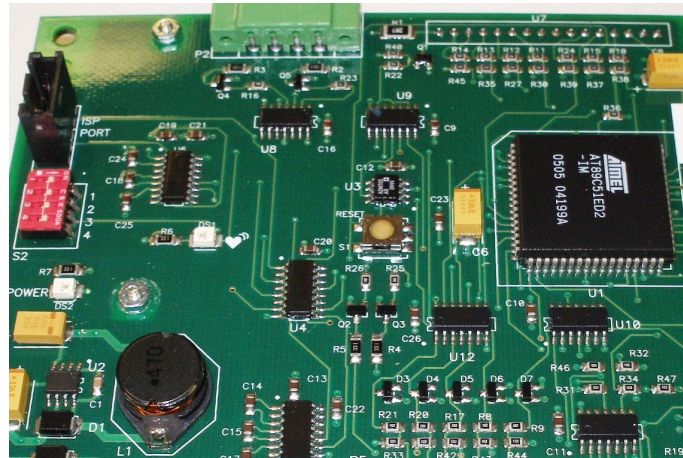


# ELECTRONIC MANUFACTURING SERVICES

*Since 1995, Global Resources, Local Support from Concept to Production*



## **When you need quality manufacturing services**

- Design
- PCB Assembly
- Box Build / Final Assembly

**Count on Optima to meet your requirements!**



*Optima Technology Associates, Inc. was founded in 1995 to provide complete electronic contract manufacturing services from design through assembly and fulfillment. Included in our core operations is one of the industry's best, most reliable, and customer friendly sources of rigid printed circuit boards, PTH/SMT board assembly, box/build and engineering design services.*

*Consider the convenience of having all of your electronic needs handled by a single source with a strong commitment to quality and customer satisfaction. Whether your need is prototype, medium or high volume production, Optima is driven to always deliver high quality goods and services, on time. **Our goal—better value from your electronic supplier to strengthen your strategic position.***

*Located in Lewisberry, PA and New Delhi, India, we specialize in providing local support coupled with cost-effective pricing via off-shore manufacturing through our ISO Approved facilities.*

### **Products Supplied**

- Printed Circuit Board Assemblies (PCBAs)
- Printed Circuit Boards (PCBs)
- Mechanical Assemblies
- Cable & Wire Harnesses
- Metal & Plastic Enclosures

### **Customer Benefits**

- Local support, close to you & your markets
- Cost-effective, world-class manufacturing in New Delhi, India
- Responsive & flexible

### **Services Offered**

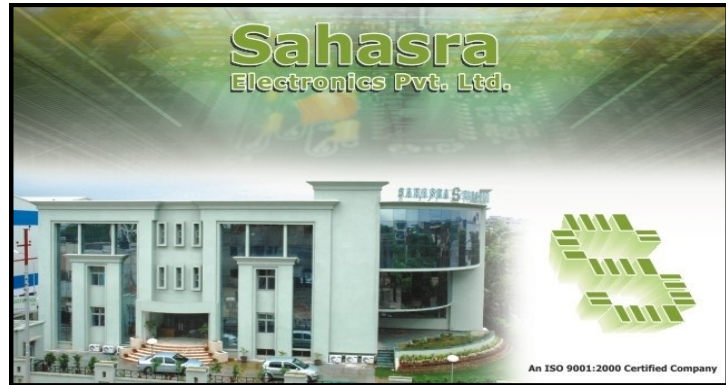
- Contract / Turnkey Manufacturing
- Engineering Design Services
- Product Design & Prototyping

