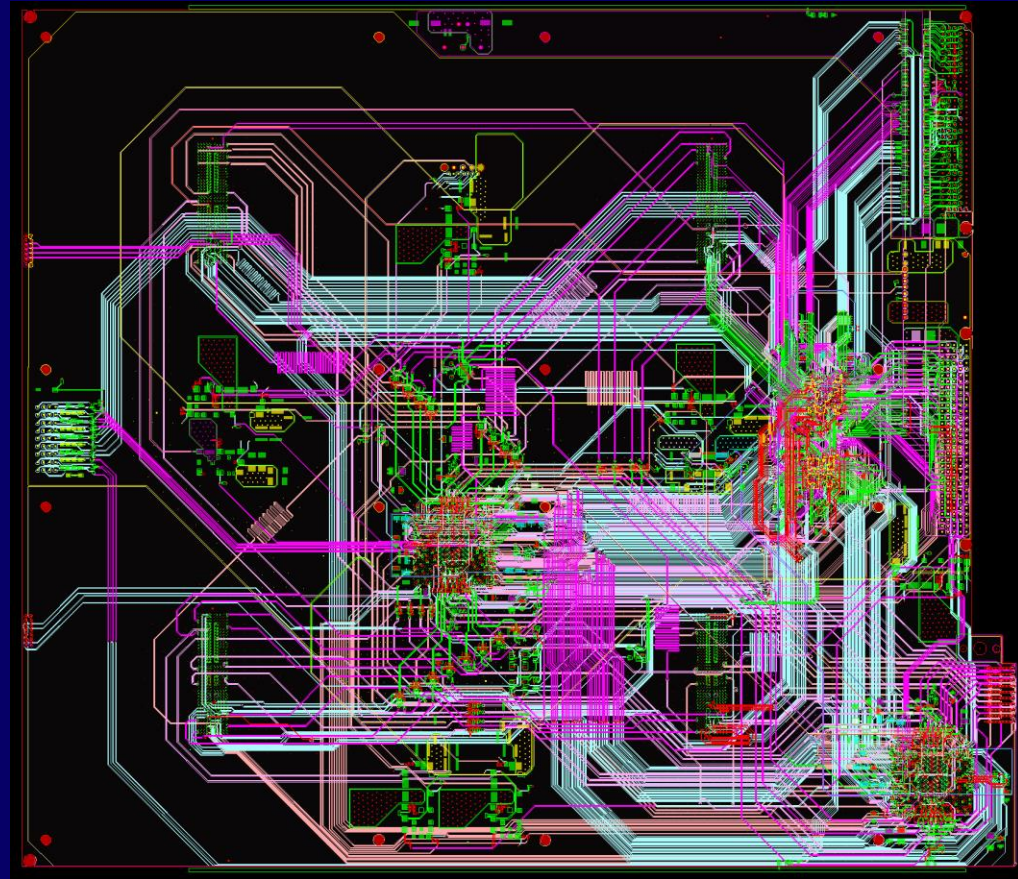
AMBSLP_V3

Design Done

PCB will arrive in Pisa
tomorrow

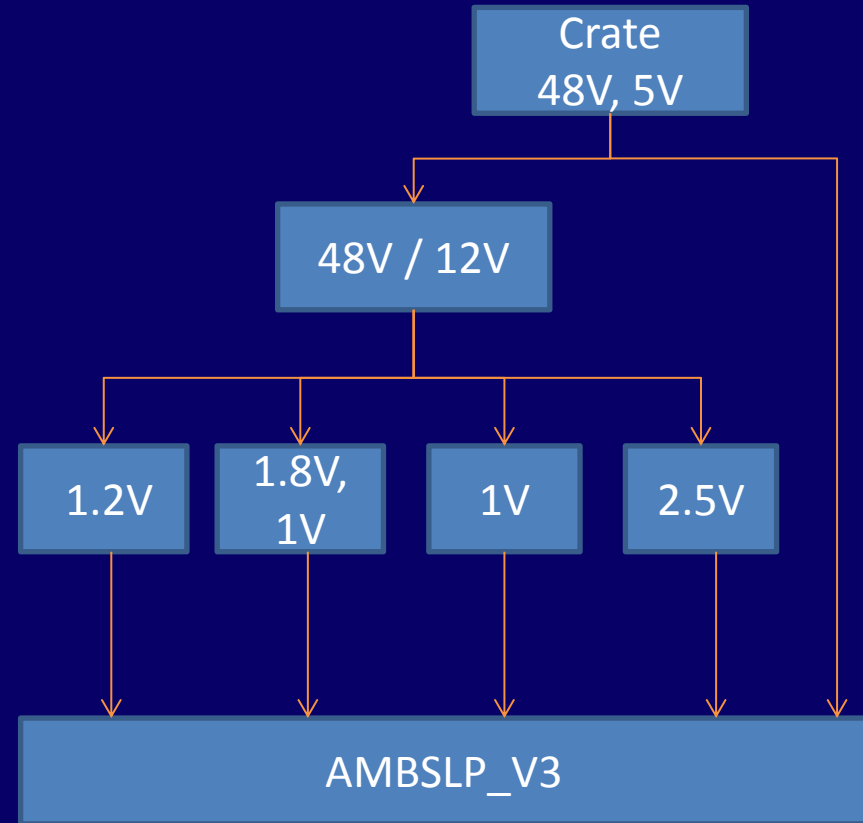
We will perform tests
And measure next week

