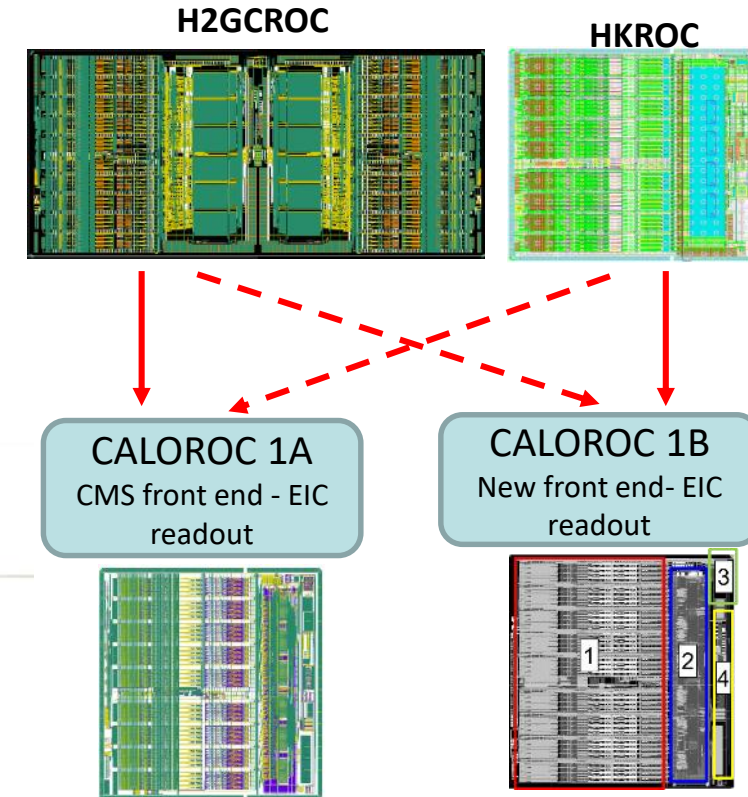
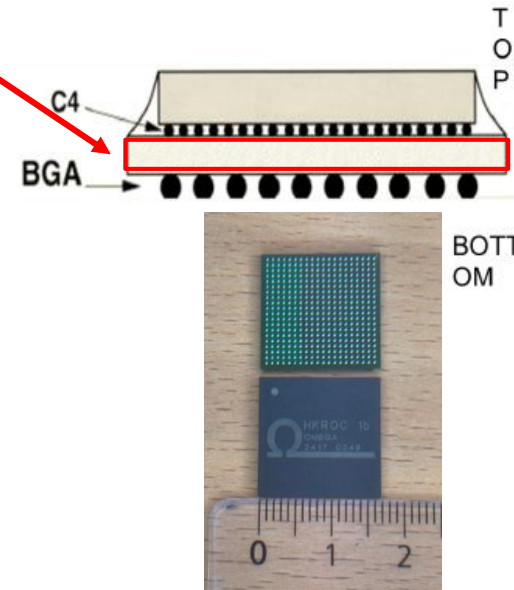


