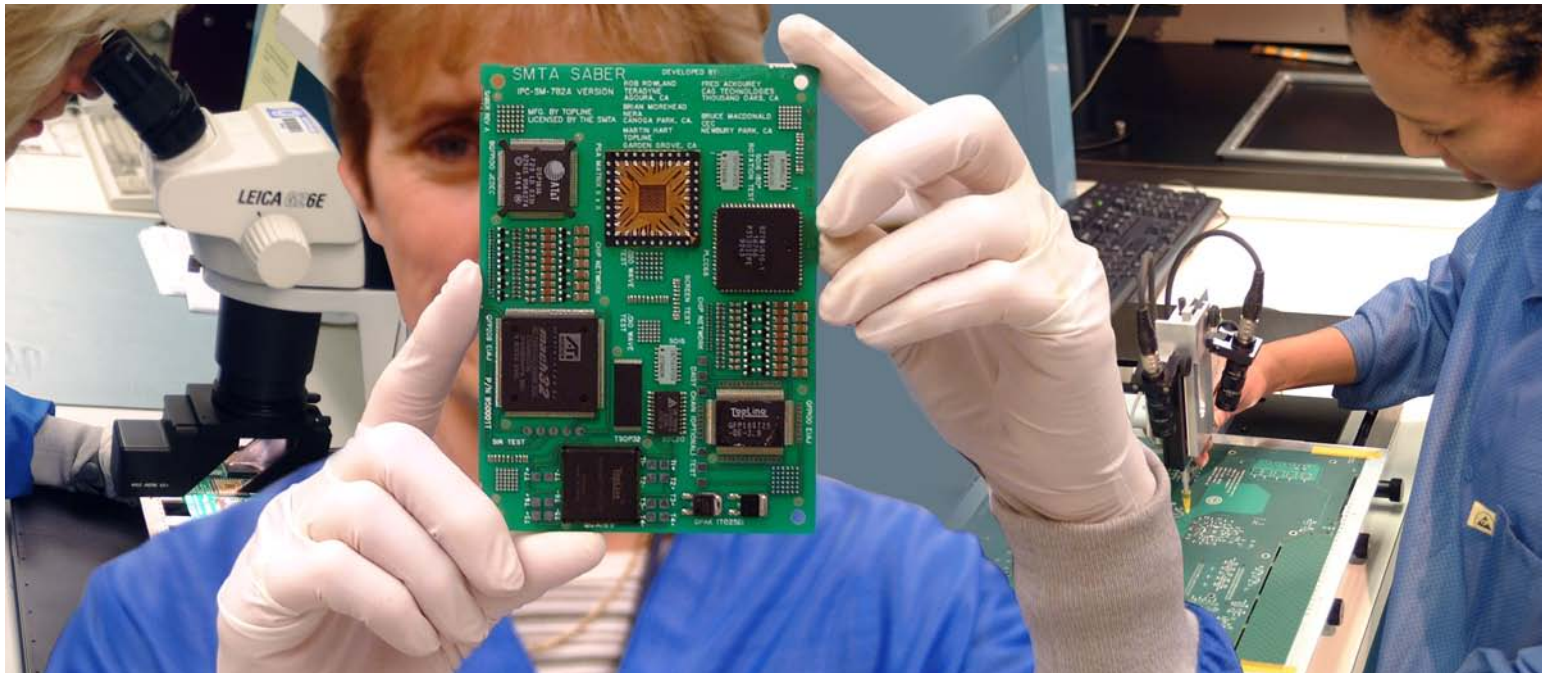




# Electronics Assembly Lab

High Reliability Electronics and Printed Circuit Board Assembly



## Highlights of SDL's EAL include the following:

- ESD-protected environment
- Lead and non-lead solder R&D vapor phase reflow ovens
- Semiautomatic pick and place machines
- Convection rework stations
- X-ray and optical BGA inspection equipment
- Nitrogen generation and universal nitrogen purge cabinets for EEE parts storage/inventory
- Selective wave solder stations
- Stereomicroscope with CCD camera and printer
- Metcal hand soldering stations
- Vibration analysis for simulation and test.
- Full CNC machine shop
- Class 100 clean rooms
- Environmental test chambers
- Adherence to NASA-STD-8739.1-4
- Inspection to IPC J-STD-001 and IPC-C-610 Class 2 and Class 3 standards
- Lead forming capabilities
- Thermal profiling of pcb
- Cable harness fabrication and testing

The Electronics Assembly Lab (EAL) at the Space Dynamics Laboratory (SDL) offers one-of-a-kind printed circuit boards, small production runs of high-reliability boards, and a variety of electronics products and services delivered to the most demanding quality standards. The EAL's experience draws from SDL's design, development, integration, testing, and operation of thousands of rigorously qualified space- and airborne sensors and instrumentation suites aboard over 400 payloads, as well as the delivery of numerous electronic systems for ground-based research and testing needs.

SDL's overall quality system is registered to the ISO9001:2000 Standard. Under these guiding principles, the EAL is dedicated to providing high reliability, overall quality and innovation from prototype to flight, with a focus on producing products on time and at cost to meet customer requirements.

The EAL specializes in PC board surface mount technology (SMT) and thru-hole assembly, lead forming, conformal coating and staking, and cable/harness assembly and inspection. With NASA-certified trainers on staff, the EAL's team of technical professionals is trained to NASA workmanship standards in hand soldering, SMT soldering, cable and harness development, ESD (electrostatic discharge) prevention practices, and conformal coating, including IPC (Institute for Interconnecting and Packaging Electronic Circuits) rework capabilities. The EAL also provides lead-free production of fine pitch and ball grid array (BGA) components.