Ready for the final
project in July '15



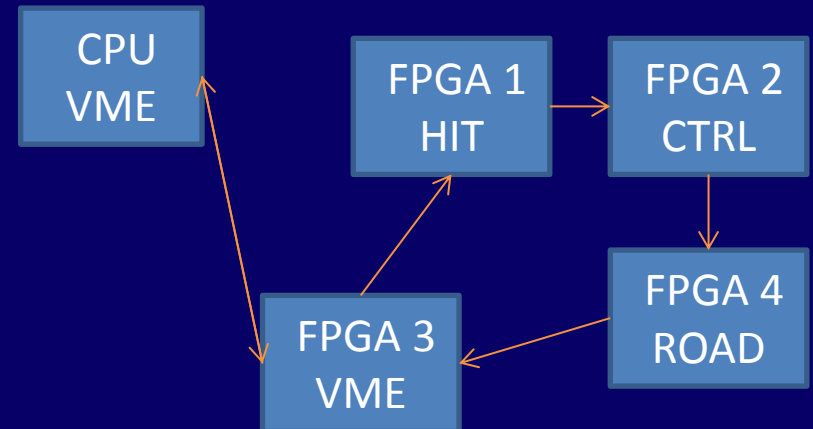
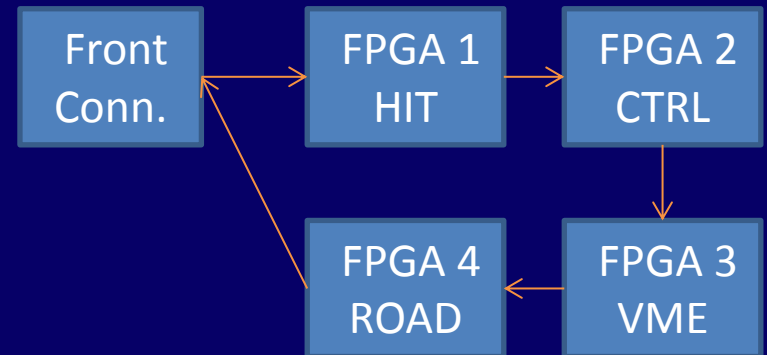
Changes after review

- Power distribution
- Configuration through VME
- Big FLASH 4Gbit for Patterns
- Fix signal integrity issue

