

Ideas for a new CCM

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Scope and Goals

- Keep the existing backplane
- Plug-compatible replacement
- Need coordination with new RM, also for prototypes
- Aim at TB2010 ?

Other issues and goals

With the existing Front-end, it appears that there are noise effects associated to bus activities (I2C, commands, etc)

IMPROVEMENTS:

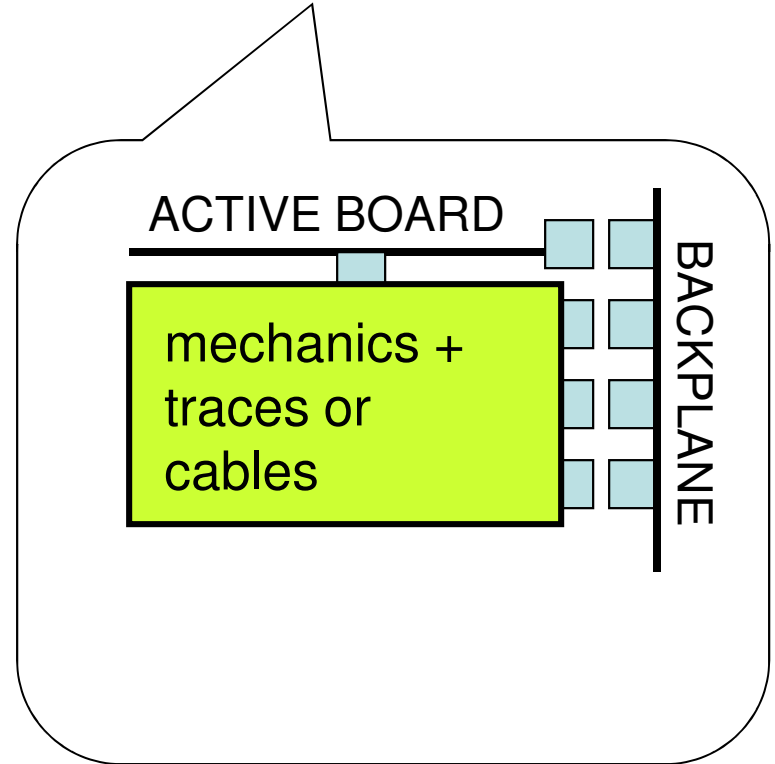
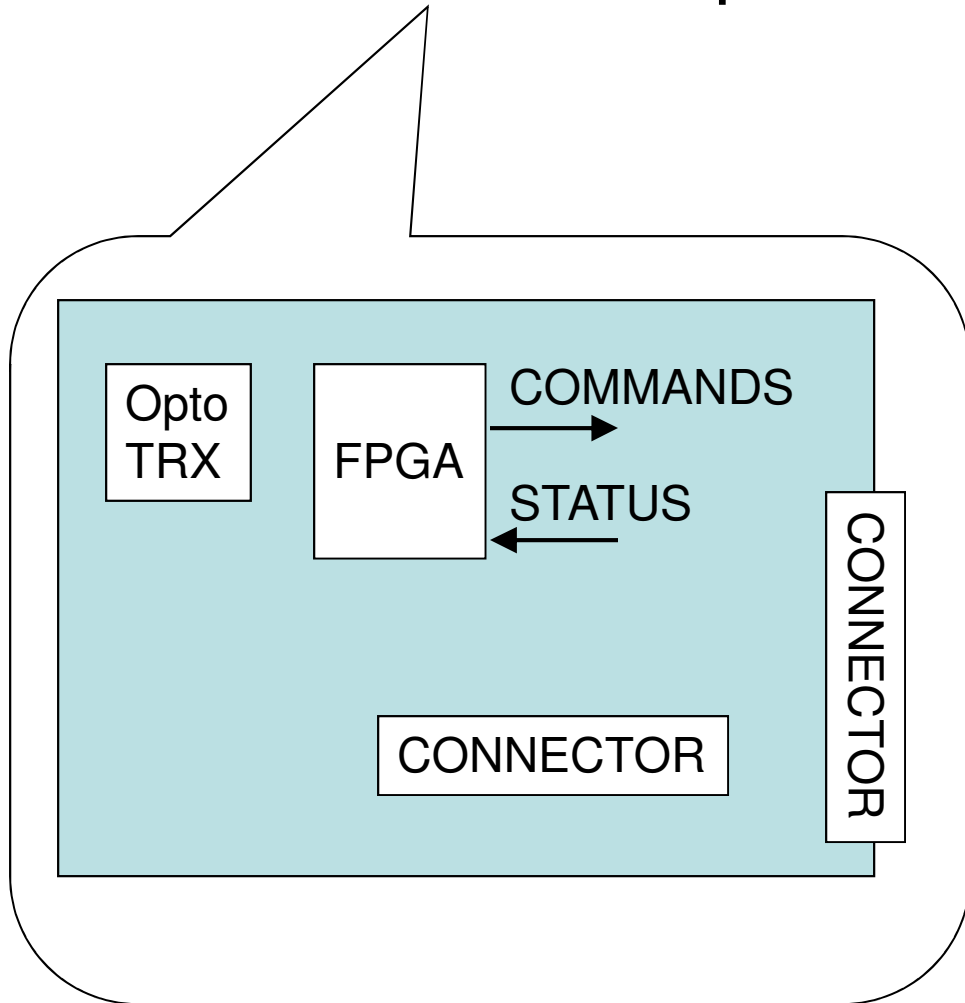
- Remove the copper link in order to reduce noise (maybe not in the prototypes ?)
- Reduce voltage levels on the backplane ?

Option 1: simple CCM

- Assume that RM can also run links asynchronously, i.e. with on-board oscillators
- Then the simple-CCM does not need to fanout a low-jitter clock
- This can be a limited prototype and maybe the final scheme
- CCM would fanout commands (BC0, resets, ...) to RMs
- CCM would report status information to the Counting room

Option 1: simple CCM

active board + passive mechanical structure



Option 2: “full” CCM

- Fanout a low-jitter TTC clock
- Need to clean the jitter
- GBT or commercial clock cleaner or ...
- Low-jitter clock should go directly on the backplane
- Need more active boards

Fibers

- Currently: 2 single-mode fibers per CCM
- one downstream, one spare
- Can we add fibers ?
- Do we need it ?