

SSD Mechanical, Cables, external services. status, schedule, resources

Howard Matis – May 11, 2010

Our Board Schedule

- Completion of PC board layout for ladder card (95% done)
 - April 1, 2010
- Definition of FPGA pinout for RDO card (done?)
 - May 1, 2010 (slave FPGA excepted)
- Layout of RDO card complete
 - September 1, 2010
- Review of both boards prior to fabrication
 - September 15, 2010
- Finish initial debugging of both prototype boards at SUBATECH
 - March 1, 2011
- SSD ready for installation in STAR
 - July 2013

Interface Document for Cone

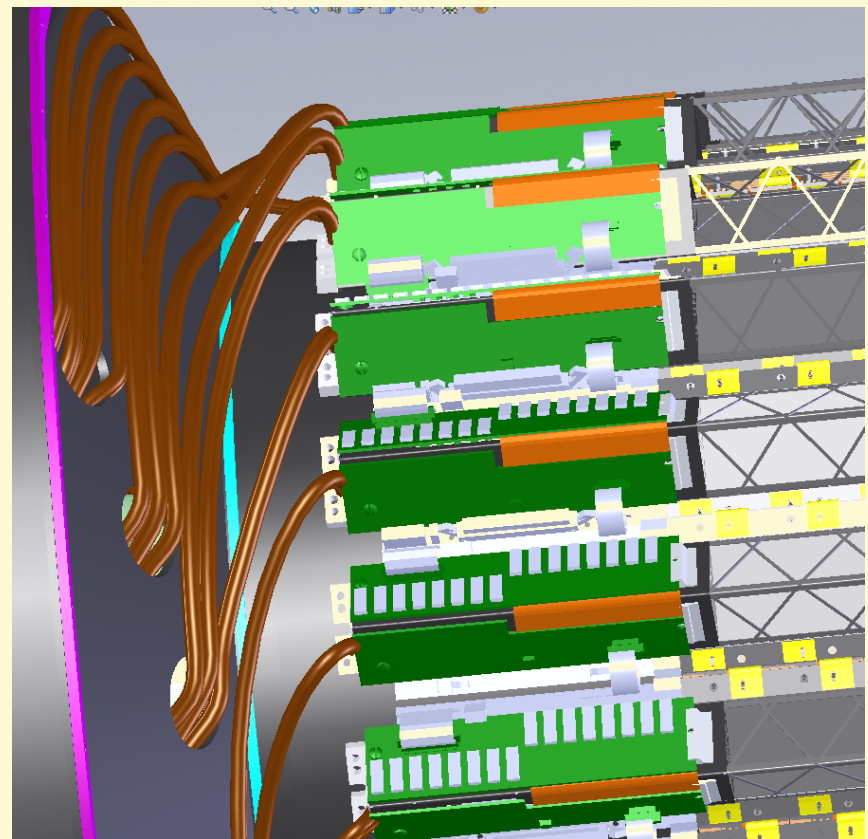
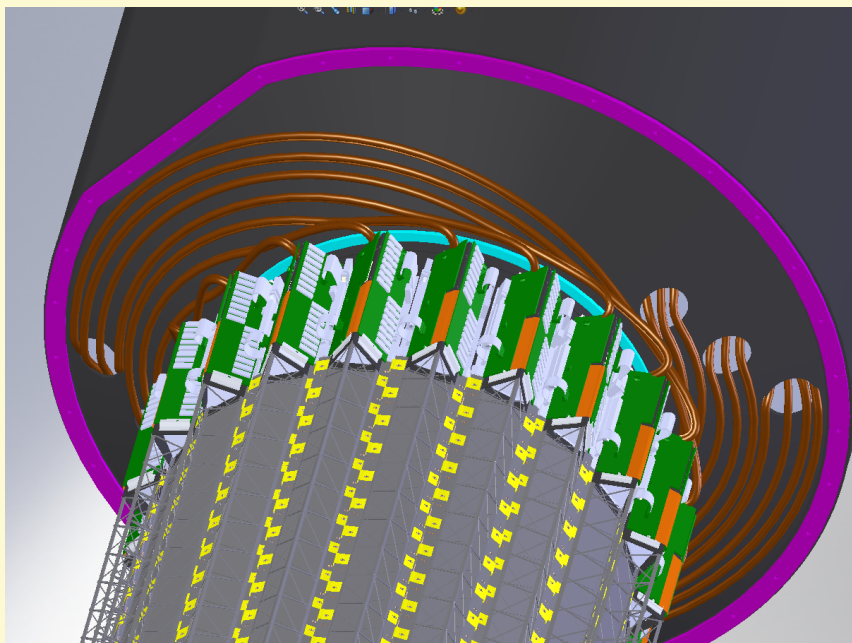
- Resolution specified
- Tolerances specified
 - Short term equal to resolution
 - Long term set to TPC resolution
 - Build due to mechanical constraints
- Cables and cooling specified
- Thermal Loads specified
- Mass of SSD specified
 - Have spare cables been added??

