

# Status of the TLU design for the test-beam telescope

# Outline

- News from the working group at the AIDA meeting.
- mini-TLU design.
- Final TLU design.
- Time schedule

## Meeting of collaborators from WP8 and WP9.3 AIDA work packages on Thursday 29<sup>th</sup>.

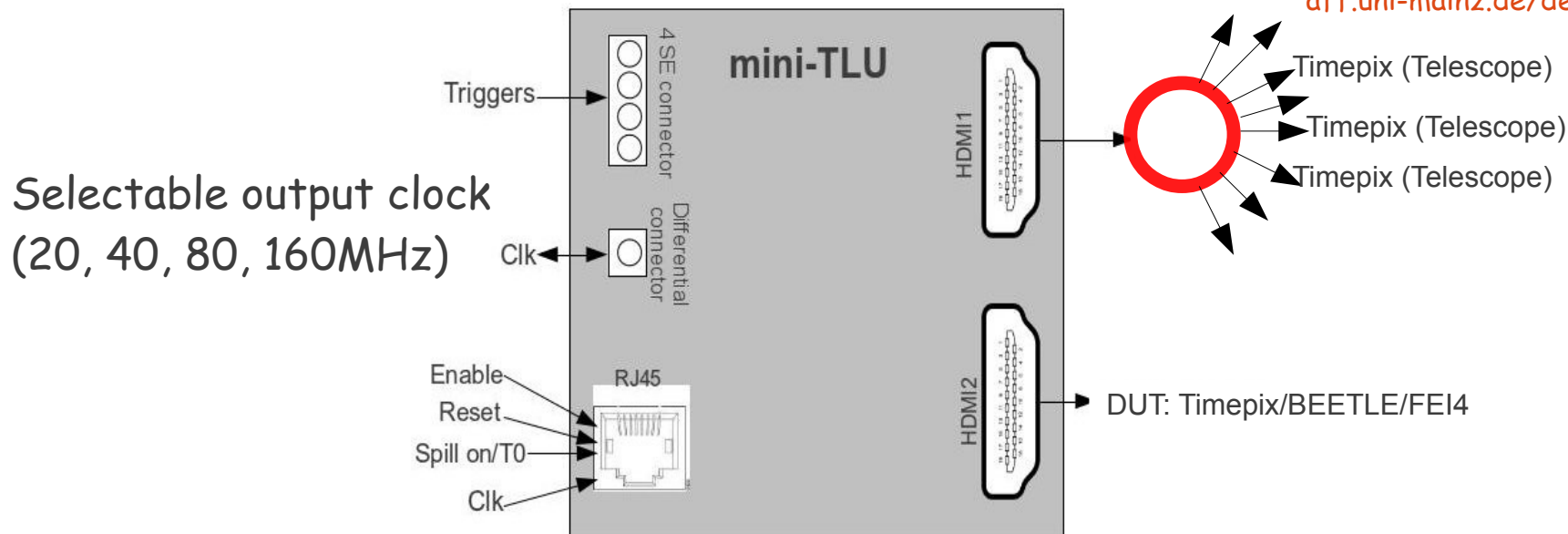
- People who attended this meeting: Álvaro Dosil, David Cussans, Abraham Gallas, Heinrich Schindler and Martin Van Beuzecom.
- Common effort to develop a first prototype: mini-TLU  
(Coordinator: David Cussans)
  - Firmware → Velo upgrade group + David Cussans
  - Hardware → CALICE collaboration

# mini-TLU

- Prototype for the final TLU. It will implement almost the same functionalities of the final TLU, but with less IO.
- The box and the fanout will be made by the CALICE collaboration. (beginning July)

Fanout: 1:8 HDMI connectors.  
 1:8 output with 3 differential pairs  
 8:1 input with 1 differential pair

[aff.uni-mainz.de/degele/Calice/CCC\\_VME/](http://aff.uni-mainz.de/degele/Calice/CCC_VME/)



