

Itk plans

EJS

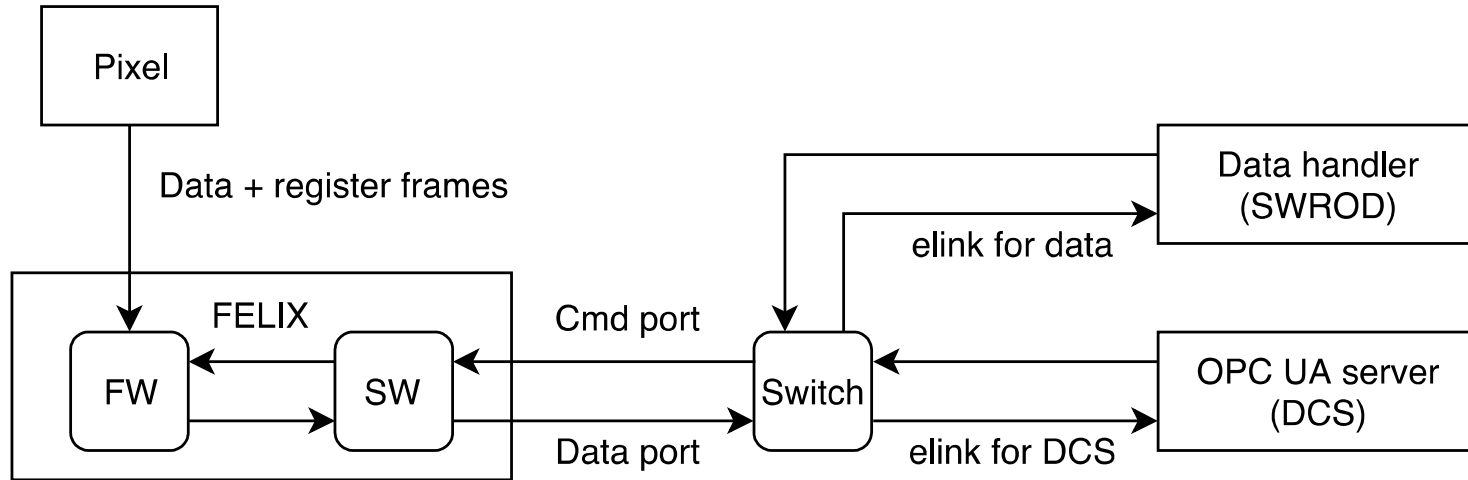
2020-07-17

Environmental monitoring

- ELMB (Embedded Local Monitor Board)
 - Needs special CAN bus cards
 - Is not supported on Centos7
 - Needs WinCCOA
 - Complex to develop → is it worth putting a huge effort just to measure temperatures?
 - We can wait for someone else to develop, but it's likely going to be on the long time scale
- For local testing, better go Arduino-like...

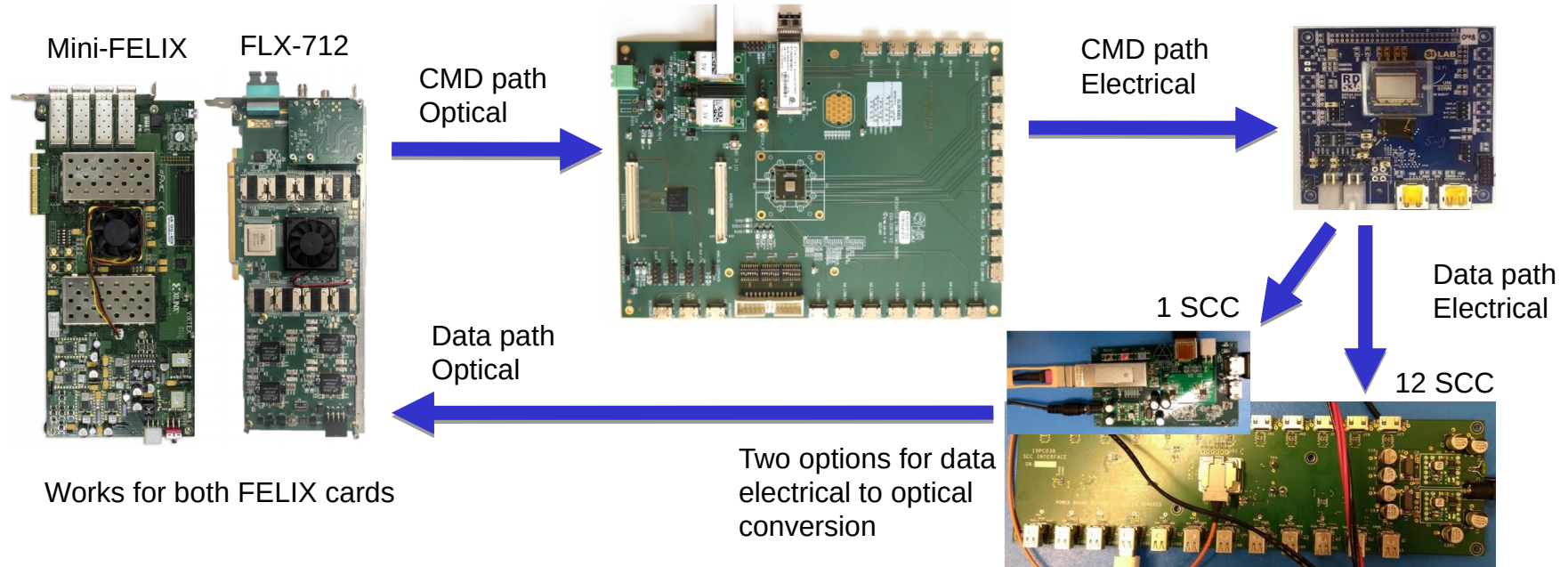
DCS

- Ok to work on the Itk DCS final project, but **for lab testing it's too much**
- Centos7 not supported (Centos8 will come in ~2 years)
- On the Felix side, Carlos is working on an interface software to read the NTCs on the chip carrier boards