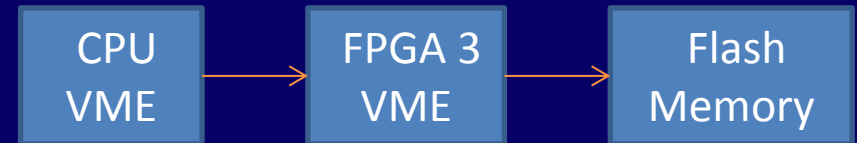


Changes after review

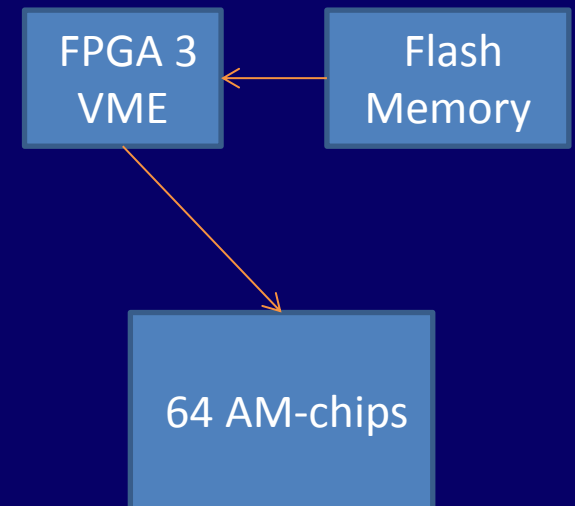
- Power distribution
- Configuration through VME
- Big FLASH 4Gbit for Patterns
- Fix signal integrity issue



Changes after review

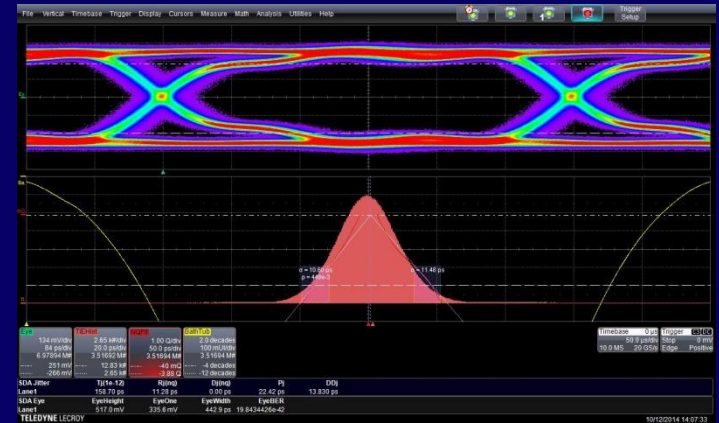


- Power distribution
- Configuration through VME
- **Big FLASH 4Gbit for Patterns**
- Fix signal integrity issue

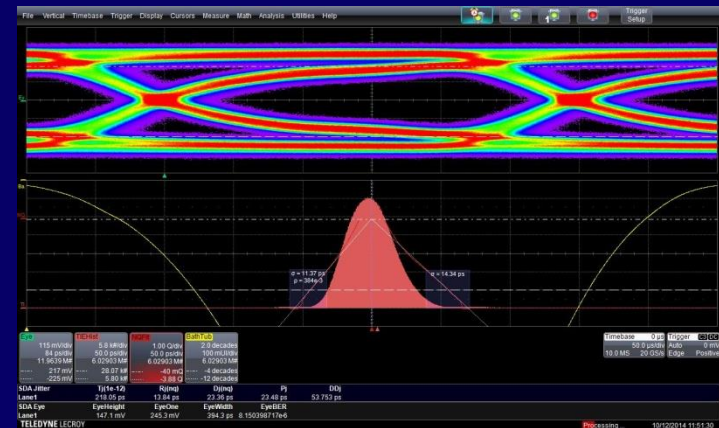


Changes after review

- Power distribution
- Configuration through VME
- Big FLASH 4Gbit for Patterns
- Fix signal integrity issue