Cable Routing

- Doing the placement of cables from detector
- Concept
- Need specific
 - Connectors
 - Locations
 - 3D models
 - Ladder Board Design

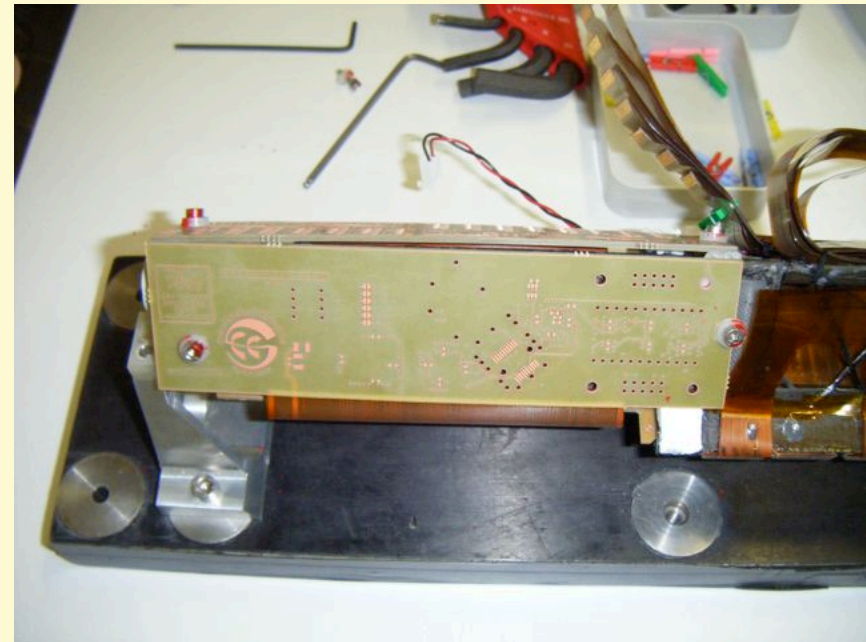


One Proposed Layout



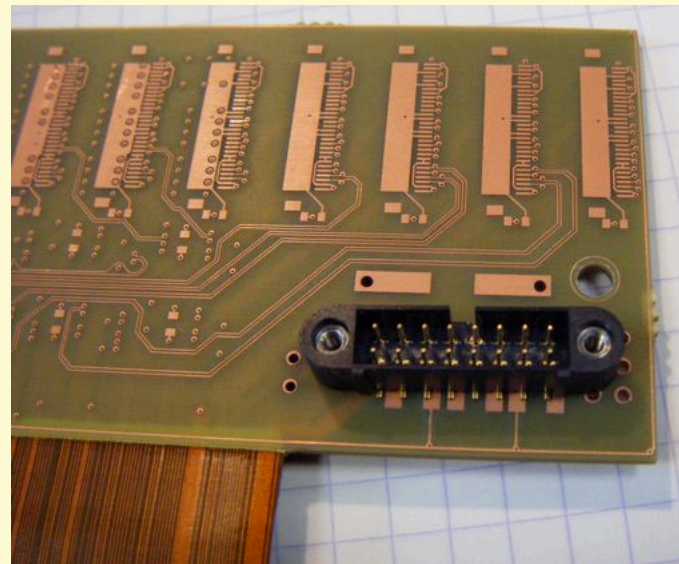
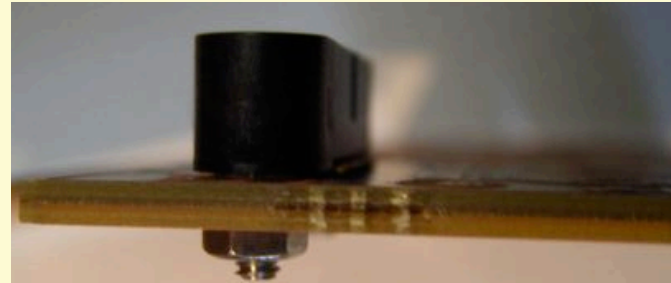
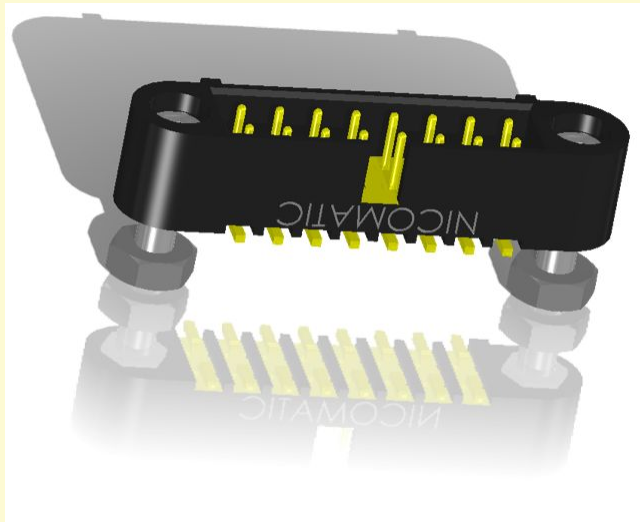
Ladder Board

