



Project Description:

LocoLabs was selected by the Department of Defense's Defense Threat Reduction Agency (DTRA) to team with the experts from the University of Michigan, H3D, and Brookhaven National Laboratory to design and produce an advanced version of the Polaris 3D CdZnTe (CZT) gamma-ray imaging spectrometer system. CZT technology allows for precise sensing and imaging at room temperature, a distinct advantage over other gamma-ray detectors, which typically must be cryogenically cooled to operate.

Key Features / Project Highlights:

- From concept to release for field trials in less than 9 months
- Intuitive web-based user interface, single-button operation
- Streamlined mechanical design resulted in an all-new battery-powered, carry-on-sized, portable field-trial-ready form factor
- Embedded Linux CPU for imaging computation
- Ultra-low-noise kilovolt power supply design
- Advanced thermo-electric cooler system for temperature control
- Exceeded the performance of the previous generation with reduced electrical noise and improved spectroscopic performance

Managed by Alion Science and Technology Corporation, this effort was supported by DTRA01-02-D-0067

About LocoLabs:

LocoLabs, a renowned Silicon Valley, California product design center, provides custom design, turnkey product development, rapid-prototype and volume-production services. It is our mission to accelerate your product development, drawing on more than a decade of experience tackling tough embedded design problems for leading suppliers of consumer, computing and commercial systems.

In our engineering and design work, LocoLabs customers call us the "Rev-Zero" company. With success stories in consumer electronics, commercial robotics, HD video and instantly deployable wireless networking, our experience reinforces the value of fast prototyping and hardware/software co-design. LocoLabs' cross-trained Embedded, Multimedia, Wireless and Linux experts in our Silicon Valley design center are available to support your rapid product development.