Short Link = 5cm, Exp. BER $\approx 10^{-42}$



Long Link = 50cm, Exp. BER $\approx 10^{-6}$

LAMBSLP_V2

Design Done

4 PCB arrived in January

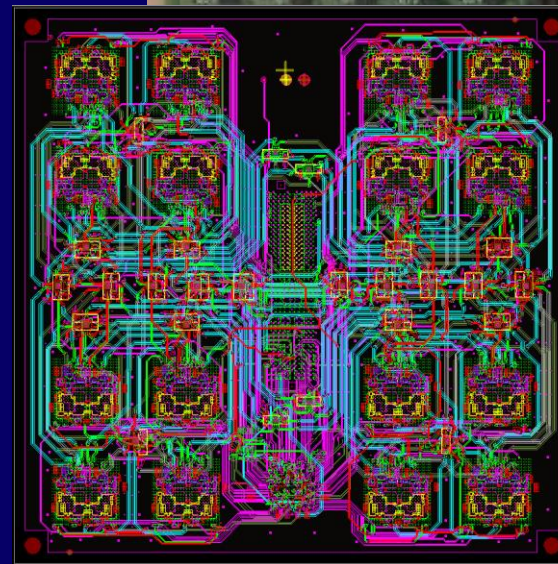
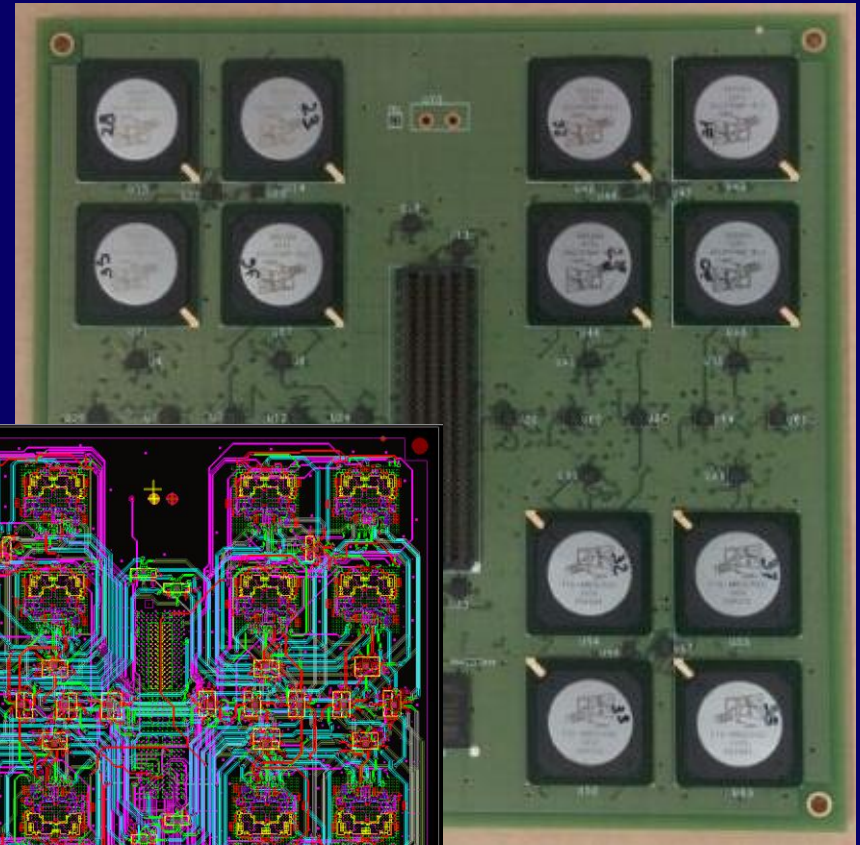
Test HW and FW ok!