### **Quick Facts**

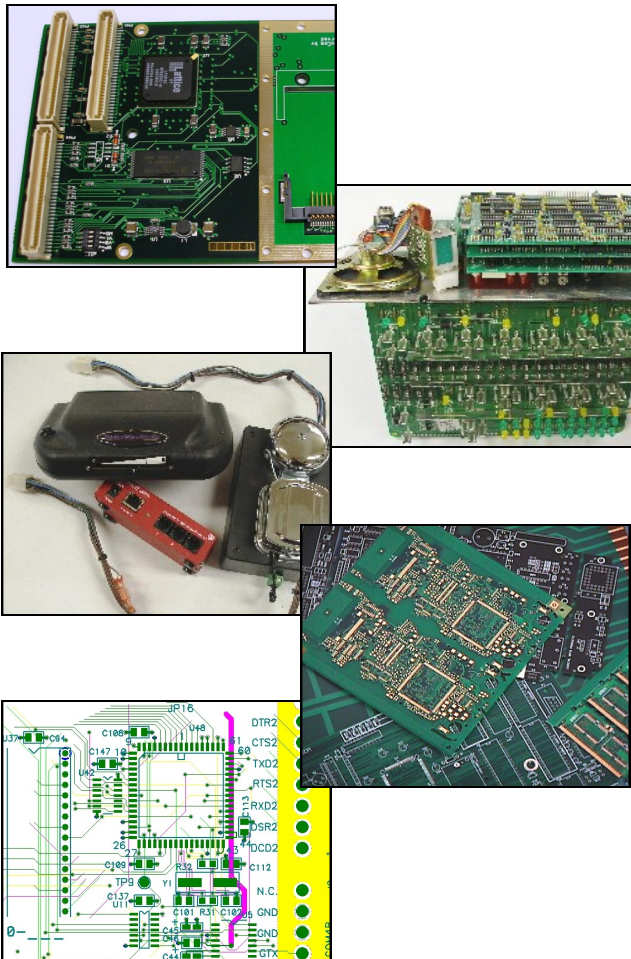
- 50,000 ft<sup>2</sup> manufacturing facilities
- 150+ employees
- Located in Lewisberry, PA and New Delhi, India
- PCBA capacity greater than 1 million assemblies per year
- PCB fabrication capacity greater than 100,000,000 ft<sup>2</sup>

## Facilities

- Lewisberry, PA
  - Stocking/Distribution
  - Sales/Marketing
  - Engineering Design
- New Delhi, India
  - SMT/TH Assembly
  - Box build/Final Assembly
  - Mechanical Assemblies
  - Design
  - PCB Fabrication
  - ISO9001:2000, UL, RoHS



[www.sahasraelectronics.com](http://www.sahasraelectronics.com)



## Capabilities

- Thru-hole, SMT, BGA assembly
- PCB Test & repair
- Mechanical assembly / Box build
- Cable & wire harness assembly
- Metal or Plastic enclosures
- Potting or Environmental coatings
- PCB Fabrication
  - ◆ Up to 10 layer
  - ◆ RoHS
  - ◆ ISO / UL
  - ◆ ENIG, Gold, Silver, Tin, HASL, SMOBC Finishes
  - ◆ Various Materials, Routing / Scoring, Thicknesses
- Engineering Design Services
  - ◆ Hardware
  - ◆ Software (Firmware & Embedded)
  - ◆ PCB Layout & Gerber Files
  - ◆ Mechanical
  - ◆ DFM & Upgrades

## Manufacturing

- 50,000 ft<sup>2</sup>
- Temperature / Humidity Controlled
- Full backup power generation
- SAP Enabled Customize ERP System

## SMT Equipment

- 3 SMT Lines with Integrated Screen Printer, Pick & Place, & Multizone Reflow Ovens
- Fuji-GSP Auto Vision Automatic Printer
- Fuji-IP-II High Speed Fine Pitch Placer
  - ◆ 20K CPH
  - ◆ 140 8 mm Tape Feeders, 12 Turret Heads
  - ◆ Vision Correction, Accuracy +/- 0.10 mm
- Fuji-CP-IV High Speed Chip Shooter
  - ◆ 36K CPH
  - ◆ Precision placement +/- 0.10 mm
- MDC SMT Pick & Place with BGA capability with EMS-SP-20/20 Semi Auto Screen Printer & MDC-ECM96 Chip/Fine Pitch Placer
  - ◆ 20 mil pitch
  - ◆ 24 feeders
  - ◆ 0402 to 2 X 2
- Multi-zone, Re-flow Ovens
- SMT Rework Stations
- BGA Rework Stations
- X-Ray Inspection
- Automated Optical Inspection (AOI)







