Short term plan

RIKEN

Itaru Nakagawa

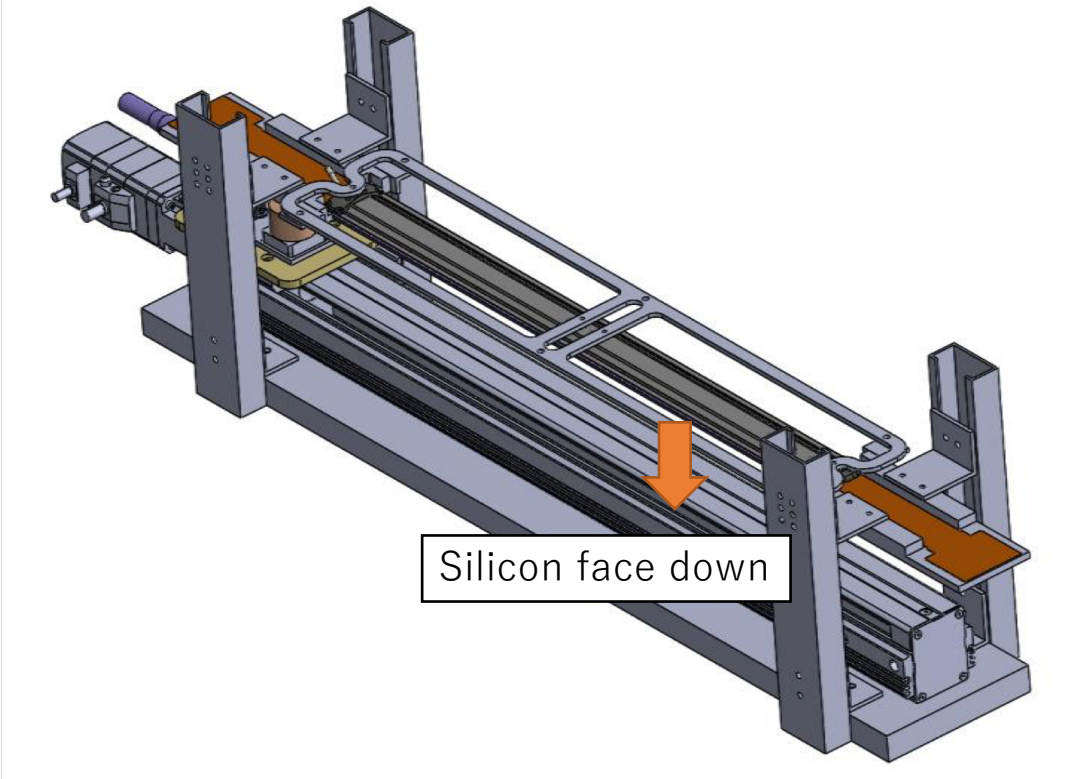
Near term missions in NWU

1. Initiate the source test and silicon signal observation from BNL ladders.
2. Simultaneous multiple ladder readout attempts.
3. FEM/FEM-IB/BCLK board/New cables tests for RIKEN test bench.
    1. Exporting preparation for FEM/FEM-IB/BCLK board is now completed.
    2. Cables are to be completed this week. Itaru will carry them to NWU next week.
4. Bus extender eye diagram measurement and half entry debugging May 26 – 28th.
5. Readbacker development.

