SMALL ARMS FIRE CONTROL SYSTEMS INTEGRATION LAB

LABORATORY INFORMATION FACT SHEET

The Small Arms Fire Control Systems Integration Lab (SAFC SIL) is an integration facility for optics, mechanical components, electronics and software.

TECHNOLOGY/FACILITY DESCRIPTION:

By combining test, analysis and tools for assembly in one location for hardware and software, Combat Capabilities Development Command Armaments Center (DEVCOM AC) personnel are able to work concurrently and together on tasks and overcome the challenges of integration. The SAFC SIL specializes in prototype integration with a focus on opto-mechanical and electronic/software testing, assembly and storage per technical data package drawings and specifications.

EQUIPMENT AND EXPERTISE AVAILABLE:

- Tools for hardware and electronic assembly
- Optical handling tools
- Vacuum picker for assembling small arms optics
- Optical cleaning products
- Optical breadboard table
- Various mounting opto-mechanical devices
- Embedded development equipment (Cypress, Microchip, TI, LogicPD, Gumstix, ExpressPCB and ExpressSCH)
- USBee DX Logic Analyzer and Osciloscope
- Volt meters
- Adjustable power supplies
- Soldering irons

- Various magnifiers
- Software development computers
- Interface cables
- Nitrogen gas purging tanks and valves
- Assembly and disassembly of optical systems and components
- Cleaning of optical components
- Testing and analysis of optical systems and camera systems
- Integration of optical components with mechanical and electronic parts
- Electronics test & measurement equipment
- ProE, PADS electrical design software
- Embedded Linux kernel development tools

- Programmable System-On-Chip (PSOC) software, TimeStorm (Integrated Development Environment from TimeSys), Pleora Technology EBus-Pure GEV player and EBus-Vision Coyotetool camera software packages, Texas Instrument Professional Code Composer Essential
- Software development computers that are setup for dual boot (Windows/Linux) to support build development (build machine) and testing
- Interface cables to interface to various embedded systems hardware for testing and debugging
- Ability to repair/modify PC boards
- Nitrogen gas purging