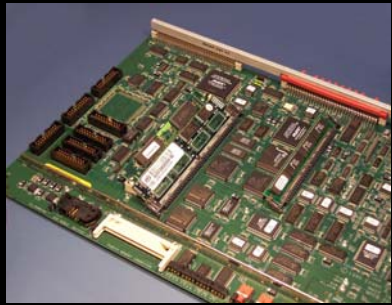




# Z

# AXIS

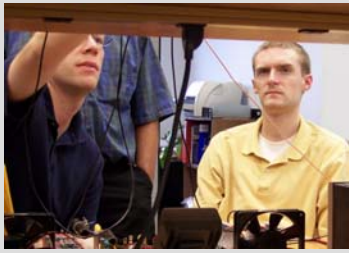
Electronics design & manufacturing  
for the life of your product



**Z-AXIS is your product development team –  
from concept through product end of life**

- **Expert design services**
  - New products
  - Product updates & re-designs
- **Full-featured prototypes**
- **Pre-production runs**
- **High-quality manufacturing**
  - ISO 9001:2008 certified
  - From fine-pitch SMT through wire harness
  - Low-volume & mid-volume welcome
- **Competitive prices**
- **Unmatched service**
- **Convenient location**
  - All in one modern, western New York facility

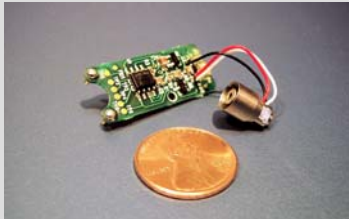
**Z-AXIS Inc. ■ [www.zaxis.net](http://www.zaxis.net) ■ (315) 548-5000**



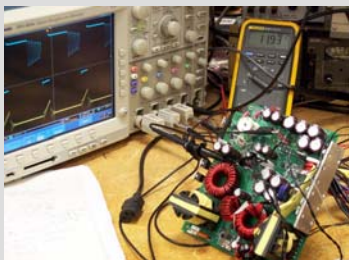
Z-AXIS design skills include analog, digital, mixed-signal and power.



We offer a full range of expert design and PCB layout services.



We specialize in compact designs and unusual form factors.



Functional prototypes demonstrate feasibility of your product ideas.



Manufacturing engineers provide immediate and ongoing feedback to designers for "closed-loop" DFM.



We also redesign existing products to replace obsolete parts & improve cost, performance and reliability.

## Design services

Our skilled design engineers **are** the product design team for many of our small and mid-sized customers. For our larger customers, we extend the capacity and expertise of your in-house staff: from new product development to legacy product updates to solving manufacturability problems.

In every relationship we earn our reputation for effective communication and unmatched support and service. We cover the entire product design and development process:

**Concept** Starting with just your idea for a new product, we help you develop the concept, identify target performance and features, estimate costs and sketch out timelines.

**Feasibility** We create a functional prototype to demonstrate your "new art," show feasibility of key features and uncover potential performance and cost trade-offs.

**Design** We provide full system, circuit and board level design. Our strengths include hard-to-find skills in analog and power design.

- System level design
- Circuit & board level design
  - New designs
  - Redesign for manufacturability, RoHS, cost reduction, improved performance, etc.
- Analog design
- Digital design
- Mixed-signal design
- Power design
- Design for Manufacturing (DFM)
- Microcontroller software design

**PCB layout** We specialize in multi-layer, mixed technology and compact or unusual form factors. With the support of our on-site manufacturing team, we excel at design for manufacturing (DFM).

**More** Our complete system design services include mechanical enclosures and wire harnesses.

## Prototypes & pre-production

We can quickly create high-end prototypes, including features such as BGAs, using the same equipment that we will use to manufacture your final products. With in-house prototyping and pre-production capability, we can:

- Demonstrate and optimize manufacturing processes for your product
- Demonstrate repeatable product performance
- Provide several units (typically 10 to 100) for verification in your final system
- Provide units for agency certification testing

Then we move smoothly into full on-shore production.

## Manufacturing services

Our manufacturing systems are designed for flexibility, speed and quality. With quick change-over capabilities, we move easily from large volumes to smaller production runs. We use both modern automation equipment and skilled manual assembly to give you high-quality, cost-effective production...regardless of volume.

We follow IPC-A-610D standards on our full range of automated and manual assembly services.

