

Flint Hills Solutions and Kansas State University announce Advanced Avionics Miniaturization Lab

Salina, KS – Sept 3, 2009 - Flint Hills Solutions (FHS) recently installed a Class 10,000 Advanced Surface Mount Technology (SMT) clean room at the Kansas State University Salina campus. The Advanced Avionics Miniaturization Lab's (AAM) HEPA Filters and laminarflow air create a quality controlled environment reducing rework by minimizing air particulates. This clean room houses some of the most sophisticated machines used in SMT today with the capability to rapidly prototype advanced miniaturized Unmanned Aerial System payloads and avionics. The miniaturization technology will help meet the increasing demand to reduce weight to improve UAV endurance and capabilities.

The SMT lab has announced initial operating capabilities and is seeking/accepting projects immediately. The laboratory has the ability to design in miniaturized components and rapidly prototype miniaturized System in Packages (SiPs), including high mix, low volume fabrication of miniaturized sensors using technology such as: two sided boards with System in Package, Package on Package, Flip Chip, BGA, Die Stacking, Screen Printing, Encapsulation and Chip Scale Packaging. Future plans include offering technical SMT related courses developed by K-State. With the combined research capability of the K-State Electronics Design Laboratory located on the main campus of K-State Manhattan, a complete offering of miniaturization services is now available.

The Lab is equipped with a DEK 03i Screen Printer, Asymtek S-820 Dispenser, JUKI CX-1 Pick and Place, Vitronics Soltec XPM2+520 Reflow Oven, and an AirVac DRS25 Rework Station. These machines use passive component sizes of 0201 and smaller fixed on some of the smallest substrates in production.

Assembly Capabilities Include:

- Class 10,000 (clean room)
- Epoxy and eutectic die attach
- Dam and fill, dispensed encapsulation (glob-top)
- Transfer mold encapsulation
- Stencil screen printing
- Fine pitch pick and place
- Reflow (N2 environment)
- IPC standards
- No-lead and RoHs compliant capable

About Flint Hills Solutions, LLC

Flint Hills Solutions is an advanced high technology and services company that provides total Unmanned Aerial Systems and Solutions to Defense, Homeland Security and the emerging Public Sectors. With a deep knowledge of the FAA requirements that will drive the development and certification of the UAS aircraft systems and payloads, Flint Hills Solutions provides training, UAS certification, payload integration, and emergency response services. Flint Hills Solutions has a long and successful track record in identifying high readiness level technologies and rapidly developing solutions to integrate these technologies into UAS applications including advanced miniaturization technology dedicated to UAS



miniaturization through a partnership with Kansas State University at Salina. Flint Hills Solutions has offices in Augusta, Atlanta and Salina Kansas.

About K-State Salina

Partnered with Flint Hills Solutions, Kansas State University at Salina is a FAA Part 141 professional pilot training and engineering technology university. This strategic partnership provides a seamless and transparent capability for a broad and complete set of UAS services to the UAS marketplace including research, design, rapid prototyping, flight operations, emergency response, air space development, and training.