Report on the Design of PMT Read out board

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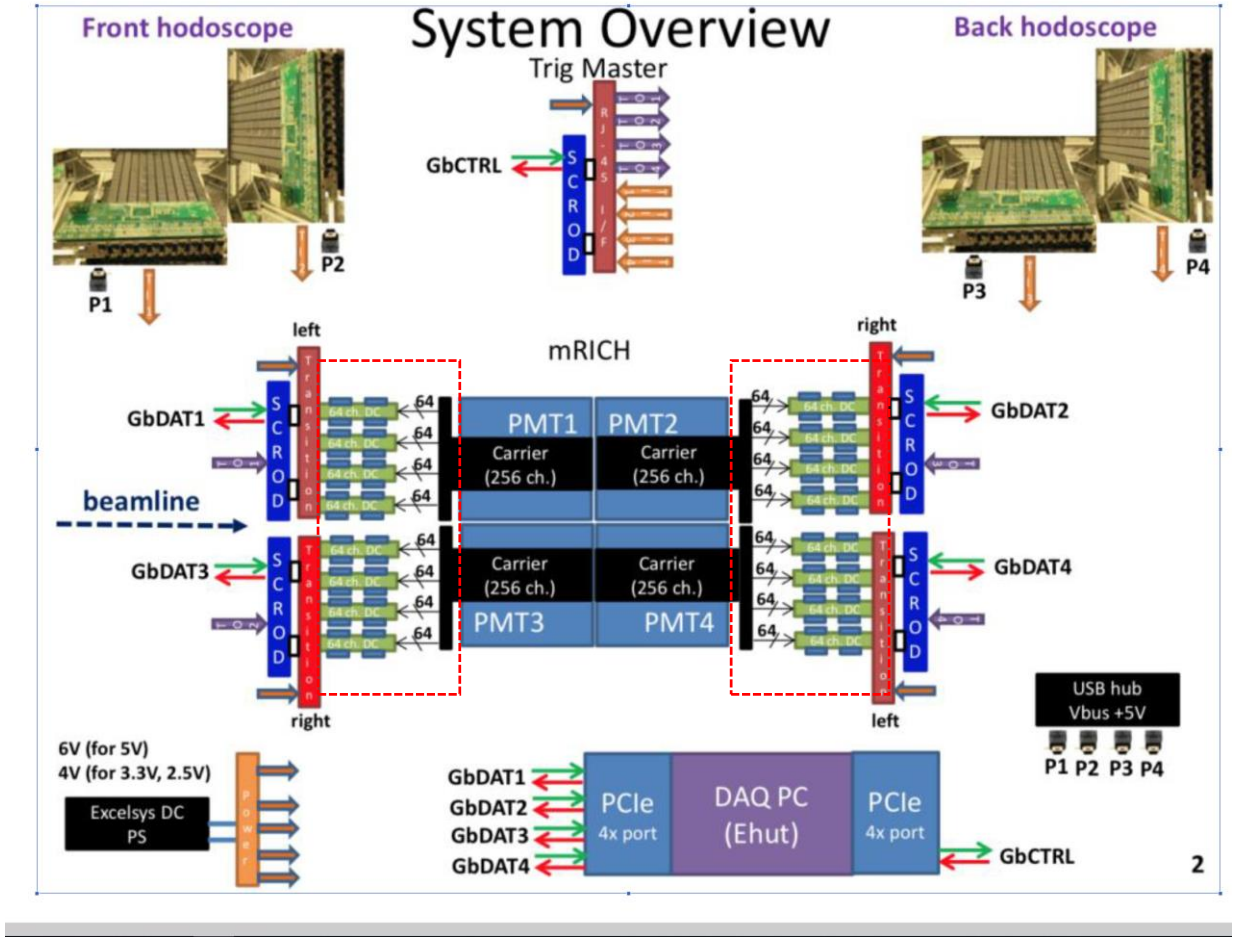
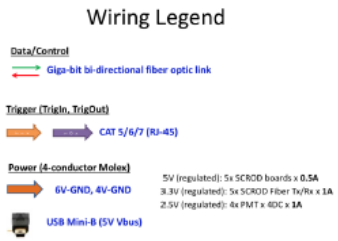
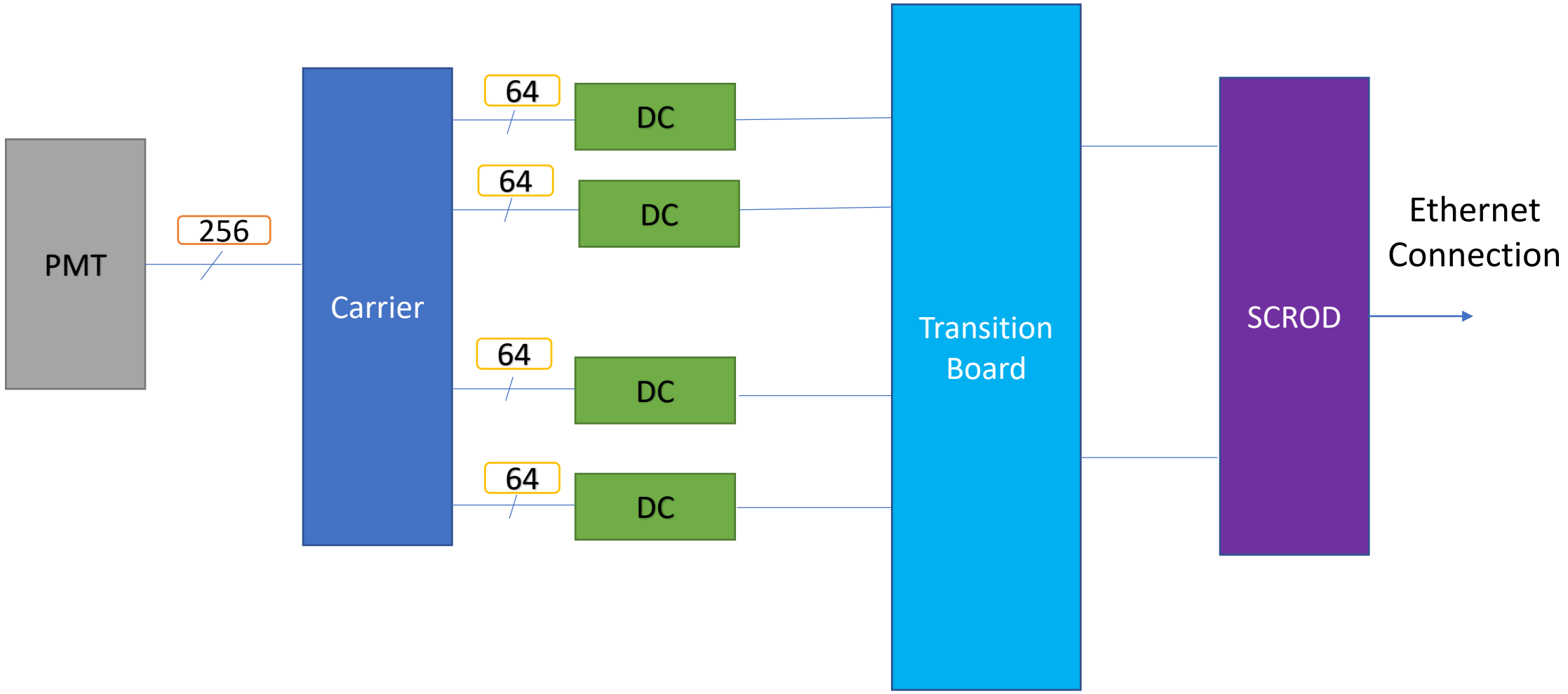
- Modular Rich (mRICH) -> Key PID detectors →ring imaging Cherenkov technology (RICH).
  →Developed by the eRD14 collaboration
  →for kaon and pion identification in momentum range from 3 to 10 GeV/c