- Mounted on a ladder
- Flex cable about 1 mm too long
- Three external interfaces
 - Air Hose
 - Fiber Optic
 - Power



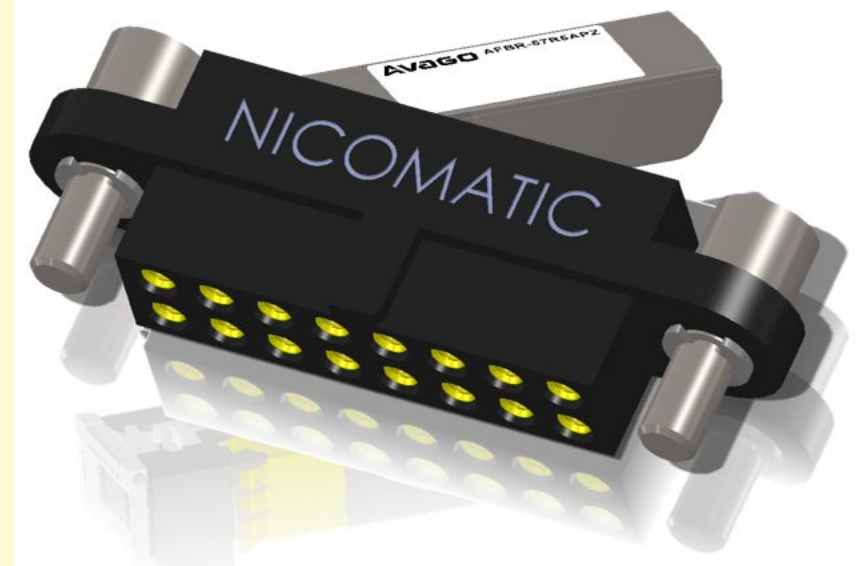
Power Board Connector

- Selected Nicomatic Connector
- Need exact place for final routing
- Have 3D files



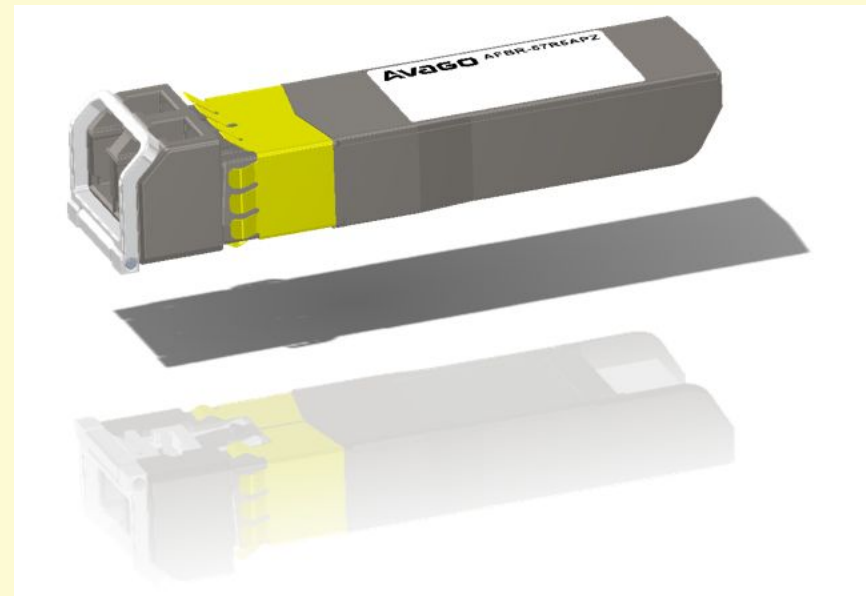
Power Cable

- Selected connector
- Need to determine whether it will work will copper clad aluminum cable
- Sample in hand?
- Need sample aluminum cable and person who will build prototype cable