Source test

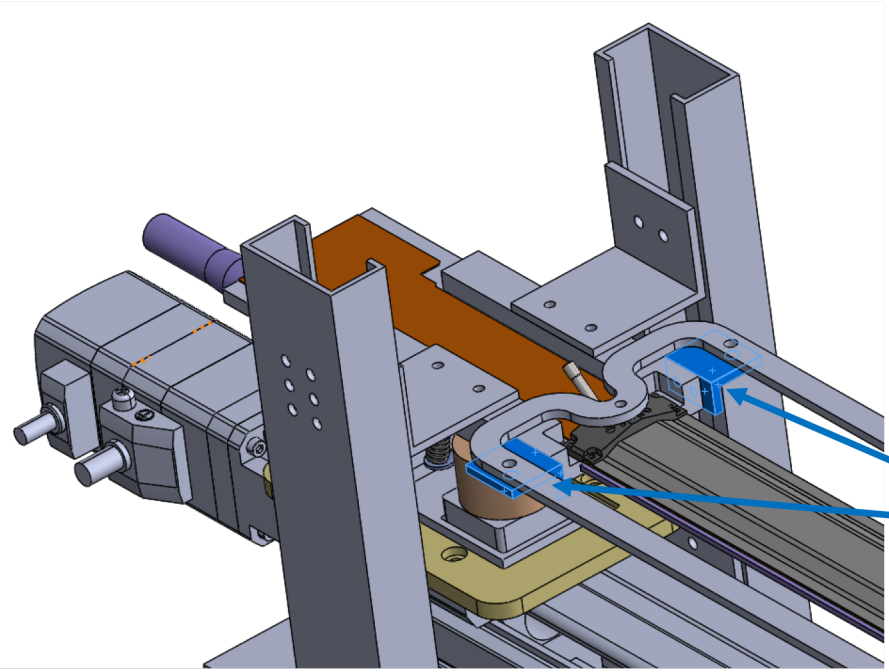
Source test fixture

- The delivery is delayed for a couple of days. It will be delivered tomorrow to RIKEN. I'll forward it to NWU right away.