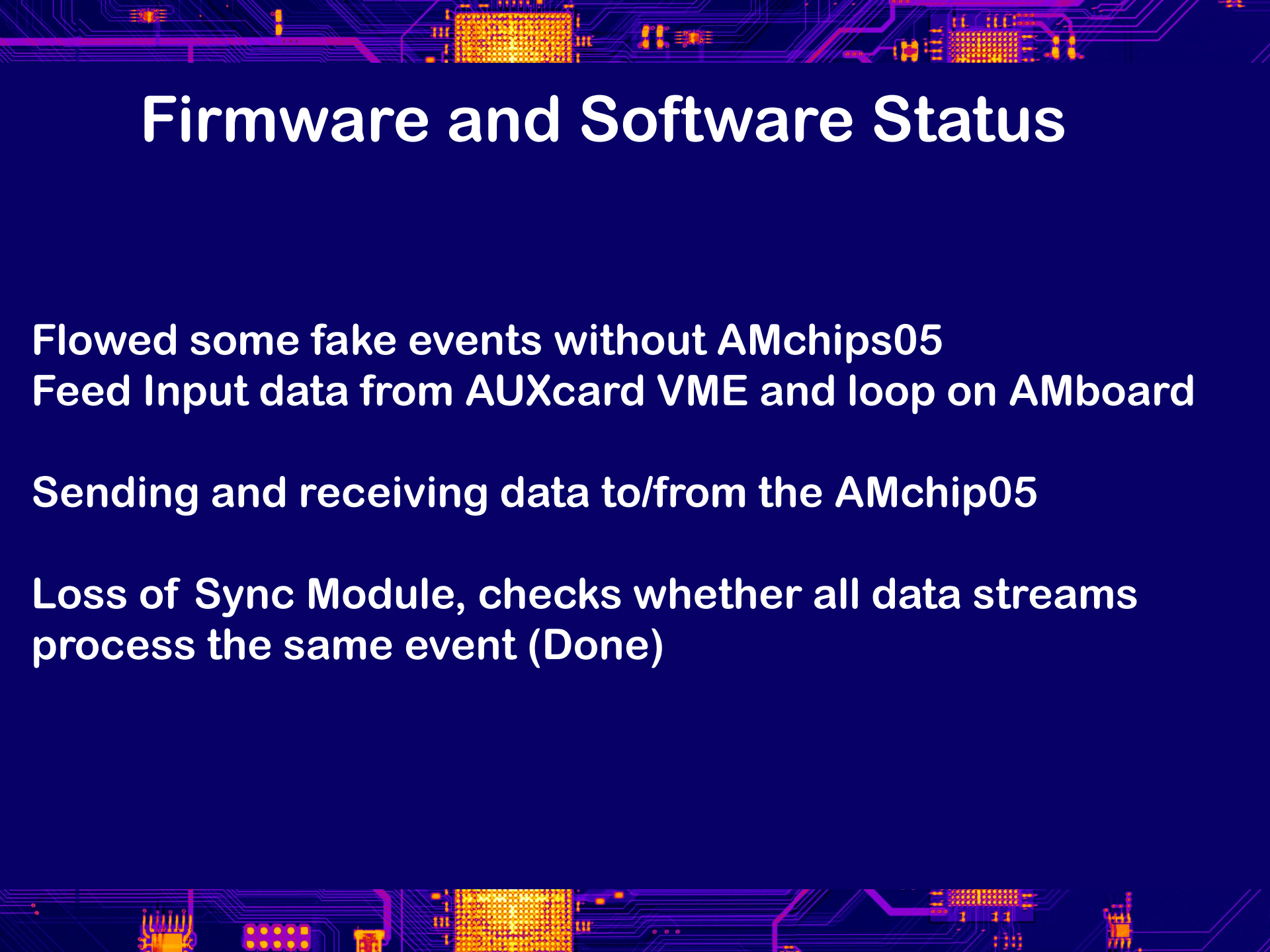
Next changes:

- Pinout for AMchip06

- Add Temp Sensor

- Final design in May '15





