



ALCOR - dRICH Readout

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Status of ALCOR64

ALCOR v3 (ALCOR64)

- First version to include all features and specifications required for ePIC (**64 channels**, flip-chip **BGA package**, **shutter**)
- MPW run foreseen for Nov 2024 canceled by foundry → MPW tapeout on Apr 8th 2025, **60 dies delivered on Aug 26th**

FC-BGA package ongoing in Singapore

- **Issue during die attach**: solder overflow
- Investigation ongoing to find cause of this issue: likely due to some **errors during UBM process**
- **Found recovery method** using gold stud bumping → successfully tested on two samples
- Ongoing: complete packaging on few devices → to be tested mounted on new dRICH ALCOR FEB

ALCOR-64 FEB-Tester board

Adapter board to **read 2 FEBs** (Master + Slave)
using commercial FPGA:

- ALCOR BUS connector: interface towards **1 Master FEB** and **1 Slave FEB**
 - FEBs need also I2C power (2.5 V) and control signals (from ALCOR BUS)
 - FireFly connectors: **4 FireFly** towards commercial FPGA to support readout up to 2 FEBs
- This setup allows **testing 2 FEBs in parallel**, thus reducing total test time for **mass production QA**
- **Design completed**, purchase order (4x) issued