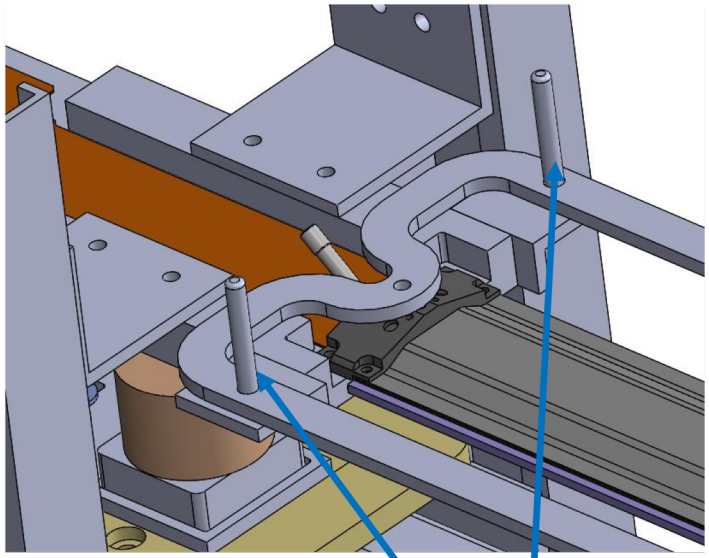


Courtesy of μ

Updated design

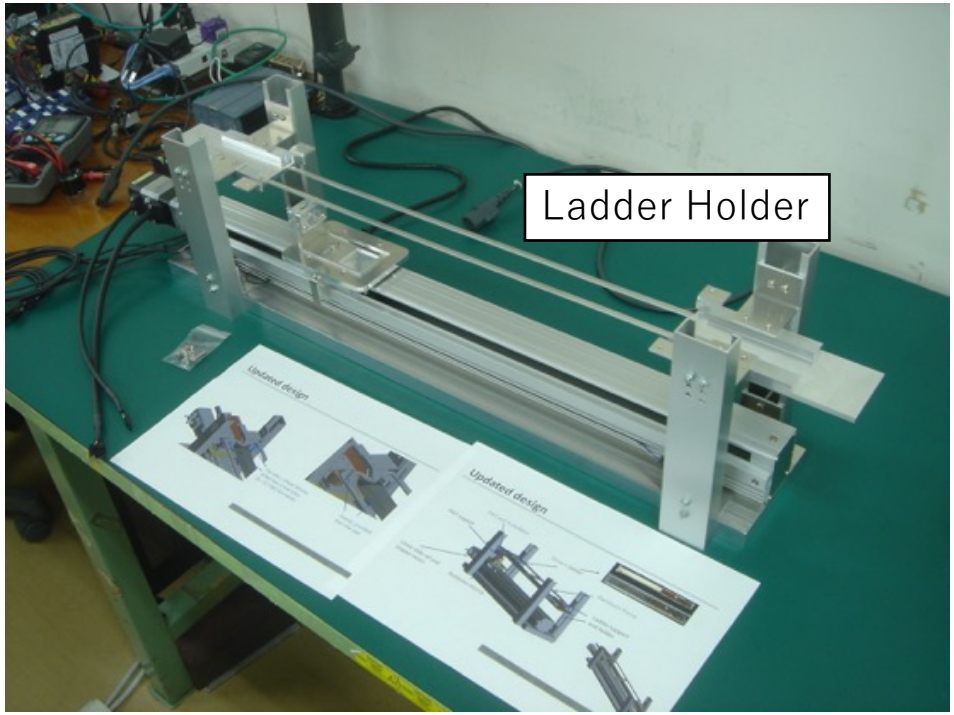


The new L-shape fixtures drilled two screw holes (6 – 32 UNC) for stands



Stands, provided from the user

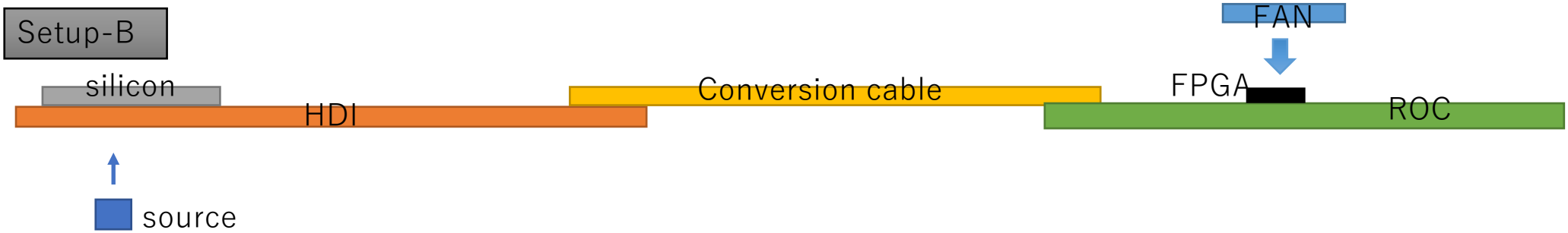
Issue Pointed out by Han-Sheng



現行だとROCを裏向きにセットアップしなければならない。