Firmware and Software Status

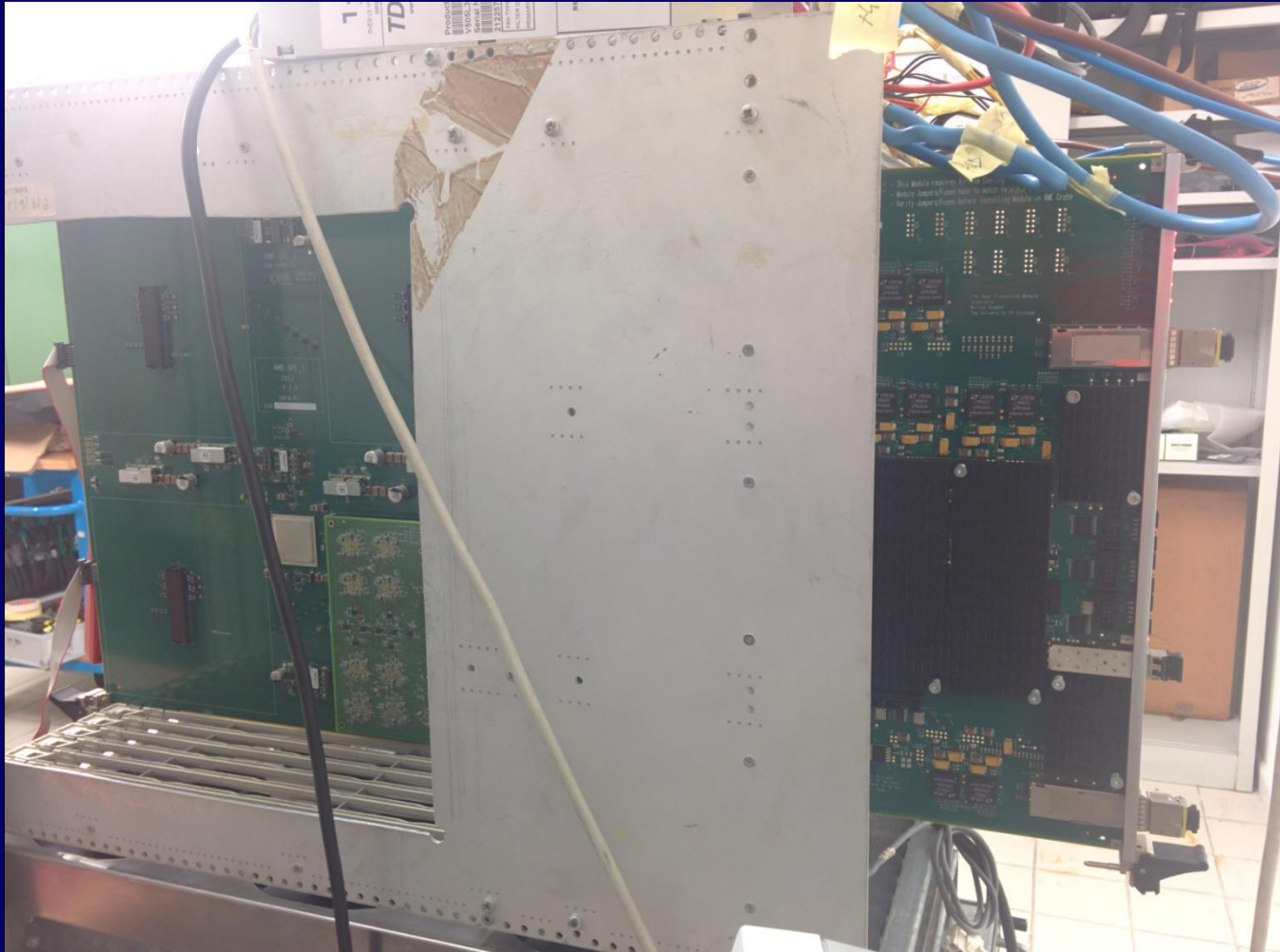
Flowed some fake events without AMchips05