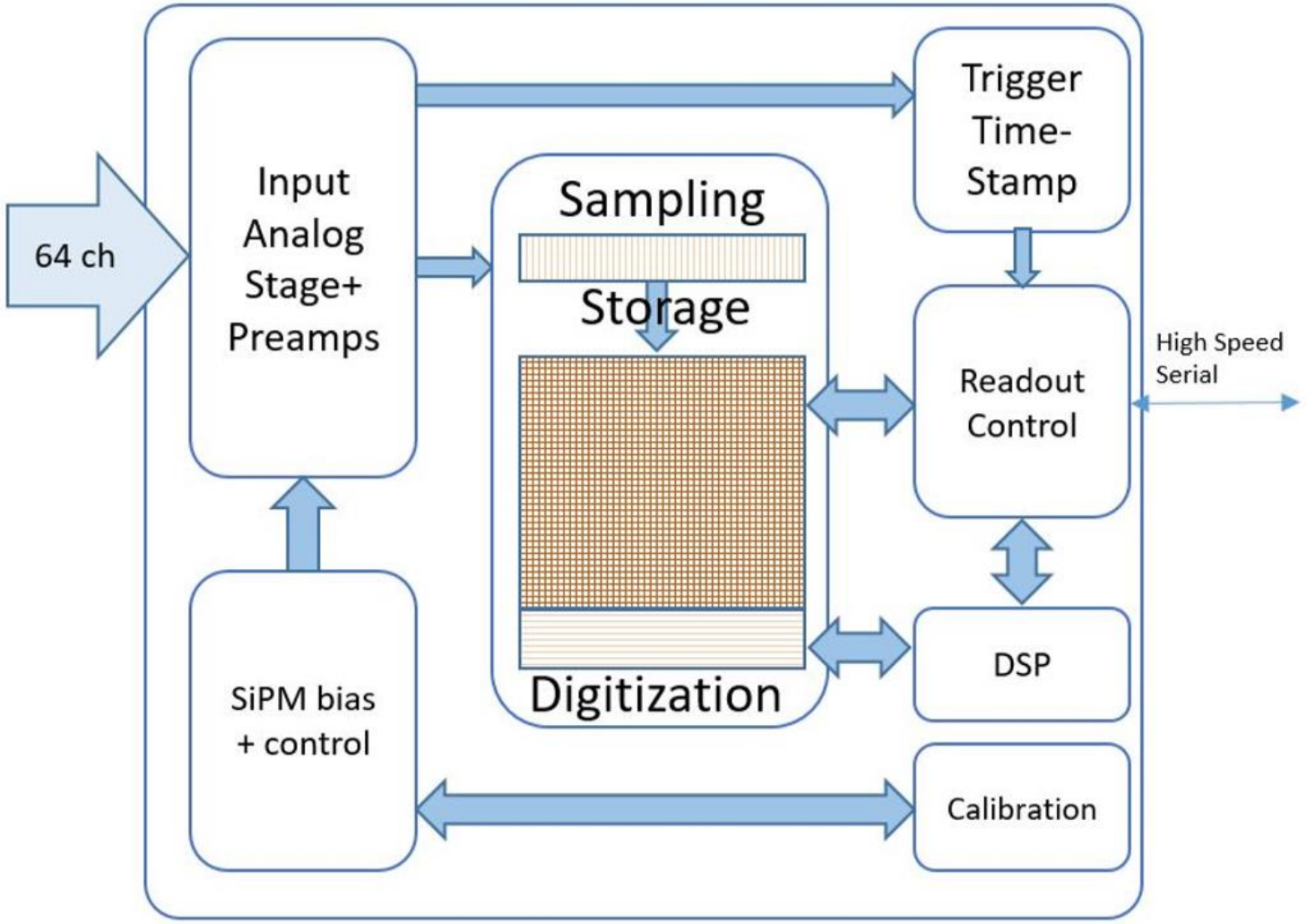




PMT Daughter card Integration:



SiREAD



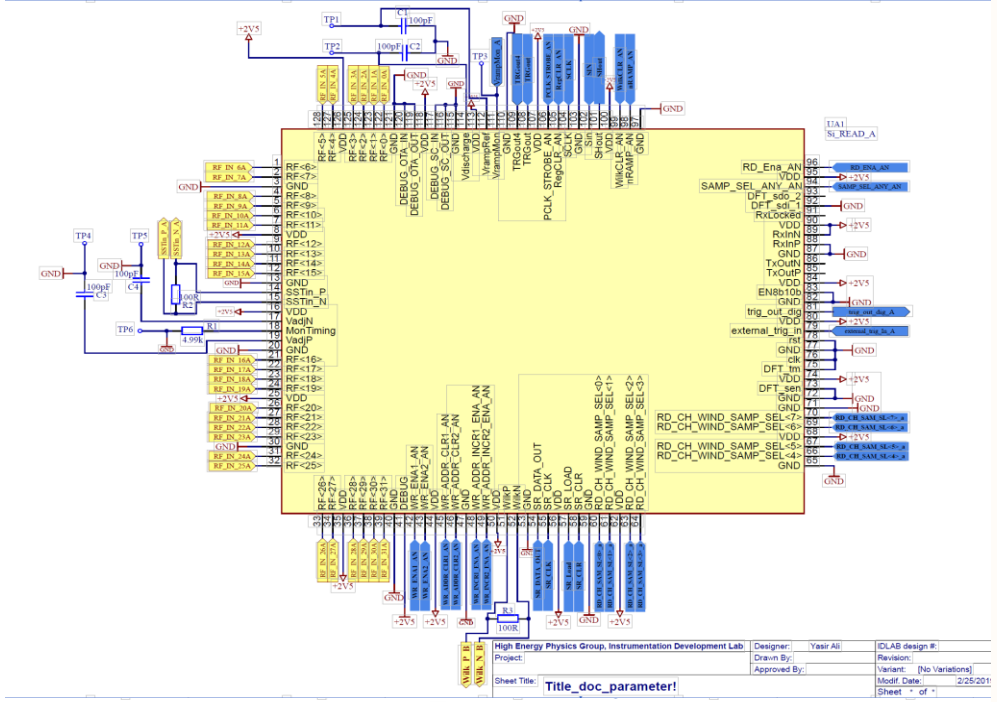
→ SiREAD waveform sampling ASIC (SiREAD), optimized for high density light detectors, such as Silicon Photomultiplier (SiPM) or MA-PMTs

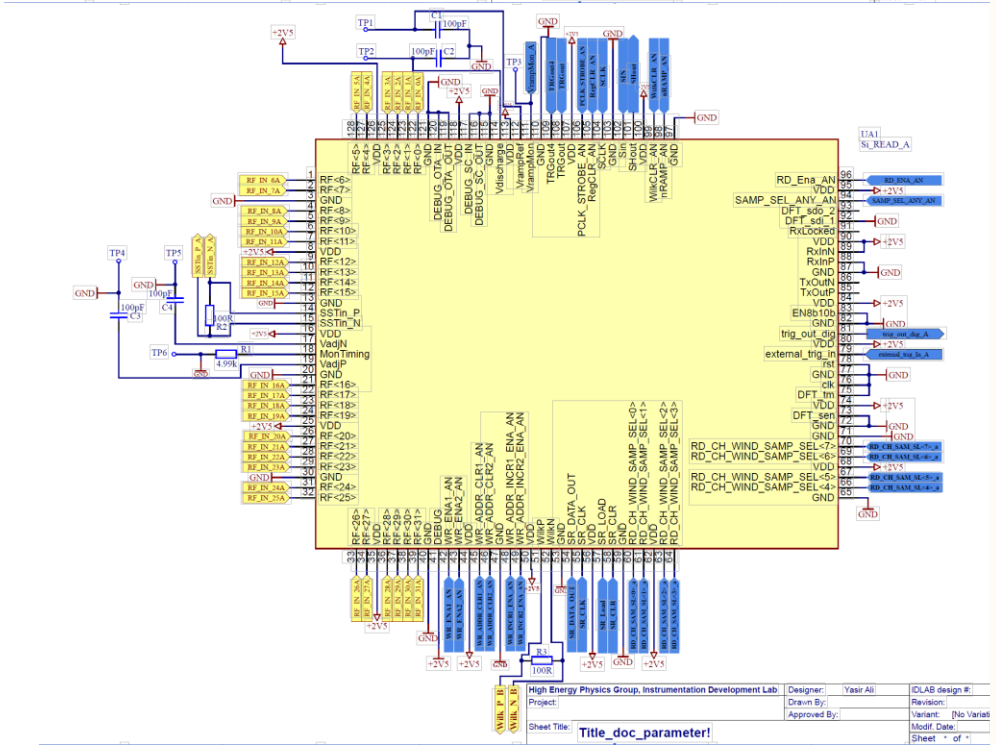
It has 32 Channels with Sampling Rate of 1 GSa/s.