EICROC - CALOROC status

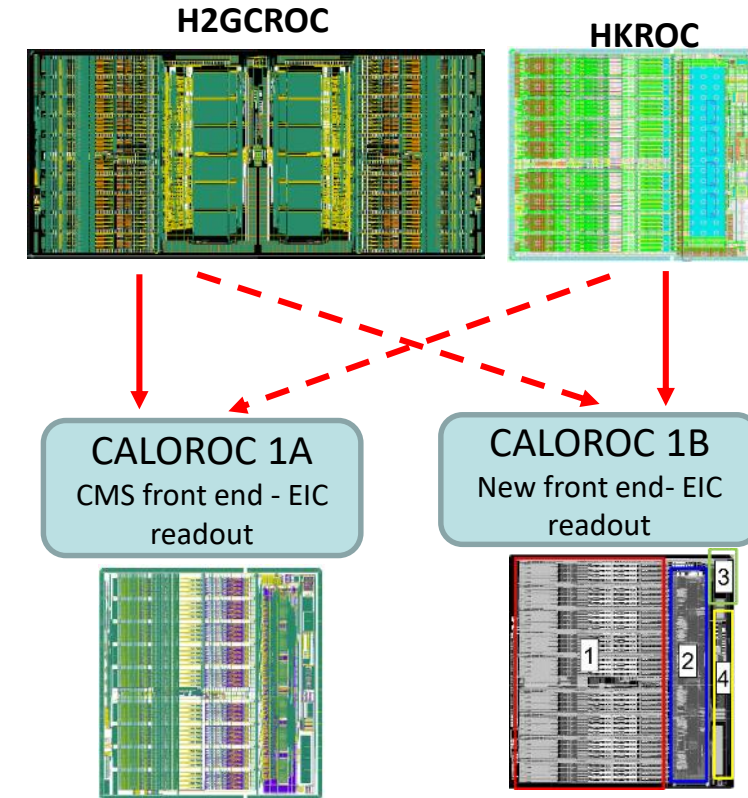
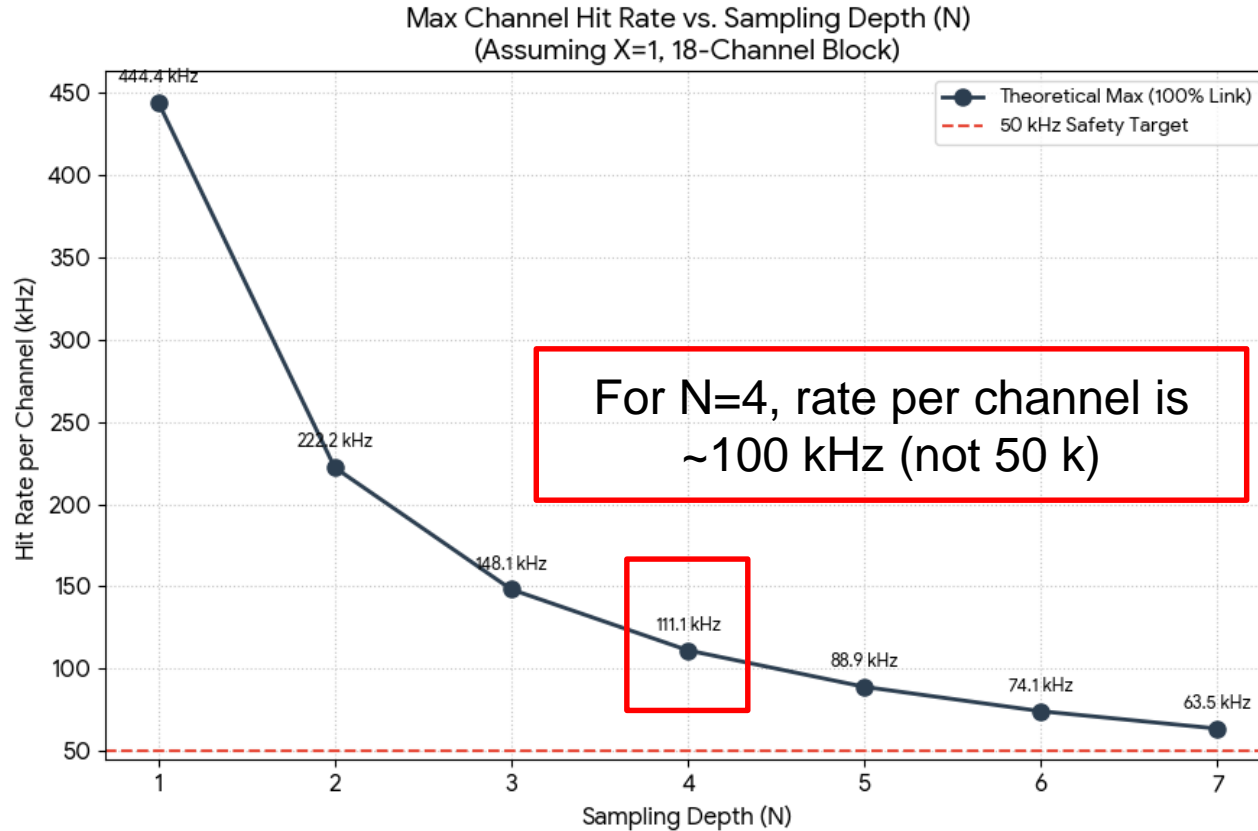
February 2026