## Thru-Hole Equipment

- Time Eng Manual Inspection Rail / Platforms
- Manual Insertion Conveyor Platform
- Table Top Insertion Soldering
- Dual Wave Conveyor Solders
- Baking Ovens
- Temperature Controlled Solder Irons & Hot Air Guns
- Lead formers / cutters (axial, radial)
- High Speed Universal Programmer & Gang Programmer Heads



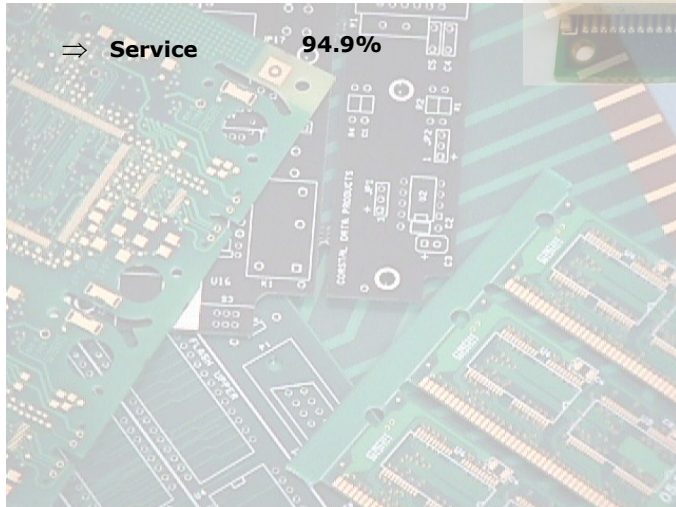
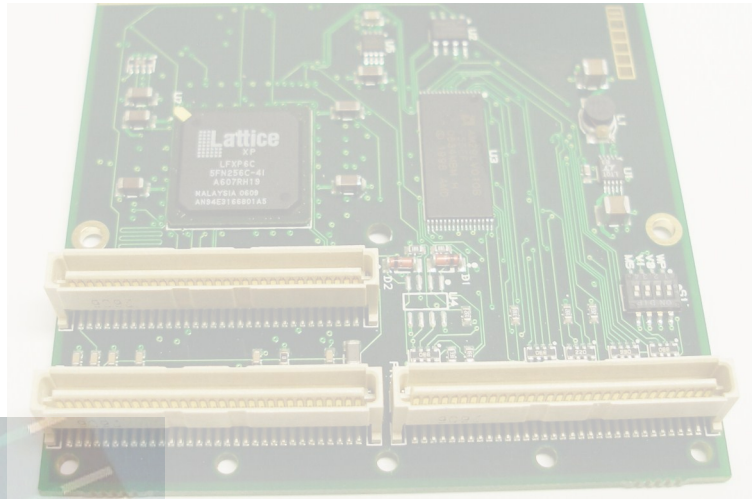
## Test & Process Control

- In-Circuit Test with MDA
- In-Circuit Programmers
- Scopes, meters, power supplies as necessary for customized functional test
- AOI System
- BGA Inspection / Rework System
- Multi-State Aqueous Cleaners

***From Concept to Production, Optima is Your One Stop for Printed Circuit Boards & Assembly Services***

**Customer Satisfaction Ratings**

- ⇒ **Overall**            **93.2%**
- ⇒ **Quality**            **92.5%**
- ⇒ **Delivery**           **94.7%**
- ⇒ **Response**         **93.4%**
- ⇒ **Systems**           **92.0%**
- ⇒ **Service**            **94.9%**



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