Annie’s Central Card

Status Report - 8/21/2015

The University of Chicago
ACC Specs

General

6U VME32 or VME 64x Format
Can work as Stand Alone

8 x RJ45
or
16 x RJ45

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ACC Specs
System

LVDS System Interface
RJ45 with:
- LVDS Clock in
- 2 x LVDS In
- 1 x LVDS Out

8 x RJ45
or
16 x RJ45

Ethernet
SMA
USB

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Annie System Interface and Clock Distribution

Note:
- Clocks to FE do not come from the FPGA;
- Clocks to FE are fixed, not from PLL.
- Clocks to FE are routed to equal length (+/-2.5mm)
ACC Specs
Front End

LED
QSFP
RJ45

8 x RJ45
or
16 x RJ45

LVDS Front End Interface

Each FE Unit serviced via 2xRJ45
ACC can service 4 or 8 FE Units.

Ethernet
SMA
USB

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LVDS In/Out lines within one FE group are length matched to +/-5mm. (Clock Out line not included here)
Annie Crate Architecture

- **Double Width ACM:**
  One ACM Card can service 8 ACCs. System can be extended in multiples of 8, in a pyramid scheme.

- **Single Width ACM:**
  One ACM Card can service 4 ACCs. System can be extended in multiples of 4, in a pyramid scheme.

- **New ACM can be designed to service up to 16 ACCs.**
ACC - situation and plans

Questions/To Do List:

- Finalize Specifications;

- Finalize Schematic, Layout;

  http://edg.uchicago.edu/~bogdan/AnniesCentralCard/index.html

- Finalize Top Level FPGA Design;

- Start work on functional FPGA Design.