GIGALOG

4ch Photon Counting with Integrated HV

Gigalog Project Example

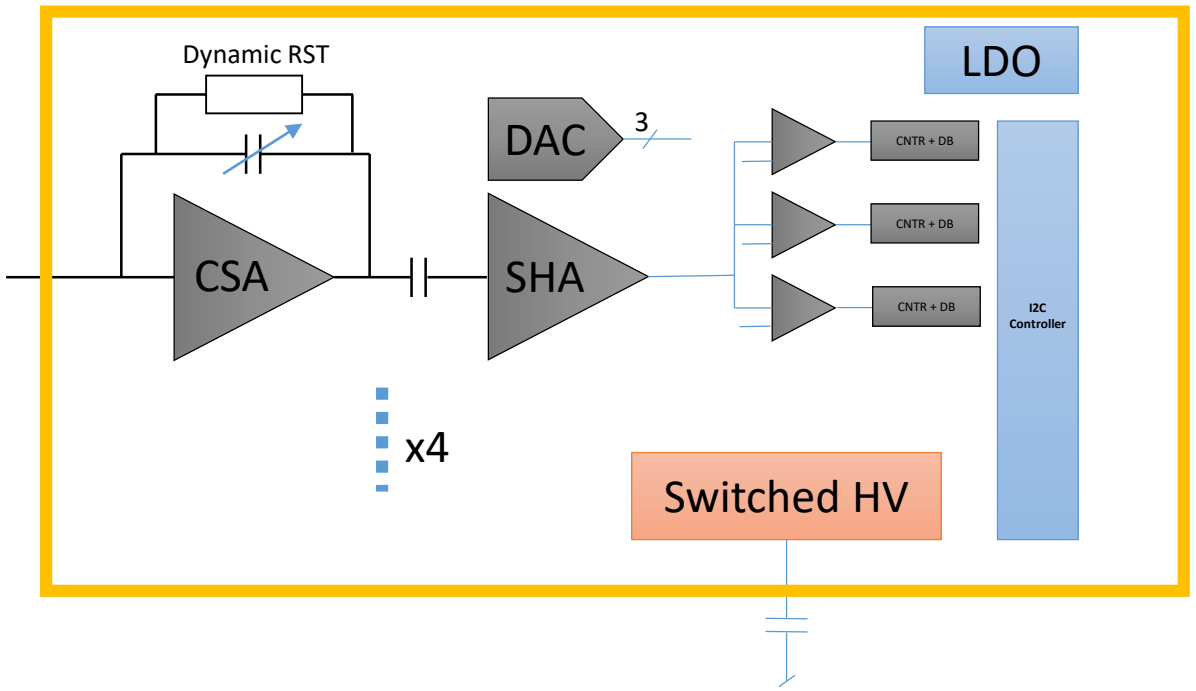
This document contains one of Gigalog projects that was supplied to the final customer. All information in this document provided with customer approval.

For any inquiries, please contact info@gigalogchip.com

Customer Requirements

- 4 photon counting channels
  - CSA, Shaper, 3 discriminators, OS, 20bit counters, I2C
  - ENC = 350e, Tpeak~100nsec, 4th order shaper, 10bit dacs[-5Kev-100Kev]
  - HV – controllable 10v – 85v with low noise induction hold capability
  - Power dissipation of 1-3mW/ch
  - Inter-channel self calibration (for zero channel to channel variations)
  - Integrated LDO – for superior integration and board space reduction.

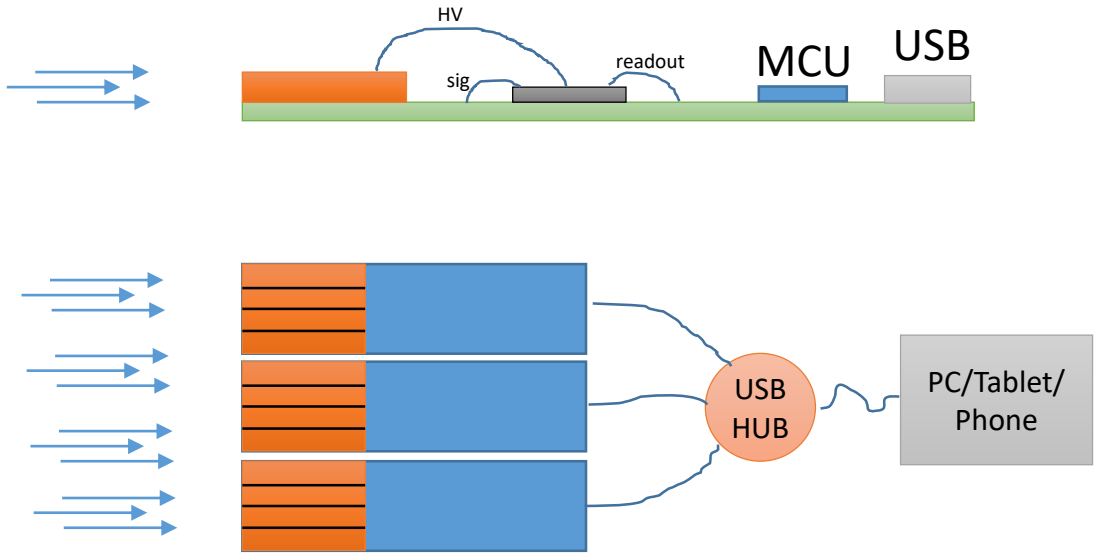
Block Diagram - IC



- IC, based on 0.35um foundry.
- Proprietary Gigalog Isolation Technology – allows to integrate ultra low noise photon counting channel and HV generation circuitry.

Prototype

- Low noise, low leakage PCB with edge illuminated CdTe detectors



Summary

- Gigalog has proven experience of providing Xray detection systems.
- Huge Experience with ultralow Noise ASIC designs. World leaders in low noise analog IC design.
- World Experts in low noise, low leakage, hybrid, mixed-signal PCB design.