Feed Input data from AUXcard VME and loop on AMboard

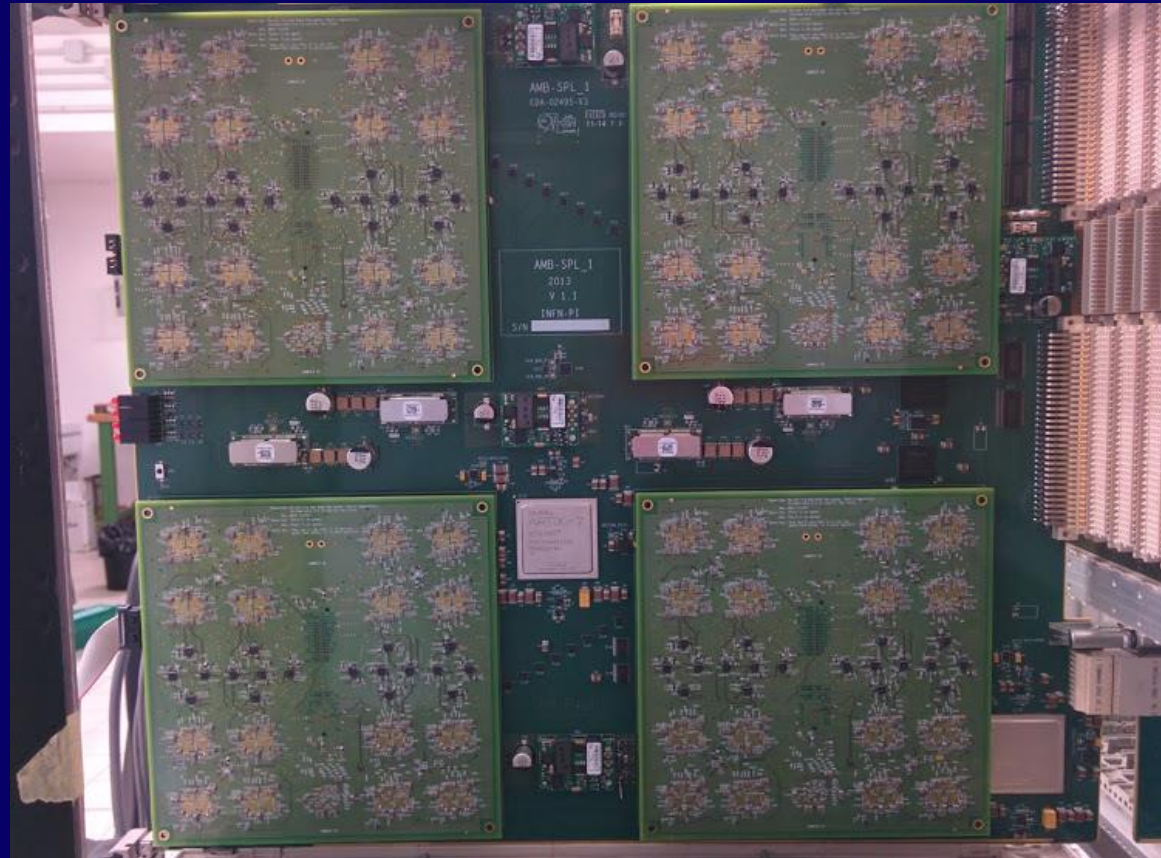
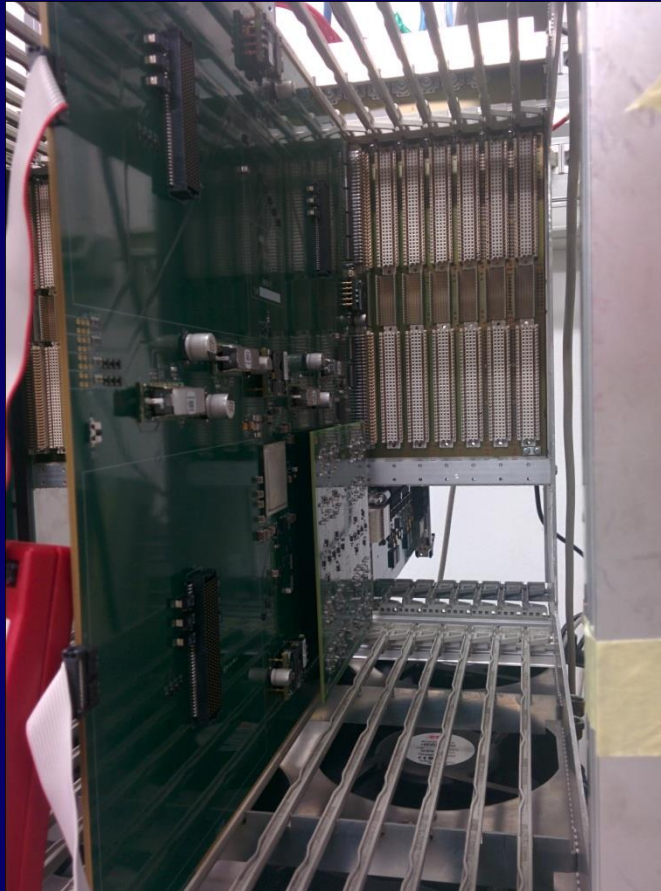
Sending and receiving data to/from the AMchip05

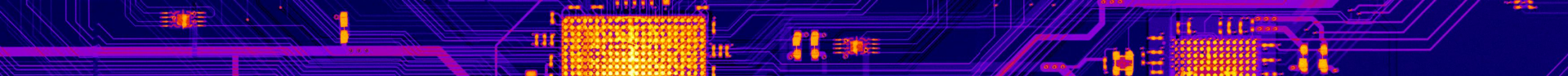
Loss of Sync Module, checks whether all data streams process the same event (Done)

Firmware and Software Status



Firmware and Software Status

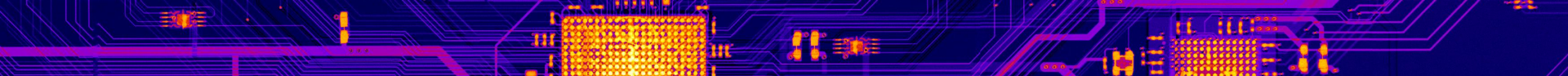




Firmware and Software Status

Next steps:

- Add AMchip05 in the dataflow AUXCard + AMBoard (next weeks)
 - Check the SpyBuffer Freeze Logic Interrupt controller (next week) (see Calliope talk in Friday)
 - Implement an automatic PRBS test for production phase (June)
 - Remote programming through VME (next year)
 - Store Pattern Bank on FLASH Memory (next year)
- 



