

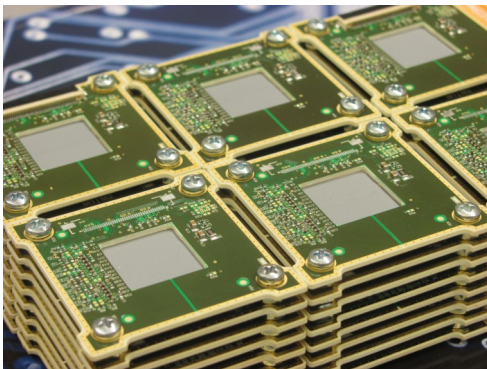
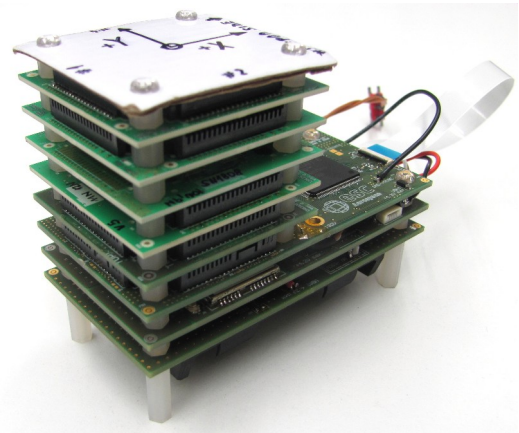
Detector of radiation flux

esc Aerospace presents the equipment for measuring of radiation flux. The equipment measures two types of particles – muons and neutrons. It could be operated in a field (more than 8 hours) or everywhere by USB B-Type.

The main feature is a mechanical arrangement of detector boards. The detectors are stacked one above another so it forms a tower. Each detector is rotated 90 degrees from another one. This arrangement creates a virtual pixel matrix. This matrix is used to detect a direction of incident particles. The error rate is less than ten degrees.

FEATURES

- high performance ARM Cortex M4
 - 32-bit, 1MB Flash, 256 kB RAM
- high performance FPGA
 - Spartan-6 family
 - Low static and dynamic power
 - Multi-voltage interface banks
- precision timing GNSS modul
 - timing up to 10 MHz
 - timing accuracy < 20 ns
 - GNSS chips qualified according to AEC-Q100
- software for a display of real-time data and data processing in Python



DETECTORS

- AMS aC18 CMOS process for a production of the ASIC chip
- PCB is made of Rogers material
- ENEPIG surface protection surfaces
- gold wire bonding technology for connection ASIC with PCB
- SPI communication
- high-voltage power up to -190 VDC
- separate power distribution +1.8 VDC for analog and digital part

Call us: +420 284 683 784, or write us: info@esc-aerospace.cz

esc Aerospace offers a product range of various On-Board Control Systems for vehicles and payloads, ranging from ionizing radiation hardened detectors to Data Relays and Sense & Avoid Systems. Commercial products include the 3rd generation of UAS/RPAS avionics with an Autopilot, Trajectory Management and Tracking functions; the 4th generation of GNC avionics has been developed for Launchers and Missiles, Micro-Satellite Instrumentation and Mini-Satellites. The 5th generation is a miniaturized and highly reliable system that enables UAS/RPAS to perform SWARM functions. esc Aerospace develops systems based on a revolutionary ASIC designed for a wide range of space and non-space radiation measurements payloads. It can be deployed as a miniaturized radiation detector with the capability of identifying radiation in early warning systems. esc Aerospace has recently presented its UAS/RPAS flight simulator. The AERO/SPACE FLIGHT SIMULATOR is targeted for expert users of UAS/RPAS and includes various aircraft and advanced options such as full autopilot.