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## Design and performance of 2nd generation readout ASICs for CALICE/EUDET technological prototypes

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### Summary

#### **The CALICE Collaboration**

Imaging calorimetry depends heavily on the development of high performance, highly integrated readout ASICs embedded inside the detector which readout the millions of foreseen channels.

To demonstrate their feasibility, the CALICE collaboration and the EUDET framework have developed ECAL and HCAL technological detector prototypes, which will be equipped with HaRDROC (Hadronic Rpc Detector Read-Out Chip), SKIROC (Silicon Kalorimeter Integrated Read Out Chip) and SPIROC (Silicon Photomultiplier Integrated Read Out Chip).

These ASICs integrate 36 to 64 channels of low noise amplification, shaping, auto-trigger, zero-suppress, 12 bit digitization and local storage as well as full power pulsing. They have been fabricated in 2006-2007 and show good preliminary performance. Design issues and measurement results will be presented.

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