ROCを空中に浮かしファンを下にしてFPGAを空冷する？
使い勝手が悪そう。

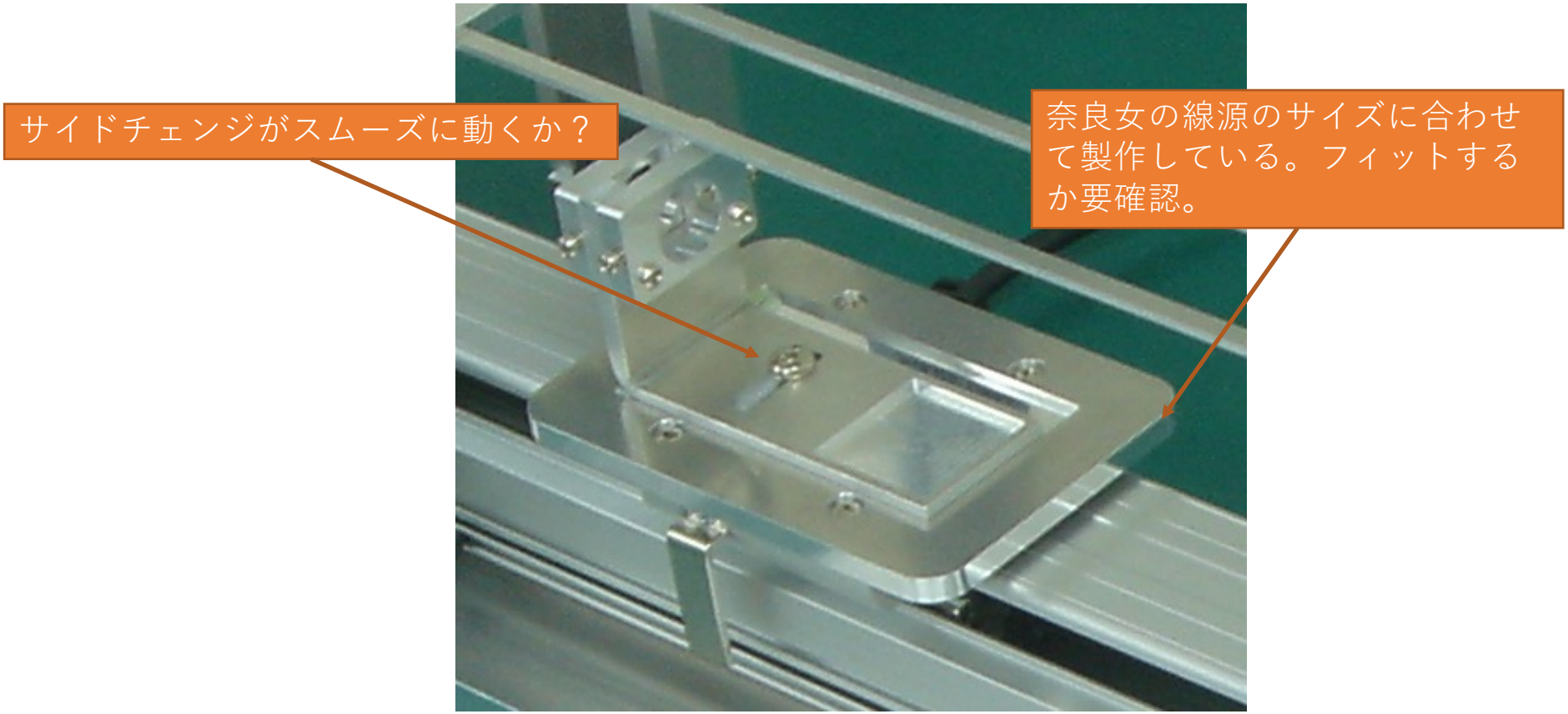
Issue Pointed out by Han-Sheng

○ No material between source and silicon.
ROC has to face down. Not smart operation.

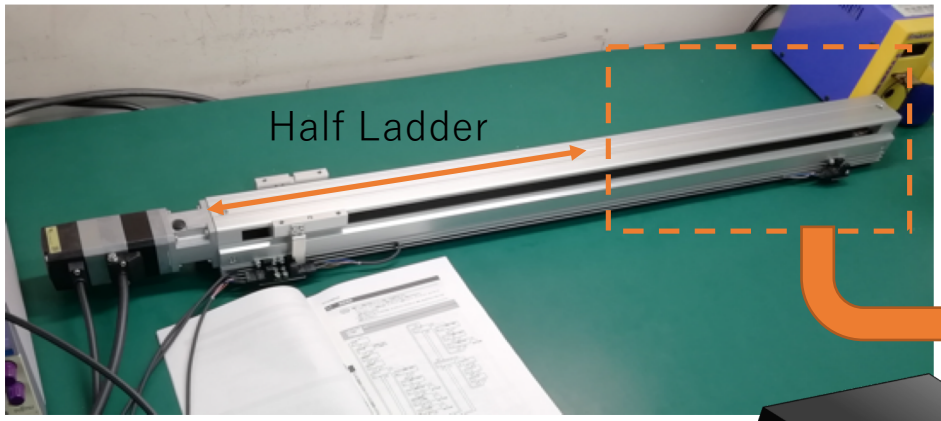


○ Energy loss in HDI material before it reaches to silicon.
ROC face up. Regular operation.