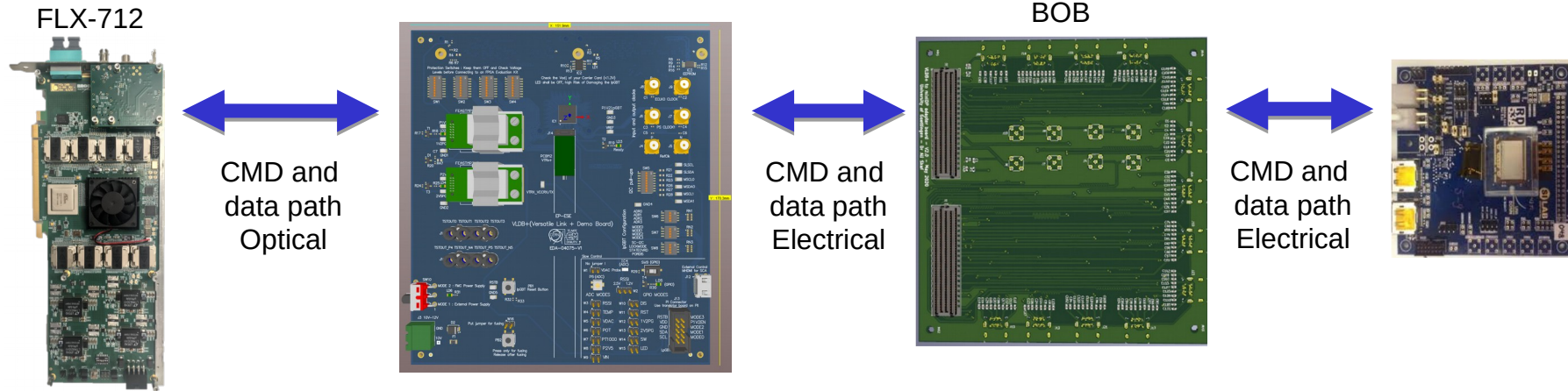
FW splits data and register
on different e-links

Readout HW option #1: ANL solution



- Cumbersome Tx/Rx split

Readout HW option #2: VLDB card

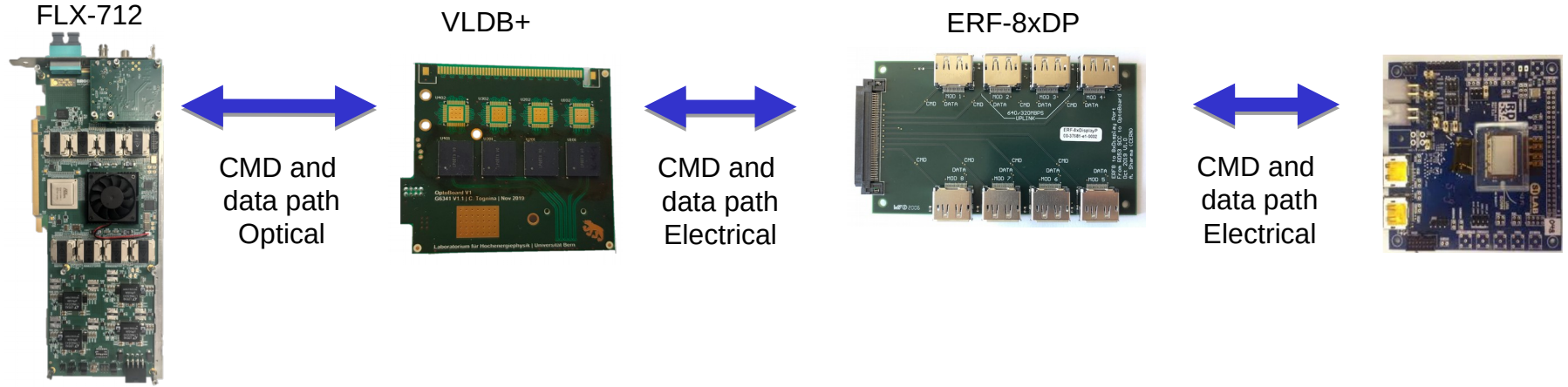


2kCHF, can be ordered at
<https://vldbplus.web.cern.ch/order>

Order from Ali Skaf
(Göttingen), should be
free or at most
 $O(100)$ CHF

- This solution is already available
- Can read up to 8 SCC or 2 quads

Readout HW option #3: the final Optoboard



- This will be the final solution
- Will be able to read 8 quads
- However, it's still under development (Bern)
- Est. delivery, at least six months

Felix firmware

- What the firmware should do:
 - Decode Aurora (should be a Xilinx IP module...)
 - Send idles to the chip (clock locking, otherwise overheat and melt down)
 - Receive commands
- Supposed to be developed by Wuppertal, but now in ANL
- Code is well behind

“Challenges” with Yarr (as it is now)

- It's a pretty “close” project (they are not willing to collaborate)
- Cumbersome architecture
- Does not interface nor compile with TDAQ, nor follows its policies!!!
- It doesn't scale! (tests with FEI-4 failed above 4 chips)
- Unless Itk decides to buy a supercomputer...

