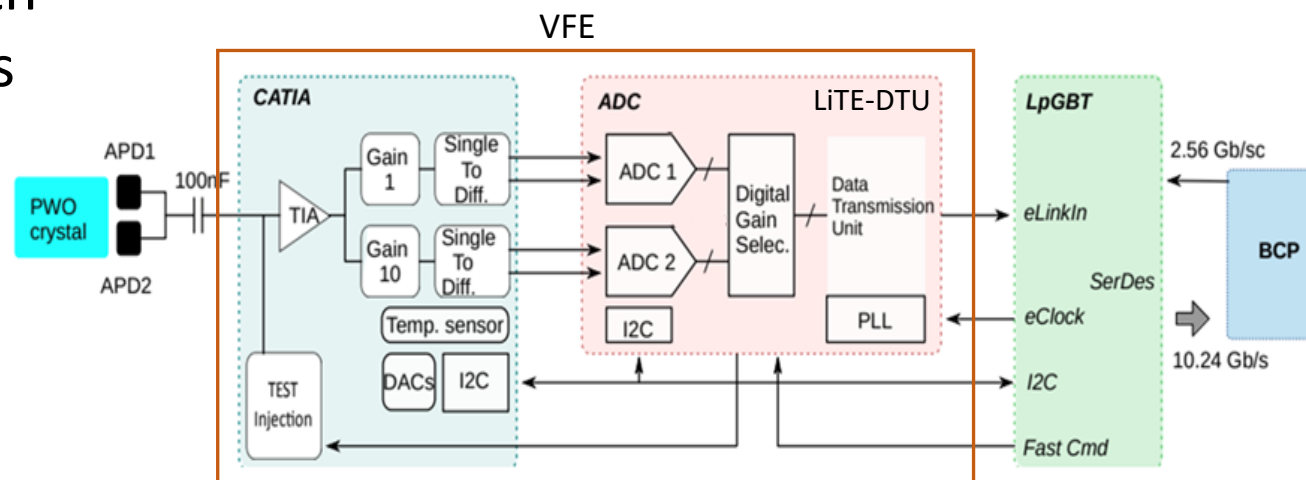


The front-end electronics upgrade of the CMS ECAL Barrel



F. Cossio on behalf of the CMS collaboration

- New on-detector electronics to comply with HL-LHC CMS trigger and DAQ requirements
 - CATIA ASIC
 - LiTE-DTU ASIC
- Noise reduction and pile-up mitigation
- 30 ps time resolution for $E > 50$ GeV
- Off-detector trigger primitive generation
 - L1 trigger with single crystal information
 - On the fly pulse shape discrimination for APD spikes rejection



CATIA ASIC

- TIA architecture
- 35 MHz bandwidth
- Dual-gain outputs

LiTE-DTU ASIC

- 12-bit 160Ms/s ADCs
- Data selection and compression