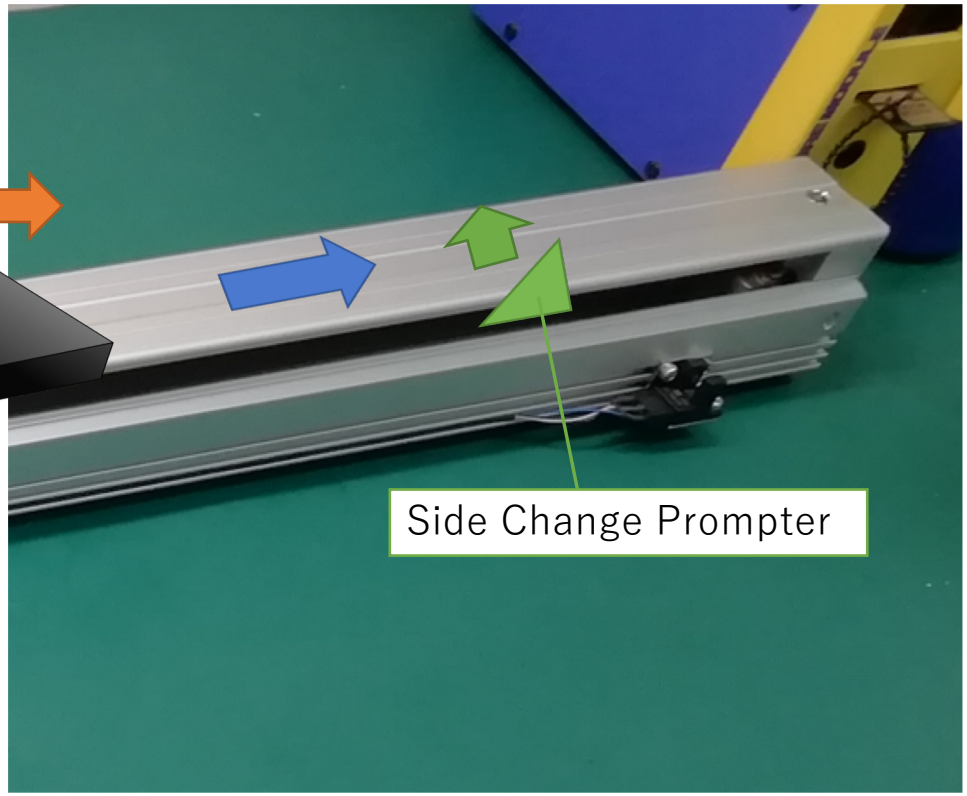
Stage and Scintillator Holder

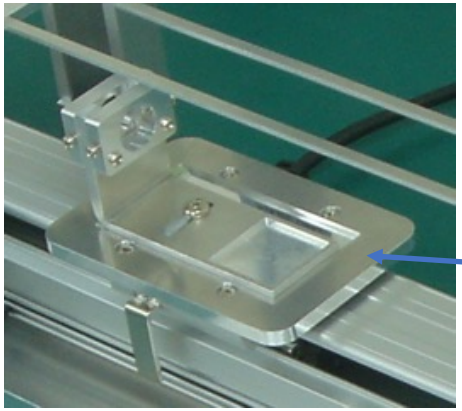


Automation of the Side Change



For example





stage

Other Optimizations and Checks

- Weight relief of the conversion cable, BE.
- Limit switch positions
- Stage speed
- Data taking sequence
  - DAQ start -> Motor on, f.i.
- Statistics
- Reproducibility
- Possible automation
- Documentation
- Database

