

ZIN Mechanical Manufacturing and Fabrication Capabilities

Mechanical Manufacturing Capabilities

All manufacturing at ZIN is managed through our ZIN AS9100D Quality Management System (QMS). The Manufacturing Workflow Process (P09014) is managed through the QMS. This process has been applied to Class A/B Mission critical hardware.

The ZIN QMS includes an Approved Vendors List (AVL) for the procurement of non-catalog items and services such as mechanical parts manufacture, EEE parts, and PWB manufacture. Suppliers must be audited by ZIN QA to be added to the AVL.

ZIN Certifications:

ZIN has certified trainers to the NASA and IPC standards

- NASA-STD-8739.1
- NASA-STD-8739.2
- NASA-STD-8739.3
- NASA-STD-8739.4
- 5GSFC-WM-001
- J-STD-001 Space Addendum
- IPC-A-600



Our Mechanical manufacturing and fabrication capability includes a machine shop, material and process control plans, SOPs, EEE parts control, contamination control, risk management, engineering conformance management, and review.

ZIN's in-house mechanical manufacturing facility produces concept, breadboard, prototype, and flight hardware. ZIN also provides production of prototype and flight hardware, and the capability to rapidly modify parts to meet changing requirements and schedule. Our labs are equipped with all standard test equipment, laminar flow and optics benches, and two thermal test chambers. A Class 100K Clean Room with 10K laminar flow benches provide workspace for assembly and testing of contamination-sensitive components.

ZIN's machine shop allows for fast and cost-effective manufacturing of design concepts and breadboards enabling early development testing of subsystems and systems; limited quantity production of prototype and flight hardware; and the capability to rapidly modify parts to meet changing requirements and schedule. Major machine shop equipment includes two CNC Milling machines, one non-CNC milling machine, one lathe, two brakes, two grinders, one drill press, one bead blaster, one sander, two vertical band saws, two horizontal band saws, one shear, one tube bender, and tube welding machine.

- ❑ Our manufacturing and fabrication capabilities include electrical assembly, machine shop, and additive manufacturing facility (metal alloys and polymer).
- ❑ ZIN maintains 18,000 square feet of secured manufacturing floor space.
- ❑ Bonded storage, fabrication, assembly, and testing activities occur in temperature and humidity-controlled areas.
- ❑ ZIN is committed to Lean manufacturing and has implemented 5S practices (sort, set in order, shine, standardize & sustain) within our manufacturing facility.



ZIN Technologies



Voyager Space External Use
johansonm@zin-tech.com | www.zin-tech.com