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- ❑ All EICROCs received at OMEGA Feb 2nd:
 - ❑ EICROC1 testboards with ASIC expected end of February
 - ❑ EICROC0/A/B testboards expected mid March
- ❑ CALOROC will be packaged after Chinese new year
 - ❑ BGA line is extremely busy
 - ❑ First lot: CALOROC-B expected end March (20 pieces)
- ❑ CALOROC characterization setup – 1 TB ready
 - ❑ Hardware ready (1 setup + 3 received)
 - ❑ Firmware with new I2C ready (LLR)
- ❑ CALOROC timeline (preliminary)
 - ❑ CALOROC1 - Sept 2026 - Integration / FEB tests
 - ❑ CALOROC1 - Dec 2026 - Module testbeam
 - ❑ CALOROC2 - Jan 2028 - Detector test ready
 - ❑ CALOROC3 - Sept 2028 - Production

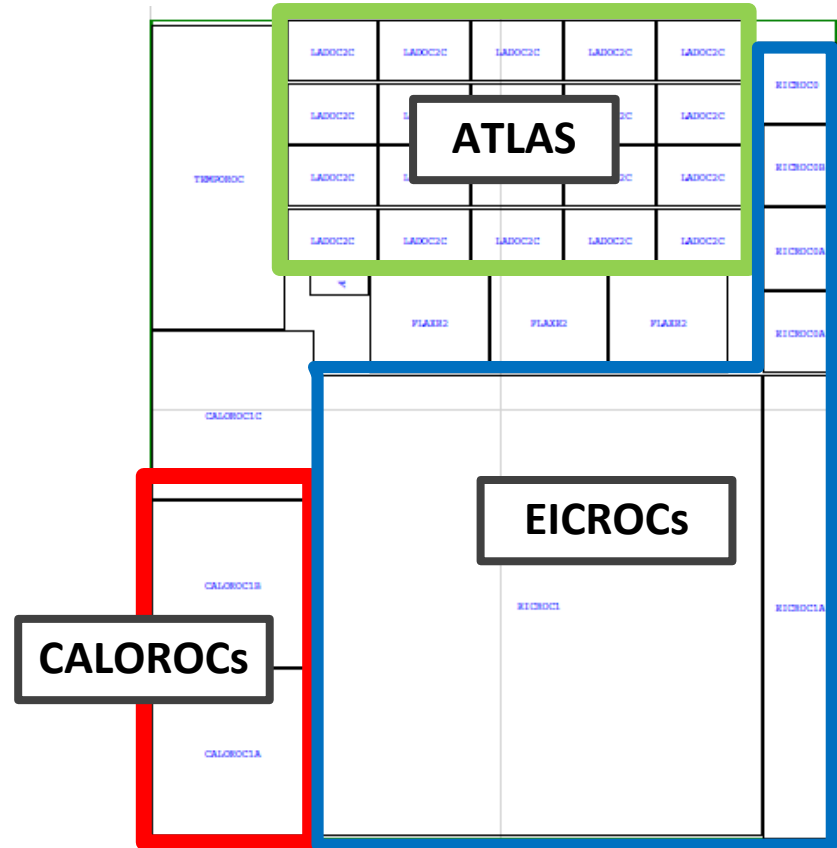


- ❑ Channel rate calculated with:
 - ❑ Uniform distribution
 - ❑ Worst case = always 1 channel readout over 18
 - ❑ Example with N=4 and
 - ❑ 2 separated in time hit → 40 words read out
 - ❑ 2 in-time hits → 24 words read out