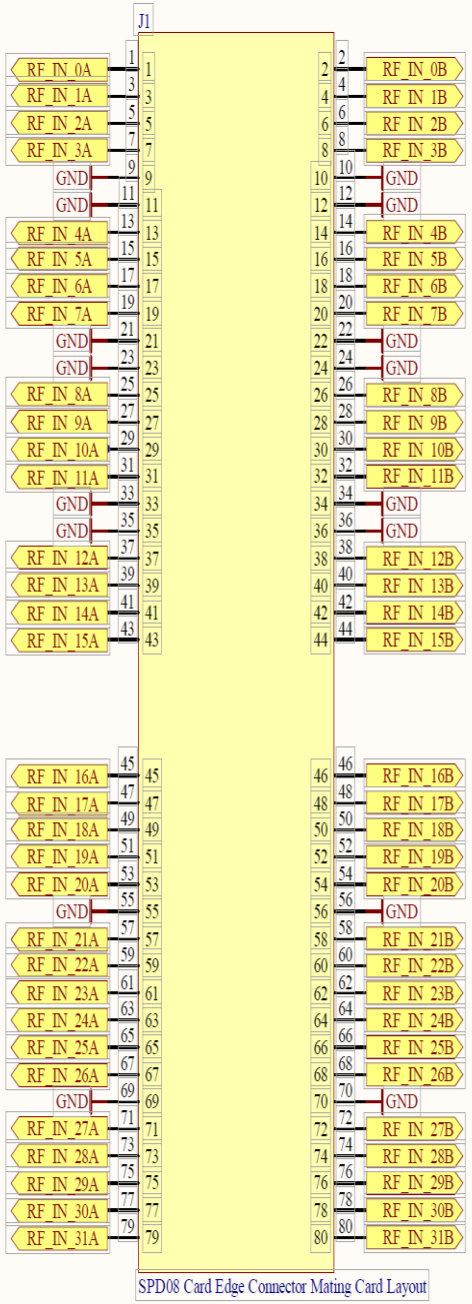
Schematic

J2
Connector

FPGA
Spartan 6





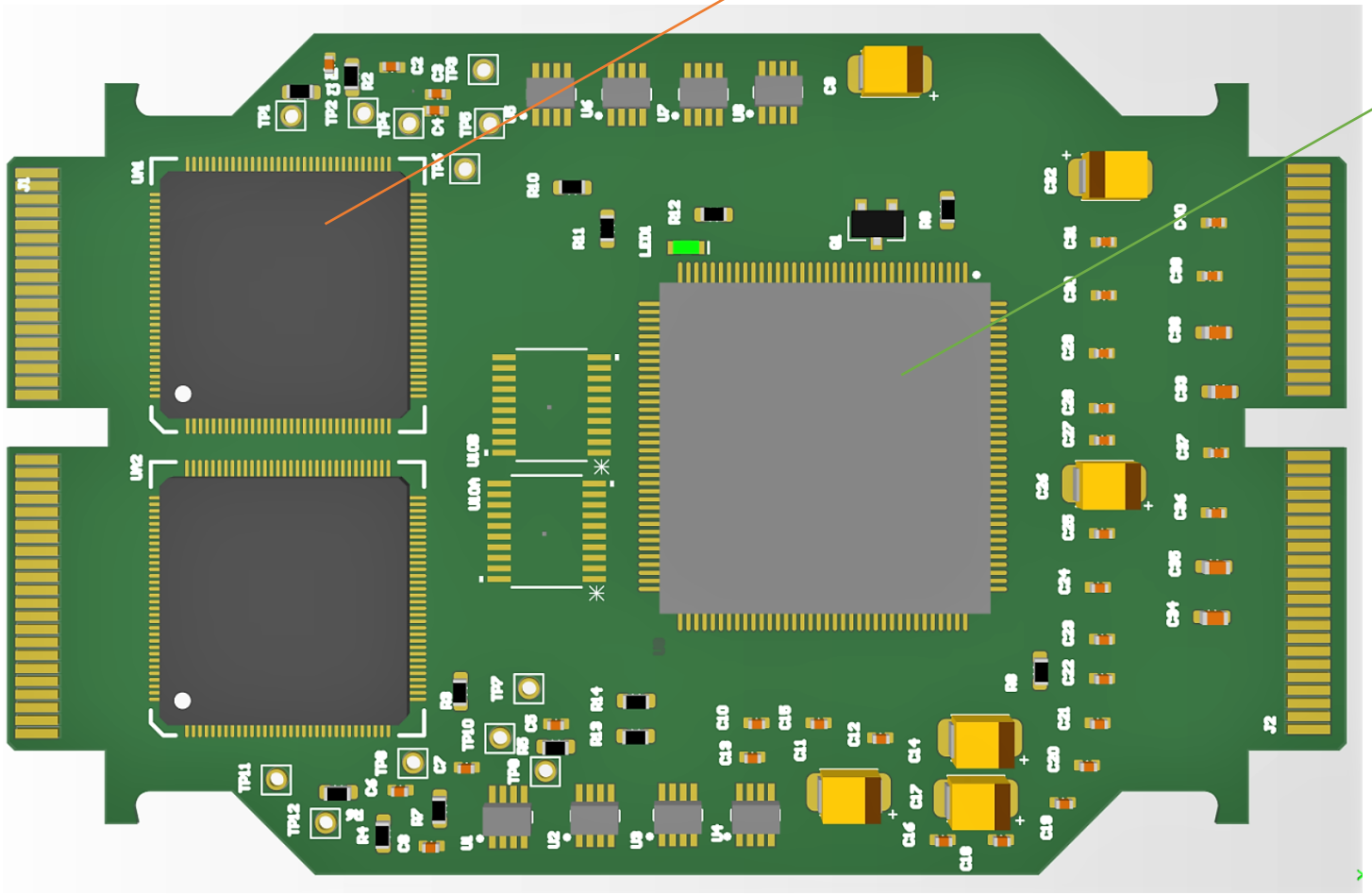


PCB with Placement Stepping towards Routing

SiREAD

FPGA-Spartan 6

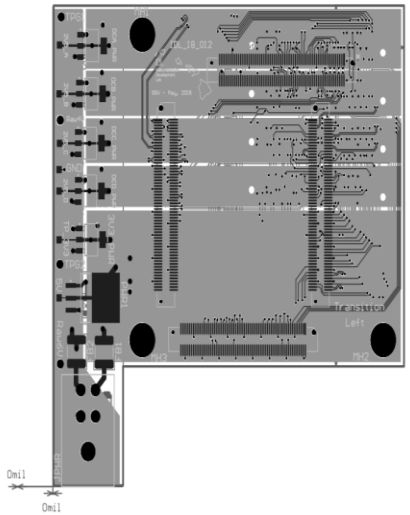
PMT



SCROD

Carrier Board

SCROD to FMC Board



Designer: .Designer	Revision: .Version	File: SCROD_To_DaughterCard.PcbDoc	Sheet 1 of 1	Code: .IDLnum	
Drawn By: .Drawn_By	Modif. Date: Date	Variant: [No Variations]	ASSEMBLY	ID: .BoardName	
Approved By: .Approved_By	Print Date: 5/21/2018	Signature:	Size: A3 H		
Title: Multilayer Composite Print				University of Hawaii at Manoa High Energy Physics Group Instrumentation Development Laboratory	

Estimated Schedule

- Schematic is Finalized and Placement is almost there
- Lay out completion and Final Design Review by: 03-20-2019
- Fabrication by: 03-29-2019
- Assembly: 04-07-2019
- Initial bring up and first indication of working: 04-15-2019

- Thanks for your Patience