**PCB assembly** Simple, complex or highly unusual - we can meet your requirements. We routinely produce fine-pitch boards with components as small as SMT 0201, unusual form factors, special connectors and more. Capabilities include:

- Surface mount, through-hole and mixed
- Manual and fully-automated insertion
- Single and double sided
- SMT as small as 0201
- BGAs and  $\mu$ BGAs
- Full surface mount rework services
- IC programming
- Lead-free / RoHS assembly
- Leaded solder process by request  
*(e.g. for military or medical applications)*

**Other assembly** Beyond PCB assembly, we offer:

- Cable and wire harness assembly
- Electromechanical subsystem assembly
- System-level assembly

**Related services** We bring together everything you need for a successful project. This may include:

- Parts sourcing and procurement
- Obsolete and hard-to-find parts sourcing
- Consigned inventory
- Testing
- Sub-assemblies
- Box builds
- RoHS compliance testing
- Custom-molded ESD trays for shipping  
*less waste; easier to handle and inventory*

## Standards and certifications

Our facility is ISO 9001:2008 certified for quality processes from design through delivery. We assist you in meeting standards including UL 2601, UL 60950, CAN/CSA-C22, EN 60601, EN 60950, IEC 601-1. We can also assist you with obtaining agency certifications such as UL, TÜV, CSA and CE.



Using modern automation equipment we routinely produce PCBs with SMT 0201, BGA and  $\mu$ BGA components.



Our PCB manufacturing processes include both lead-free (RoHS) and traditional leaded processes.



The right mix of automation and skilled manual assembly yields high-quality, cost-effective production.



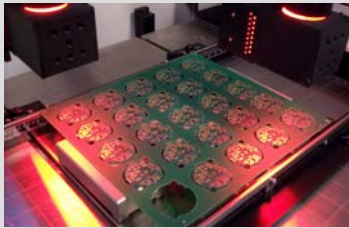
Manufacturing services include cable and wire harness assembly, mechanical enclosures and more.



We follow IPC-A-610D standards on our full range of services.



From small and simple to large and complex - we can meet your PCB and system assembly requirements.



Speedline stencil printer with imaging system delivers repeatable results; easily handles boards for SMT 0201.



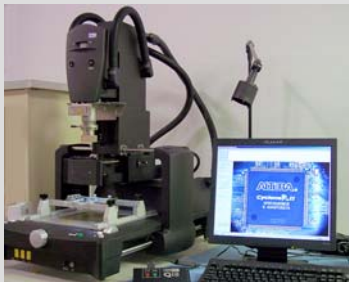
MYDATA dual SMT line offers quick change-over for small runs & online component testing for high quality.



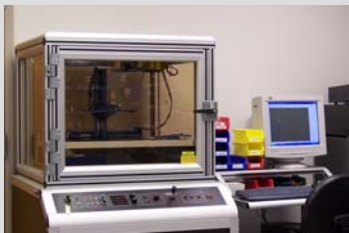
Conceptronics 60 reflow oven is qualified for fine-pitch, double-sided, lead-free (RoHS) boards.



Vitronics Soltec Delta lead-free wave solder with computer control allows us to store and quickly set up the best process for each board.



We repair or upgrade boards with the OKI-Metcal BGA/SMT rework station, extending your product's lifecycle.



Our Glenbrook Technologies jewel box 70 T x-ray is used for BGA and multi-layer board inspection.

## Z-AXIS manufacturing equipment list

We continuously invest in new technology to meet your needs. We maintain a full range of production equipment in our modern, 32,000 ft<sup>2</sup> design and manufacturing center. Call us for a tour!

### Surface mount technology (SMT)

- MYDATA MY9e MYSynergy SMT lines
  - Cascaded dual HYDRA head machines for volume production
  - Midas head machine for smaller runs
- Conceptronics 60 reflow oven
- Speedline stencil printer
- OKI-Metcal BGA/SMT rework station
- DataPAQ Q18 thermal profiler

### Through-hole technology

- Amistar AI-6448 axial insertion
- Universal radial insertion

### Soldering and board work

- Vitronics Soltec Delta wave solder (lead-free)
- Hollis Astra wave solder (lead)
- Westek closed-loop orbital aqueous cleaner
- Metcal soldering systems

### Custom packaging and marking

- Dual 80-watt CO2 laser
- Programmable robotic conformal coating machine
- Branson ultrasonic welder

### Inspection

- YesTech YTV B3 automated optical inspection (AOI)
- Glenbrook jewel box 70-T x-ray
- Fischerscope x-ray fluorescence spectrometer
- SMT Tools side-looking microscope (BGA inspection)
- Lynx vision systems
- Raytheon/SPI Palm IR-225 thermal imager

### Wire harness assembly and coil winding

- Schleuniger wire cutter/stripper
- Amp K presses
- Adams-Maxwell horizontal winders
- Jovil JV75 hook winders
- Various hand tools

### Other

- Bridgeport CNC 3-axis mill
- Custom-formed ESD packaging equipment

## About Z-AXIS

Z-AXIS Inc. provides ISO 9001:2008 quality design, prototyping and manufacturing services for complex electronic products and electromechanical assemblies. We offer fast design turnaround, competitive NRE charges, rapid production and low freight costs from our design and manufacturing facility in western New York. We meet our OEM customers' most demanding requirements.



**Z-AXIS Inc.**  
1916 Route 96, Phelps, NY 14532  
(315) 548-5000 ■ [www.zaxis.net](http://www.zaxis.net)

We provide innovative solutions to satisfy our customers' needs.