

micro-TCA DAQ Upgrade Meeting – 9/9/2014 - First Meeting

Resources:

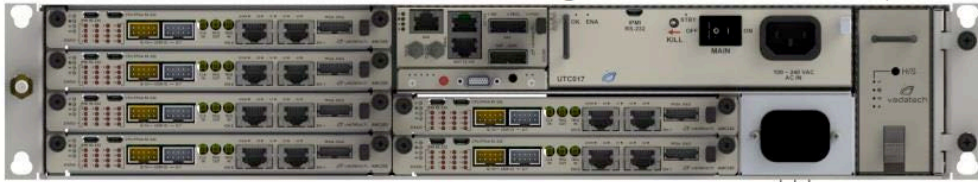
http://www.phys.hawaii.edu/~idlab/taskAndSchedule/STURM/XRM_Readout_Upgrade.pdf

The following is slide 14 from XRM_Readout_Upgrade.pdf

Micro-TCA

- Based upon advanced TeleCom standard, but a light version, preferred by particle physics community
- Designed for intensive signal processing/handling
- Engineered from the start for extremely high reliability and performance

2U height, 19" rack-mount (\$3,750)



mTCA Hub Controller (\$5,341)

CPU (Intex Xeon E3) (\$3,360)

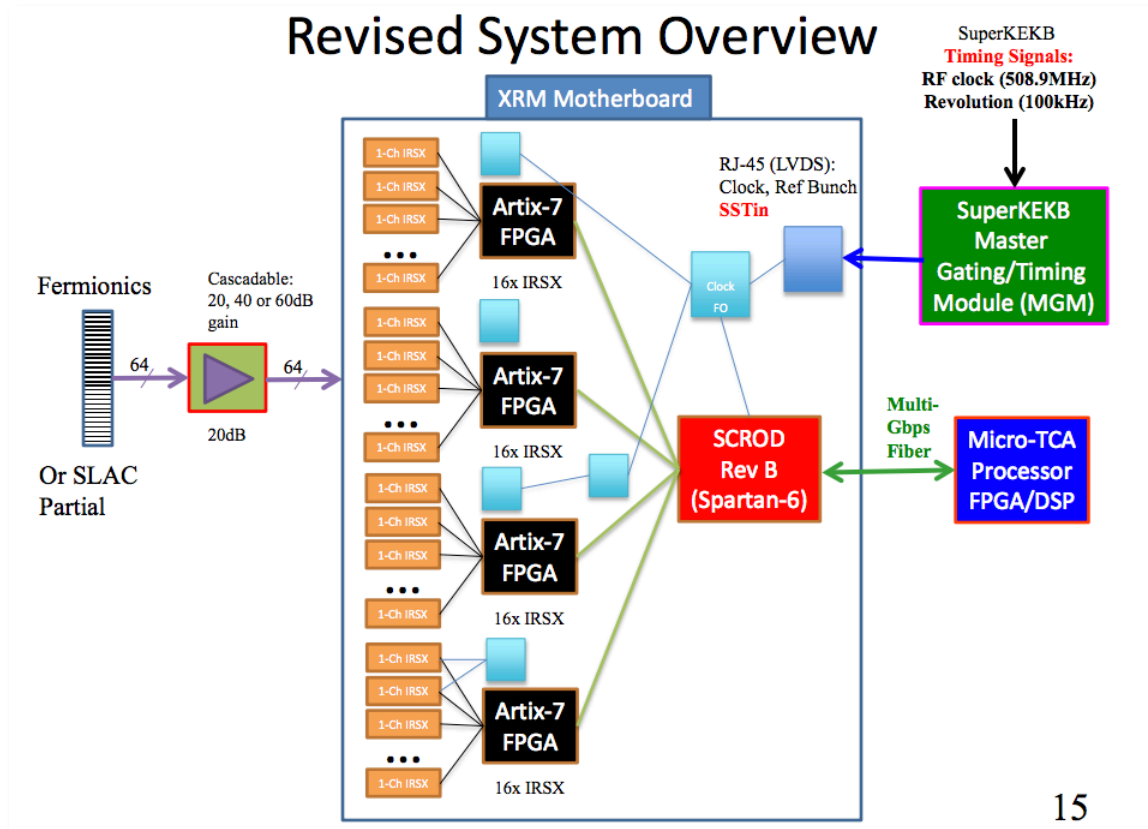


14

CPU(Intel Xeon E3)
Transmission Protocol (Setup)

HI nuon beamline

The following is slide 15 from XRM_Readout_Upgrade.pdf



Steps:

- 1) Configure OS
- 2) Set up Link
- 3) Transfer Protocol
- 4) Establish Event Transfer

Problem:

- We don't have a high data-rate
- Need very high throughput

Micro TCA system

- PCI link
 - Learn how to configure and see how fast can go
- Connect up to 6 computers

October Deadline (Transmit one at time)

- Jussi designing hardware at the moment
- Ring in KEK is 3km long (same particle comes every us), 5 Hz