Logikon Labs
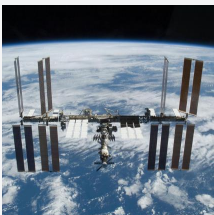## Short Company Presentation

http://www.logikonlabs.com

August 26, 2015

Company Profile

- Logikon Labs
  - Logikon: Logic is the foundation of digital computing
  - Labs: We focus in Research & Development
- High-tech SME based in Athens, Greece
  - Established in June 2012
  - A "micro entity": currently five employees, plus a growing network of freelance professionals
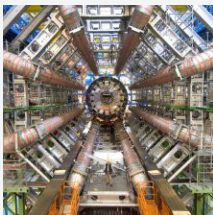- Active in the field of embedded electronics and software, for aerospace, scientific and industrial applications
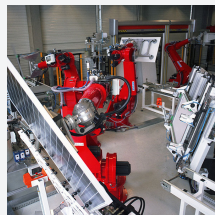
Example Applications

AEROSPACE

► On-board computers
► Payload data processing units
► Remote sensing instruments
► Ground support equipment

SCIENTIFIC

► Instrumentation
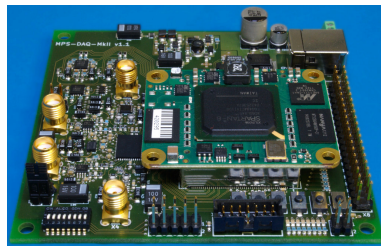► Medical devices
► Data acquisition
► Precision control

INDUSTRIAL

► Production monitoring
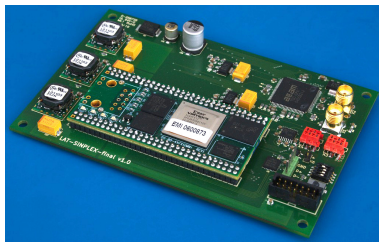► Automated control
► Robotics
► Smart buildings
► Info kiosks

- ► MPS-DAQ
- ► High-energy particle discriminator
- ► Design under contract
- ► 0.1-400 MeV, for γ-rays, electrons, protons, alphas
- ► Precision analogue signal conditioning
- ► 4x 100 MHz, 12 bit DAQ
- ► FPGA + soft-core CPU
- ► Real-time particle identification algorithm
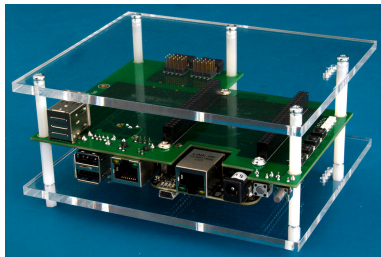- ► SPI and USB communication
- ► 90 mm×90 mm PCB, 5 Watts

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- ▶ LAT-SINPLEX
- ▶ Photon timing laser altimeter
- ▶ Subcontracted in FP7-SPACE
- ▶ 27 ps ToF resolution (~4 mm)
- ▶ FPGA + PowerPC
- ▶ Real-time statistical algorithm
- ▶ SPA1 and USB communication
- ▶ 75 mm×115 mm PCB, 4 Watts

Recently Completed Projects (3/3)

- Low cost data logging solution for smart buildings
- Design under contract
- Based on BeagleBone Black
- 1 GHz ARM Cortex A8
- 512 MB DDR3 RAM
- 2x ethernet, 3x USB
- 2x electrically isolated serial ports, configurable as RS232/RS422/RS485
- Expansion port
- 140 mm×110 mm PCB, 5 Watts

ALaRT

- ▶ Advanced Laser Ranging Technologies For Altimetry
- ▶ ESA contract, KO 05/06/2014
- ▶ Multi-channel photon timing laser altimeter
- ▶ Target application: forest canopy mapping
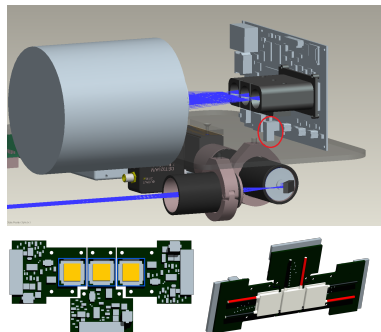

cosine | measurement systems

ALaRT

▶ Logikon Labs in charge of front-end electronics and software for sensor readout and real-time processing

▶ 3072 channels, triple 32x32 SPAD arrays with on-chip TDC

▶ 300 ps resolution per channel

▶ FPGA-based precision delay line for detector gating

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- ► Providing Research & Development support to startups and private companies
- ► In preparation of several proposals/tenders for European research programmes (H2020, ESA)
- ► MTDC-ng: next generation FPGA-based multi-channel TDC for 3D imaging applications

LOGIKON LABS

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