

Capabilities: from Concept to Completion

General

Concept to Completion encompasses the entire realm of electronics manufacturing that Compunetix offers, including various levels of design, fabrication, procurement, electronic assembly and testing services.

- Prototyping
- Production
- Parts Procurement

Project Management

Our team serves as the direct link between the customer and the manufacturing process and includes, at a minimum, a Project Manager, Production Planner and a Materials Sourcing Agent. Formal reviews are held by the project manager, together with production engineering, design and manufacturing personnel.

At Compunetix, Sales Engineers are involved from pre-sales to order entry, through shipment of the product and beyond. Sales Engineers become the Project Managers after an order has been placed and stay involved with their customers, projects and programs for the long term. Compunetix customers continually tell us how important this extraordinary level of attention and consistency is to them.

The Compunetix internal MRP system and proprietary bar coding system allows us to track total progress and process details of every operation in the assembly process, giving us the ability to always know the present status of your product. "Concept to completion" happens every day at Compunetix.

Products

Compunetix produces a variety of electronics systems from PCB-level assemblies to upper-level box builds to complete system-level integrations.

At the PCB level Compunetix provides IPC-A-610 class II and III manufacturing services that range from simple through-hole assemblies to designs incorporating the finest pitch SMT components as well as complex double-sided hybrid PCB assemblies that utilize both through hole and SMT components. In addition to rigid PCB assembly work, we frequently provide assembly and testing services for flex and rigid-flex PCBs. On the system side, we produce everything from the PCB assemblies to the completely wired and integrated final product, be it a handheld device, full rack system, or control panel.

- Electronic Assembly
- Surface mount
- Through hole
- Backplanes
- Mechanical Assembly
- Chassis
- Harnesses
- Testing
- Conformal Coating

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Material Procurement

Compunetix has an experienced procurement staff that is assigned by customer, not commodity.

This ensures that our customers develop a relationship with our buyers and also that our buyers become very familiar with the customer-specified materials. These buyers are extremely knowledgeable about these parts and the logistics of their procurement, including finding the most competitive prices. With the assistance of Compunetix's internally-developed and proprietary MRP system our buyers have real-time access to inventory shortages, procurement history and delivery status. Additionally, thanks to the large volume of electronics that Compunetix purchases, we have long-standing relationships with the industry leaders in distribution, various manufacturers, fabricators and brokers. Our buying power, experience and buying tools enable procurement services that customers appreciate and continually rely upon to meet the strictest quality and schedule demands.

- Proprietary MRP System
- Material Options
- Purchased
- Consigned
- Kitted
- Secured Inventory
- 12,000 Inventory Line Items

Inventory

A dedicated inventory is maintained for every individual turnkey customer, strictly controlled and monitored in real-time by our MRP system, ensuring that each customer's inventory is their own and always available.

Manufacturing

"State-of-the-art" can be a cliché when it comes to technology. One look at our list of customers and projects demonstrates, however, that keeping current with the latest equipment is an absolute must. Compunetix is a fully equipped contract manufacturer.

- Surface Mount Assembly
- Fully automated inline manufacturing
- 15 mil pitch
- Double sided
- BGA
- Through Hole Assembly
- Automated insertion
- Wave soldering, 20" width
- Test
- In-circuit
- Functional
- Test fixture manufacturing
- Conformal Coating
- Acrylics
- Urethanes
- Environmental Stressing

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Quality Assurance

Compunetix is an ISO 9001:2008 certified manufacturing organization.

In addition, all of our assembly technicians are certified J-STD-001 specialists and all of our QC inspectors and several of our production cell supervisors are certified IPC-A-610 specialists. We also have certified IPC and J-STD trainers on staff which provide in-house training to new and existing personnel, as required.

Compunetix meets the requirements of:

- IPC 610 Class 3 (Class 2 standard)
- MIL-P-55110
- ANSI/NCSS Z540-1
- MIL-Q-9858
- NASA NHB 5300

Automated Inspection

PCB assemblies that include SMT components are 100% inspected using automated optical inspection (AOI) equipment. This highly sophisticated inspection equipment quickly and efficiently checks for various potential defects.

X-Ray Inspection

X-Ray inspection methods are the only way to check the solder integrity of leadless components, such as BGAs. At Compunetix, every PCB assembly that contains BGAs or other leadless components is 100% X-Ray inspected.

Testing

In addition to our normal rigorous inspection techniques and modern test facilities, highly trained and experienced test engineers are available to provide automated in-circuit testing, functional testing and environmental stressing to meet the most demanding customer specifications.

Conformal Coating

PCB assemblies often require conformal coating as a result of hazardous chemical or environmental exposure. For such applications, we utilize an automated conformal coating sprayer, which can apply various coating thicknesses of either acrylic or urethane coating. To ensure thorough coverage, we rely on a downstream fluorescing station. The curing process is accelerated through the use of an in-line IR oven.

Repair/Rework

Compunetix has the experience and knowledge to perform in-house PCB assembly-related repair and rework operations as well as inspection troubleshooting. From simple solder touchups to removal and re-balling of BGA-type components to PCB rework, Compunetix is fully qualified and equipped with rework stations to address these requirements. We serve as a repair and test depot for several of our customers, ensuring that their products are functioning to their original specifications. If there is a functional issue, we stand behind our assembly work 100% and remedy the situation, be it through repair or replacement.