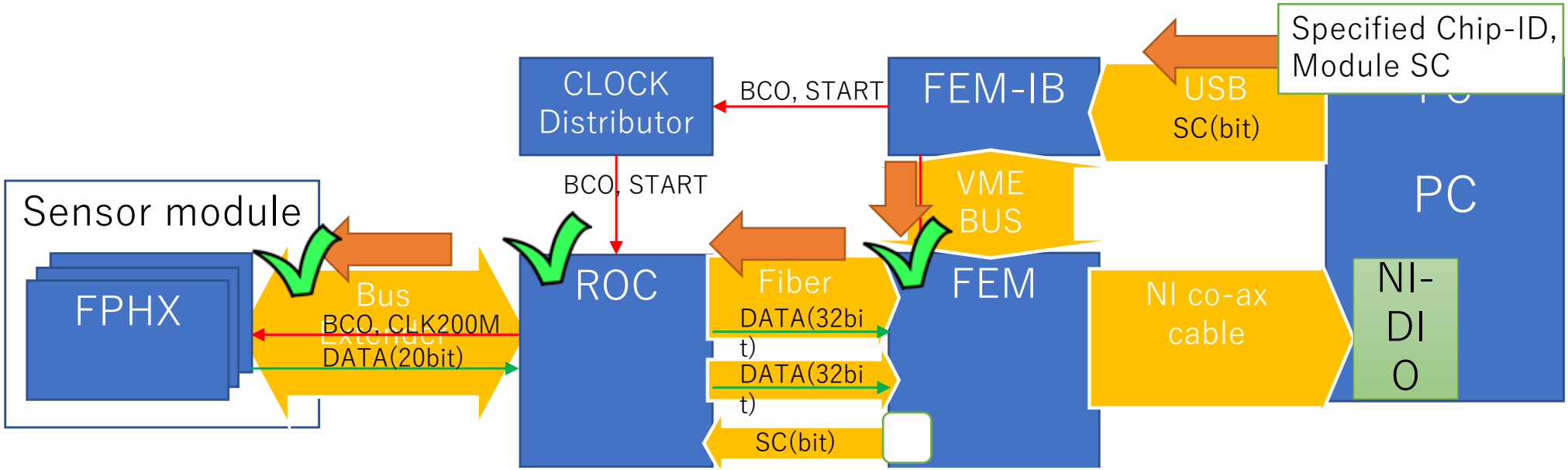
Eye Diagram Measurement

Eye diagram measurement

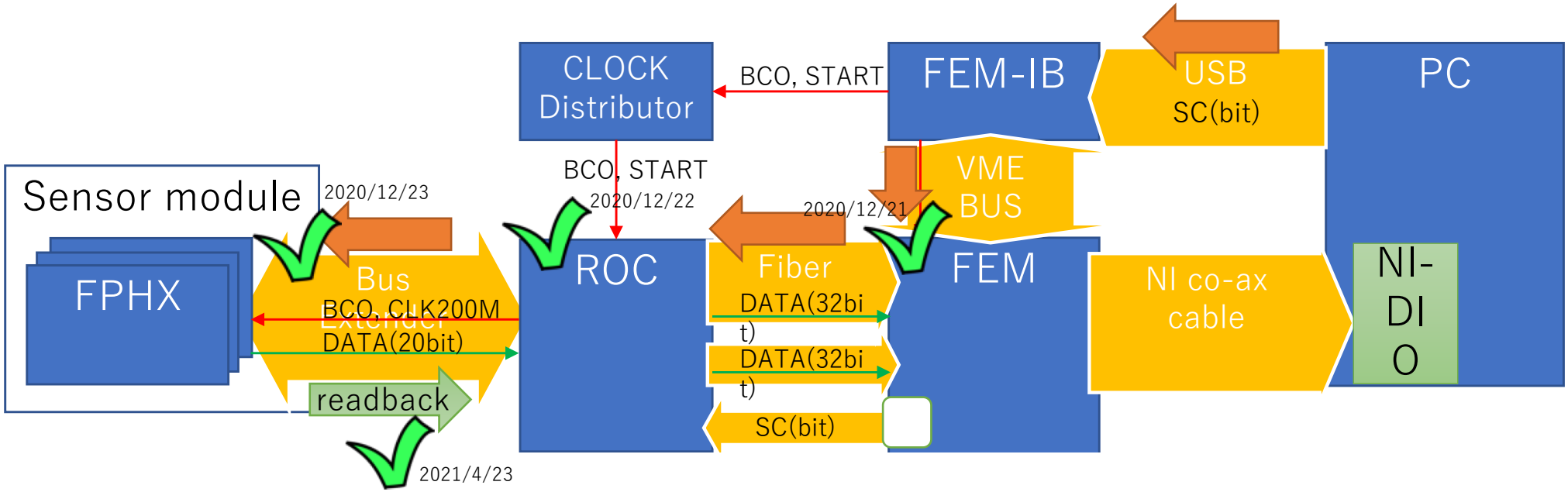
1. Reproduce 2.5V regulator result w/o BE with old BE
2. Same condition, but new BE. Compare any difference with the old one.
3. LVDS scan with 3.0V regulator and compare with 2.5V w/o BE
   - Quick comparison of LVDS amplitude (be prepared by μ). Always record drawing current at power supply.
4. Chip position dependent eye diagram measurement.
   - Chip-1 and 13, (14 and 26?)
5. Half entry inspection
6. Else? Other preparations?