1. The Readout Model

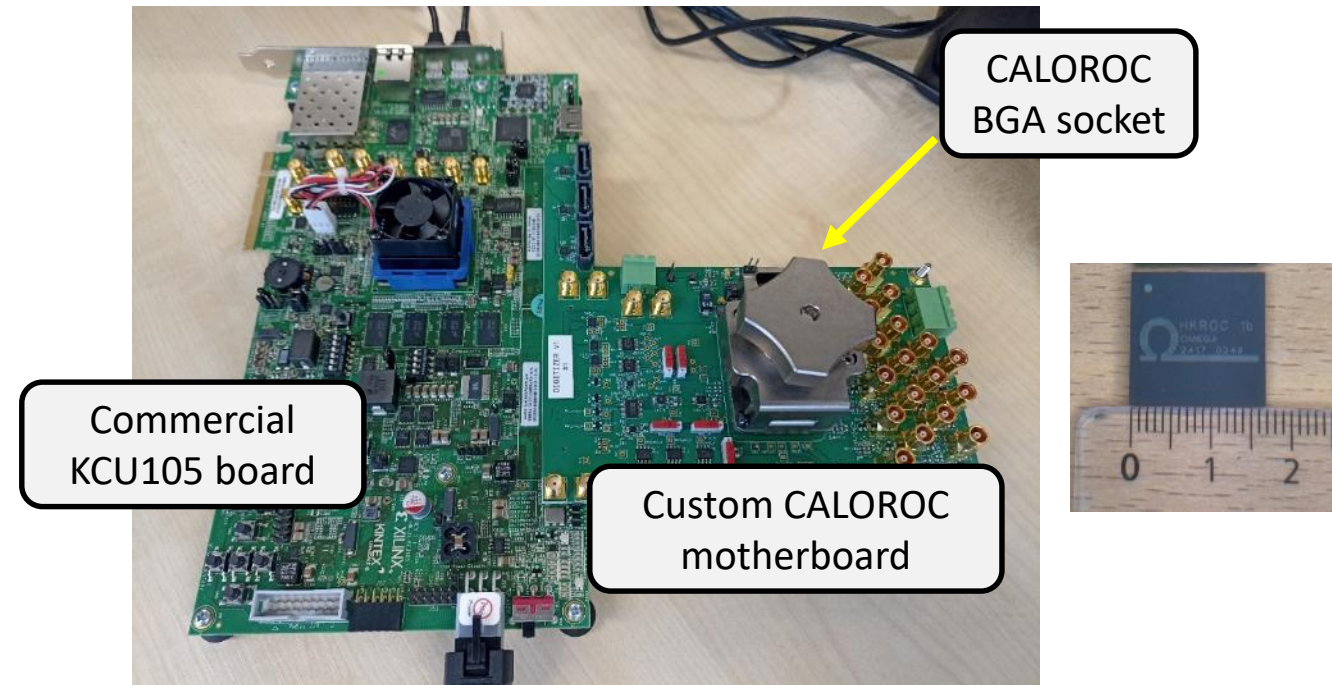
$$T_{\text{readout}} = N \times (X + 4) \times 25 \text{ ns}$$



- ❑ CALOROC testboard (motherboard) design started in June
 - ❑ Prototypes v1 will be ordered **by the end of 2025**

- ❑ 1x CALOROC socket ordered and received (Sept)
 - ❑ 1 will be reused from another project

- ❑ KCU available (now at IJCLAB)





- ❑ Jan 2026: produce and distribute testboards
 - ❑ Characterization (with socket to be ordered)

- ❑ 2026 - Extensive tests and comparison of CALOROCs
 - ❑ End of 2026: selection on performances and system needs
 - ❑ Substrate validation
 - ❑ Same channel count

- ❑ 2027: Submission of selected CALOROC2
 - ❑ If needed new substrate
 - ❑ Substrate validation
 - ❑ Irradiation tests
 - ❑ Robot testboards

- ❑ Q2 2028: Submission of final CALOROC3
 - ❑ To be adjusted with EICROC tech node (130 vs 65 nm)

