SSD slow control (new)

<http://www-subatech.in2p3.fr/~electro/projets/star/upgrade/index.html>

Main changes:

1. Replace single ADC with 16 ADCs for each ladder P/N side.
2. All ladders processed concurrently.
3. Connexion/C2D2 card + ADC card -> ladder card.
4. The JTAG commands come from slave FPGA instead of Corelis board.

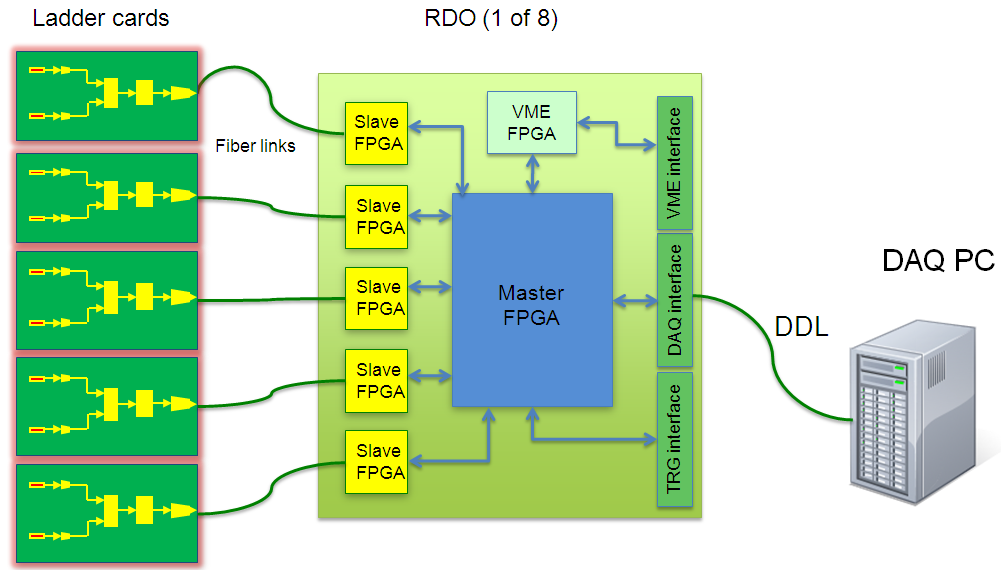


Figure New Readout Chain

# Test

Some tests are done by Micheal and me. The ladder 0 and QRDO are used. Main work is done in Micheal’s laptop. Only some early code is ported to ssd-upgrade, in **/home/yanwh/source/slow controls using library** and **/home/yanwh/source/slow controls interface**. The ladder FPGA code is in **/home/yanwh/source/configuring\_ladder\_fpga.zip\_FILES**. The makefiles may still be useful, but the source code is outdated.

# Appendix

1. USB related library:

<http://www.ftdichip.com/Drivers/D2XX.htm> : d2xx driver

<http://lalusb.free.fr/software.html#refsoftware> : LALUsb

1. If the message "FT\_Open failed" appears:

Perhaps the kernel automatically loaded another driver for the FTDI USB device.

**sudo lsmod**

If "ftdi\_sio" is listed: Unload it (and its helper module, usbserial), as follows.

**sudo rmmod ftdi\_sio**

**sudo rmmod usbserial**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Last modified: 12-18-2012

[yanwh@rcf.rhic.bnl.gov](mailto:yanwh@rcf.rhic.bnl.gov)