Readbacker Developement

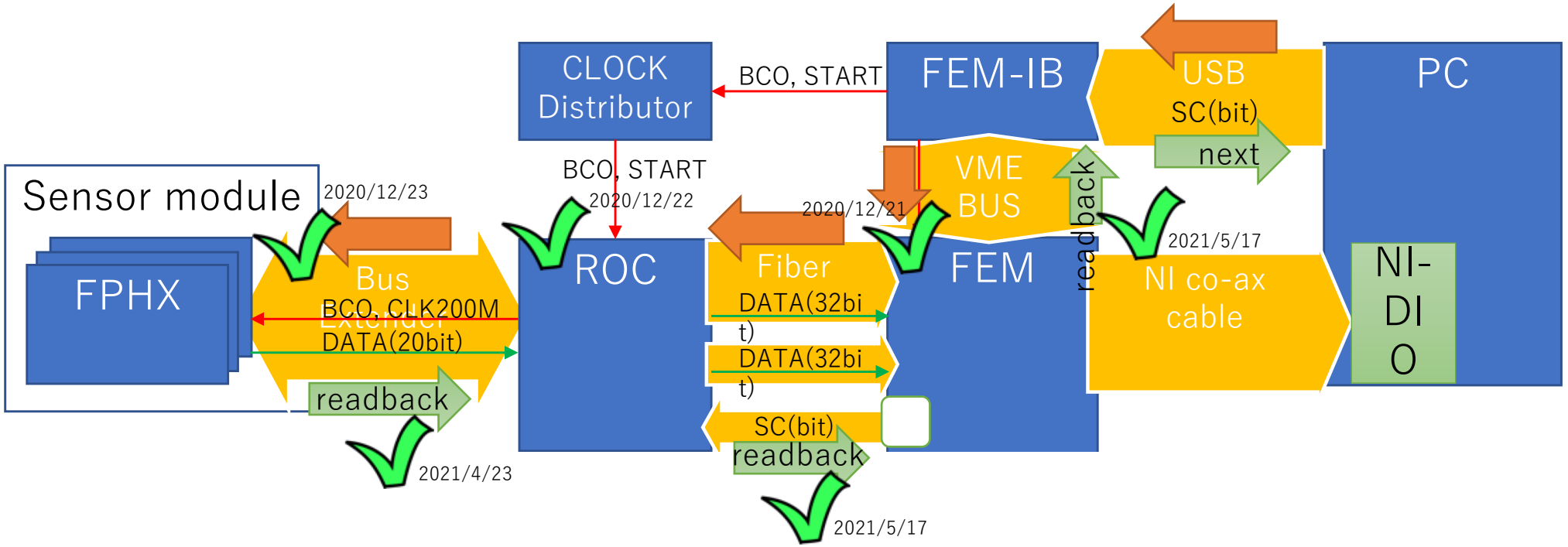
Readbacker Status in December 2020.



Readbacker Status before Golden Week



SC Transmission to Specific CHIP-ID&Module



- Tracing SC command transmission from PC to FPHX chip (done) by the end of Dec. 2020.
- Return path is completed to FEM-IB by May 17th