



APPLIED TECHNOLOGY MANUFACTURING CAPABILITIES



IN-HOUSE MANUFACTURING CAPABILITIES



For over 65 years, Applied Technology has been serving the U.S. federal government with design and manufacturing of specialized products. Located in a controlled-access building that accommodates the engineering and manufacturing needs of select projects, Applied Technology's state-of-the-art, ISO9001 certified facility supports engineering prototypes to mature product. Volumes range from 10 to 200 units per production run, with available capacity for much higher volumes.

With manufacturing capabilities from SMT placement through final assembly and test, Applied Technology offers a wide variety of manufacturing options from simple board level products to complex systems and kits. Kit solutions include everything needed for customer missions including radios, peripherals, cabling, antennas, and more.

SMT LINE

EQUIPMENT

- MPM Momentum Screen Printer
- Hanwha (Samsung) Placement Machines
- BTU Pyramax 100N Reflow Oven
- Koh Young SPI
- Sierra-Summit 2100 RD Rework Machine

- Sayaka SAM-CT56NJ Board Router
- Nikon XTV130 X-Ray Machine
- Nordson Asymtek Quantum Dispense
- Cybertoptics AOI

CAPABILITY

- SnPb and No-Lead capability
- Chip components down to .010" x .005"
- Connector size up to 6" x 1"
- Package on Package
- Panel sizes to 18.0" x 15.0"

- Board thickness: 0.025" to 0.118"
- Ball Grid Array verification
- Chip Scale Package placement
- Repair, re-work and X-ray capability



MANUAL ASSEMBLY

- Highly skilled and experienced assembly staff with government security clearances

- All manual assembly staff IPC J-STD-001 Certified

- Inspection to IPC Standards (IPC-A -610, IPC/WHMA-A-620)

- Component soldering to .010" x .020" parts

- Lead free and leaded solder

- Unique high density custom packaging

- Manual board assembly and final electro-mechanical assembly

- Flexible processing tailored to meet unique customer requirements



ADDITIONAL PROCESSES

CLEANING

- Solvent degreaser

AUTOMATED DISPENSING

- Underfill
- Conformal coat
- Thermal compounds
- Form in place gaskets
- Conductive epoxy
- Adhesives

HERMETIC PACKAGING

PAINTING

LASER WELDING

MACHINING

3D PRINTING



SUPPLY CHAIN

- Material authenticity ensured through Counterfeit Parts Prevention program
- Traceable or non-traceable build options
- Customer supplied or Applied Technology procurement options
- Highly accurate inventory control with full component counts before and after builds utilizing X-ray count technology
- Inventory can be tracked by customer or individual project level
- Moisture sensitive device monitoring and control system
- Materials stored in a controlled-access warehouse

TEST

- Automated test equipment (ATE), bench testing or manual testing depending on application
- Common LabView based test executive
- RF test frequency range: DC to 40GHz
- Test data integrated into production control system with statistical data analysis capabilities
- Small and large anechoic test chambers
- Faraday cage isolation for RF testing of sensitive electronic products
- Full product testing over temperature and voltage extremes



QUALITY SYSTEMS AND CAPABILITY



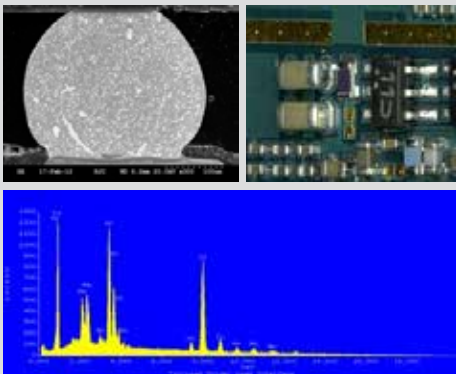
QUALITY SYSTEMS

- ISO 9001:2015 Certification
- AS5553 counterfeit control and prevention
- Component traceability
- IPC J-STD-001 certified inspection and manufacturing staff
- 100% Inspection (Class 2) IPC-A -610, IPC/WHMA-A-620
- Class 3 Printed Circuit Boards (PCB)
- ITAR and non-ITAR PCB supply base
- Production control system with positive route reinforcement
- Hertzler Gainseeker defect reporting and data analysis tool
- Electrostatic Discharge (ESD) and Foreign Object Debris (FOD) control programs



RELIABILITY TEST

- MIL-STD-810
- RTCA DO-160
- Mechanical Vibration
- Mechanical Shock
- Thermal Cycle
- Thermal Shock
- Accelerated Life Test
- Electrostatic Discharge (ESD) Test
- Drop Test
- Dripping Rain
- Water Immersion
- Salt Fog
- EMC
- Dust
- Altitude
- Humidity



ANALYTICAL LAB

- Scanning Electronic Microscope (SEM) – 15 to 300,000X magnification
- Energy Dispersive Spectroscopy (EDS)
- X-ray Fluorescence Spectroscopy (XRF)
- Optical Microscopy – up to 1,000X
- Digital Microscopy – up to 1,000X
- Scanning Acoustic Microscopy (SAM)
- Infrared thermography
- 3D Video Measuring System
- Cross-sectioning
- Ion milling
- Precision sawing, grinding and polishing
- Semiconductor decapsulation

For more information on Applied Technology's manufacturing capabilities, please contact: ATmanufacturing@motorolasolutions.com

The information and specifications provided are for informational purposes and are subject to change without notice.

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