Fiber Optics

- Selected Avago
- Have sample in hand
- Need to identify “cage” which mounts on board
 - Just finding specified part number
- Put into 3D model



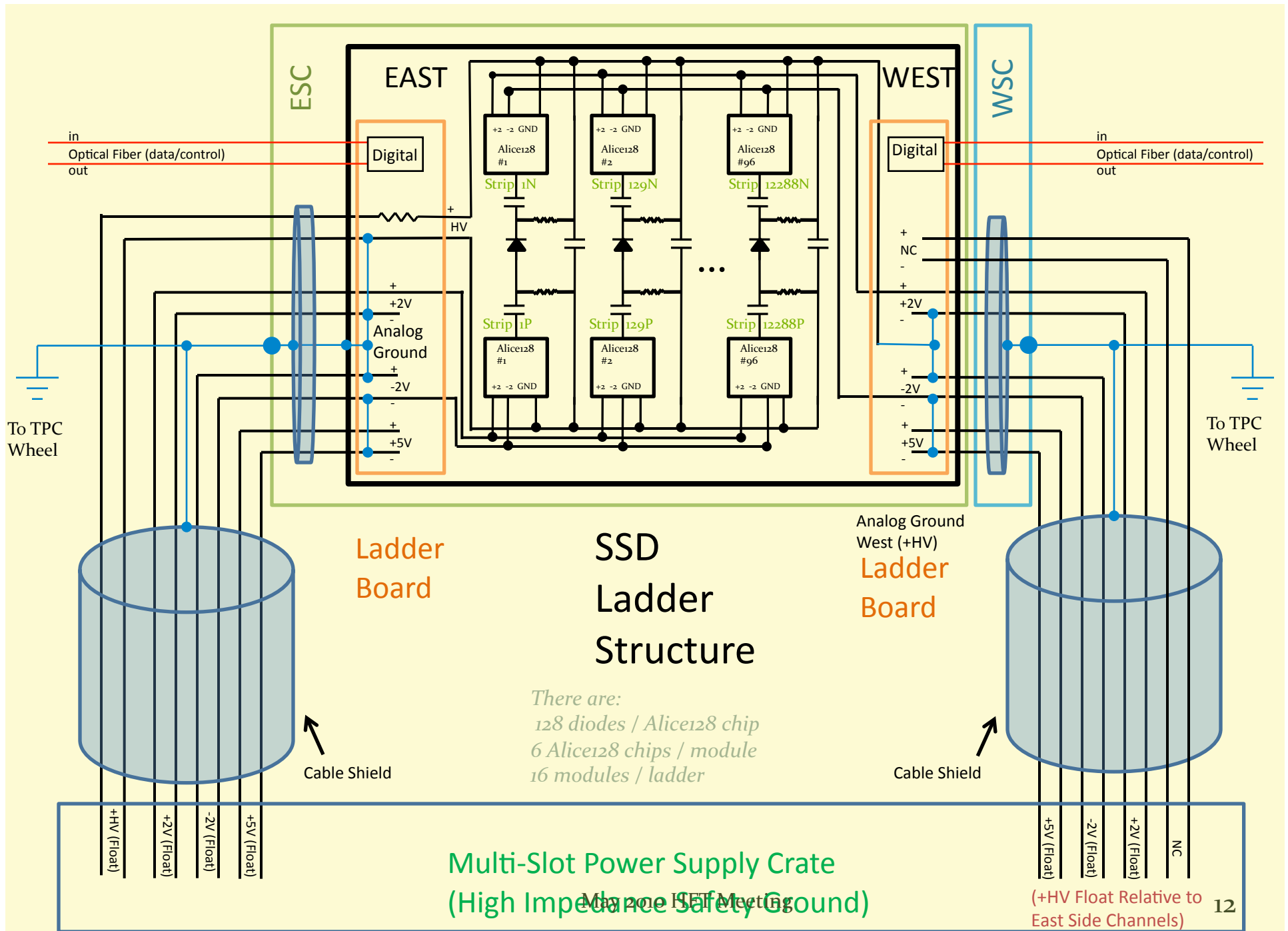
Other things on Cone waiting design

- Cable routing on design
- Air cooling supply
- Patch panel design
 - Final design dependent on Power Supply choice
- Patch panel at Power Supply
- Safety review of system

Cooling System

- Know Interface
- Waiting for design on cone
- Cooler in place on STAR platform
- Waiting for Jim to get back from sabbatical





Important immediate actions

- Finish Mechanical prototype review
- Redesign prototype
- Evaluate connectors
- Build aluminum connector
- 3D layout of connectors on cone
- Need a committed team with defined responsibilities
 - Lots of this work has “depended on the kindness of strangers”
- September 1 deadline coming soon