# mini-TLU

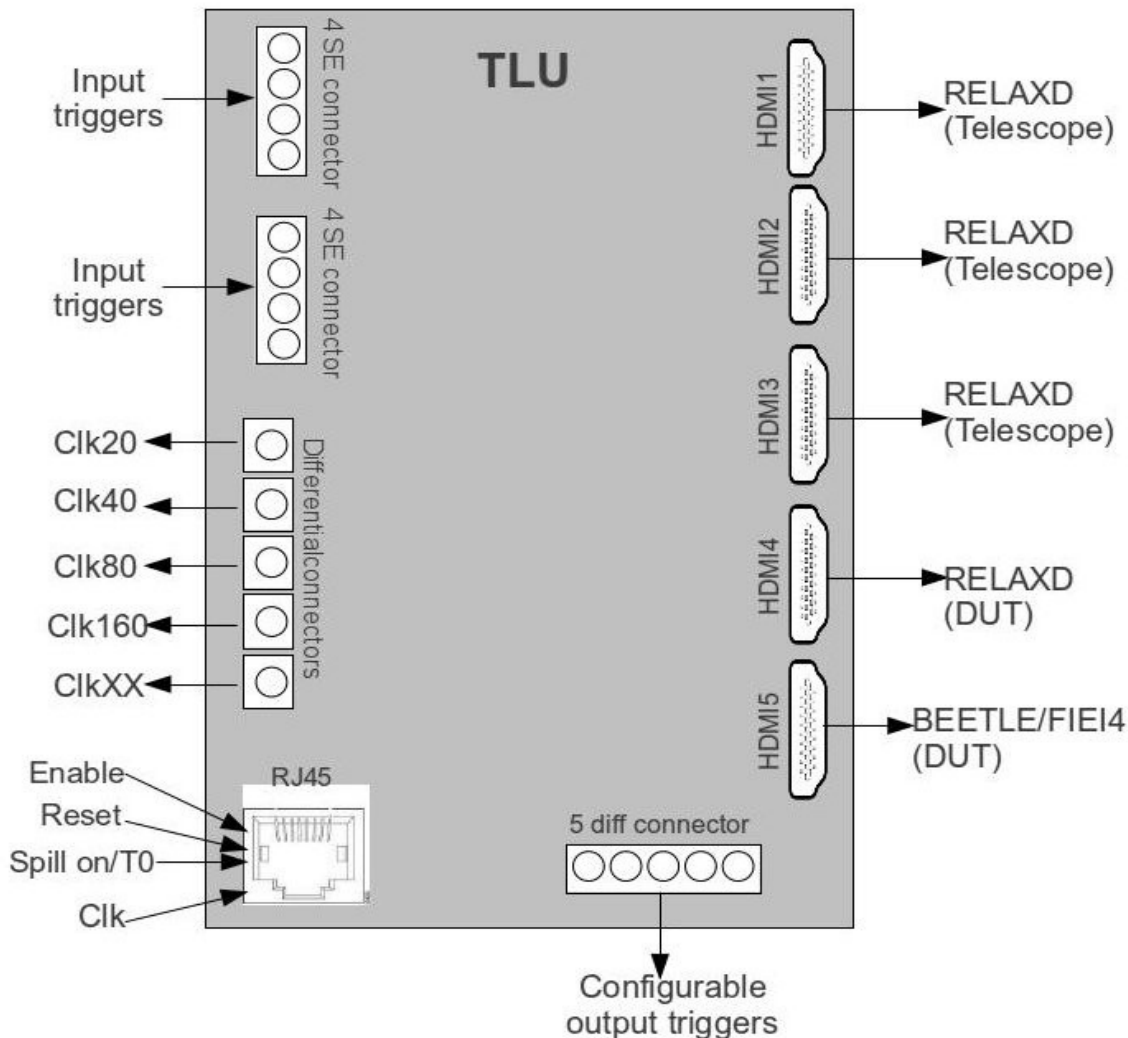
- HDMI Signals:

name	description	signal type
Device busy	Input: Busy signal from device	LVDS
Trigger signal	Output: Trigger signal	LVDS
Clock	Output: Clock signal	LVDS
General Output	Output: General purpose Output	LVDS

- Trigger Signals:

Trigger1	Signal from scintillators	TTL
Trigger2	Signal from scintillators	TTL
Trigger3	Signal from scintillators	TTL
General Input	General purpose input	TTL

# final-TLU



- We have to define the number of input and output triggers we need. It can be made later. This kind of triggers will not be implemented in the mini-TLU.
- Do we need an asynchronous trigger?

