

Knowledge & Technology Transfer

COLLABORATION OPPORTUNITY / SERVICES

Microelectronics

References

LAPP: I-019322

<http://lapp.in2p3.fr/spip.php?rubrique81>

Description

Analog, digital and mixed-signal ASIC design: complete ASIC or bloc (IP) specifications, design, simulation, layout, prototype characterization and production tests.

Technology and/or Application domain(s)

Skills covered at LAPP concern mainly front-end electronics for high energy physics experiments. These skills are easily applicable to various fields, like sensor signal processing, low material application, low power consumption devices, or systems working in harsh environment, like space or radiation.

Keywords

Electronics, Micro-electronics, detectors, sensors, imaging

Offering

- Expertise and know-how in ASIC or IP block design and specification.
- Collaboration or Partnership for ASIC design related with LAPP research programs (e.g. MPGD).

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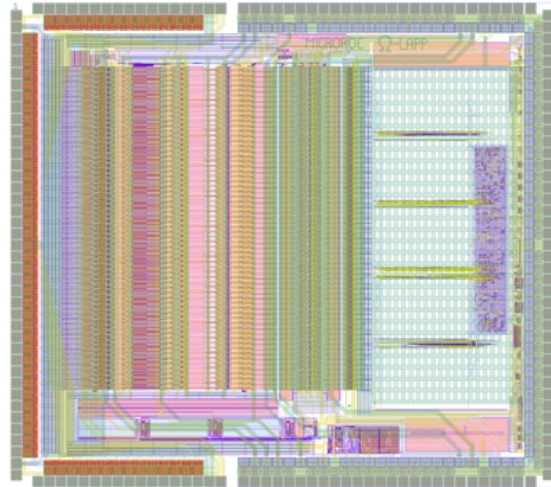
<http://lapp.in2p3.fr/>



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*MICROROC ASIC for MICROMEGAS detectors
(collaboration LAL/OMEGA – LAPP)*

State of development / Innovative aspects and main advantages

Microelectronics has been one of LAPP's specialties for many years. Lots of ASICs from LAPP are installed in high energy physics experiments all around the world, earthbound or in space.

Skills are oriented towards mixed-signal ASICs with low noise, high dynamic range, high linearity, low power consumption and radiation hardness.

As an example, here are some ASICs totally or partially developed by LAPP: multi anode PMT readout, MICROMEGAS readout, I2C slave, ATLAS calibration ASIC, power-on reset...

Exploited technologies are mainly AMS CMOS 0.35 um, AMS SiGe 0.35um, IBM 130 nm and 130 nm Global foundries.

Fields of application / Potential commercial applications

- Analog and/or digital Signal processing
- Data compression
- Telecommunication
- Medical Imaging
- Sensor/detector signal conditioning

Other applicants

LAPP is a member of the IN2P3 microelectronics designer network