Conclusion

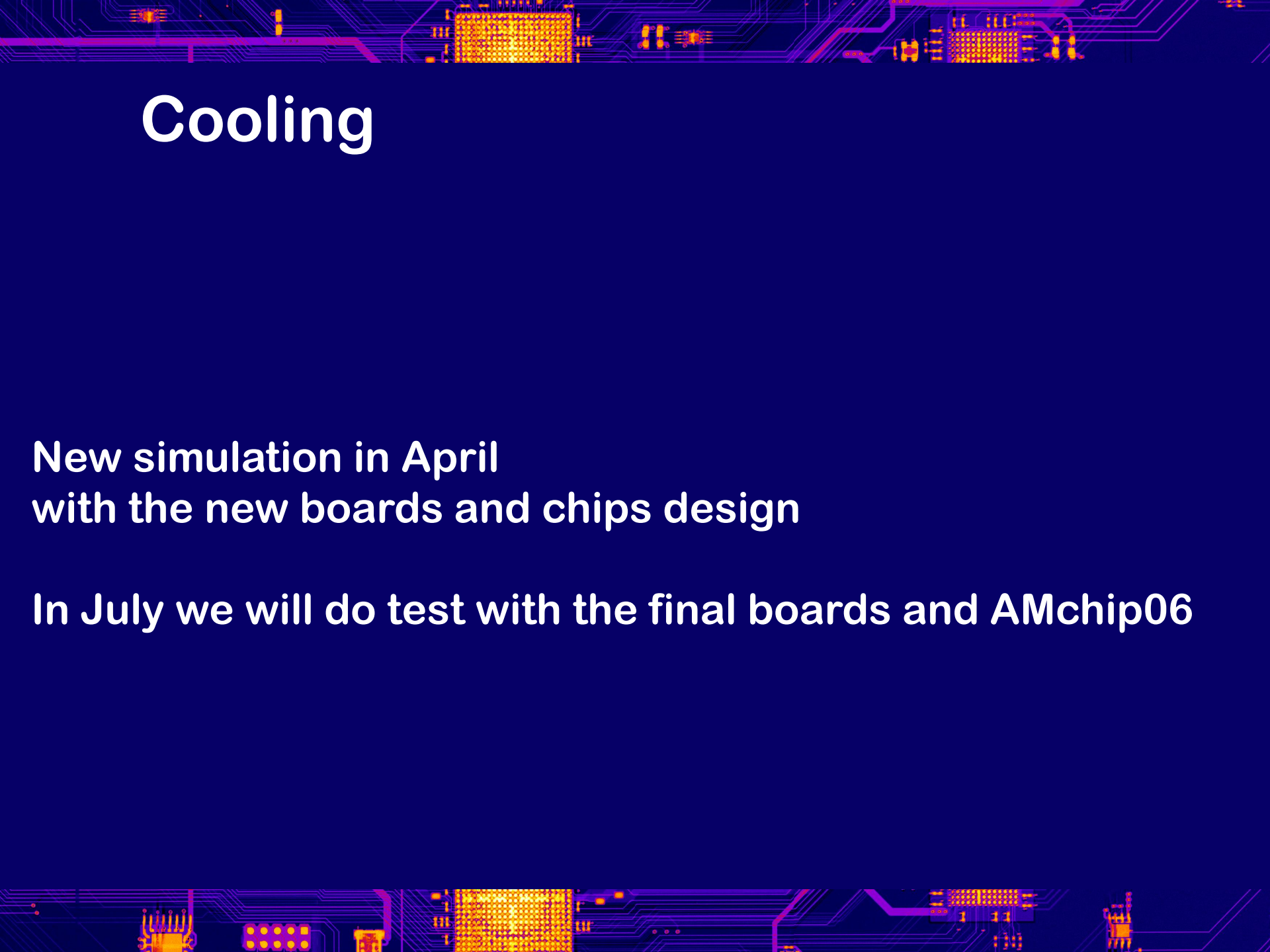
- AMBSLP_V3: Test next week.
Final design in July
- LAMBSLP_V2: done, final version in May
- Firmware and Software: focus on running events
with the AMchip05 and AUXcard





Thanks!

Any questions?



Cooling

New simulation in April
with the new boards and chips design

In July we will do test with the final boards and AMchip06