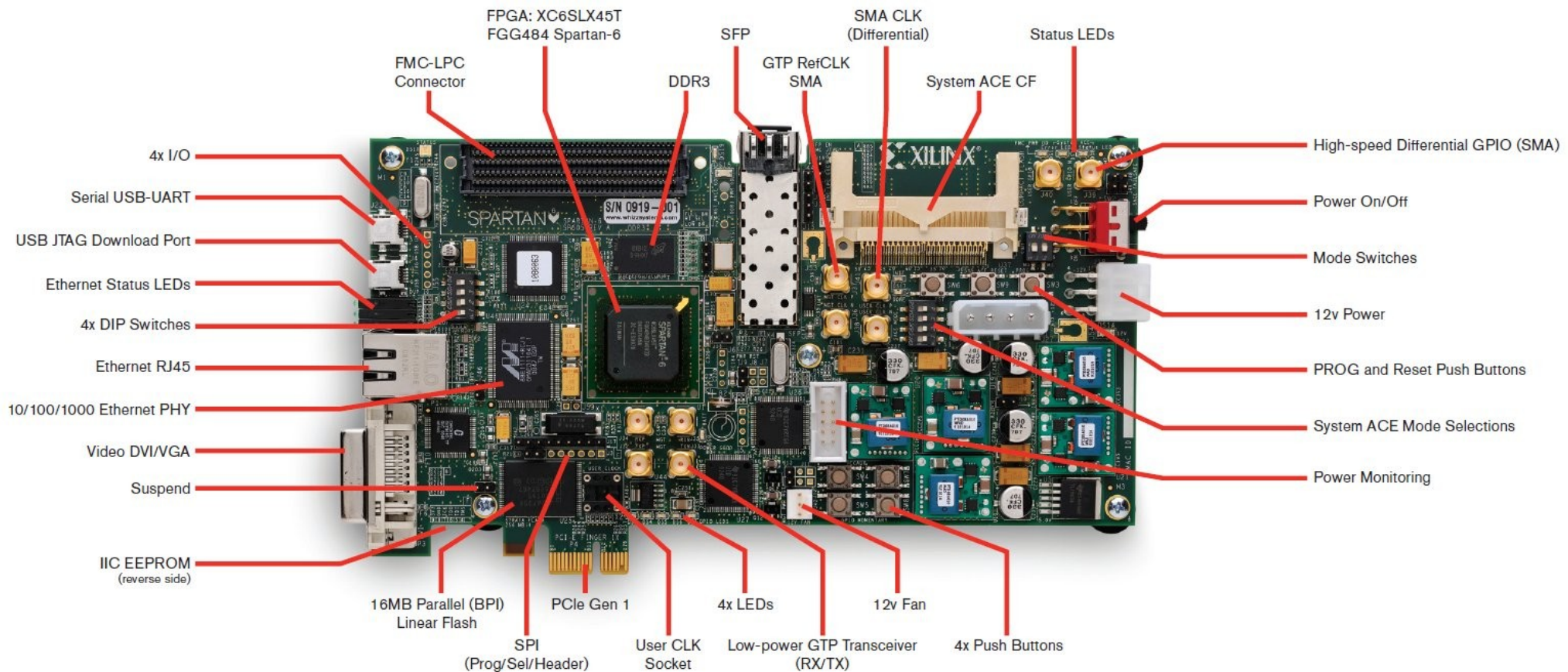
# Time schedule

- April - May → Development and test of a TDC in the SP605 development kit in Santiago.
- May → test of the TDC in the test-beam.
- Jun → Finalize the firmware of the mini-TLU with all the functionalities.
- July → Install the mini-TLU with the box in the test-beam.
- May-July → collect and implement new features for the final TLU.

# Backup slides



# SP605



# FANOUT

