

Windber, Pennsylvania Contract Electronics Manufacturing Facility

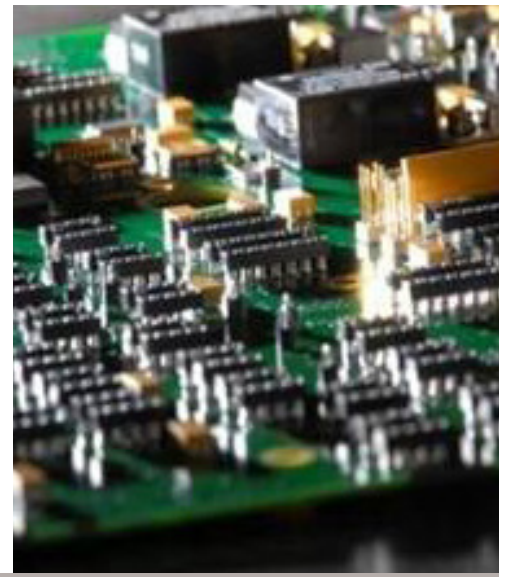
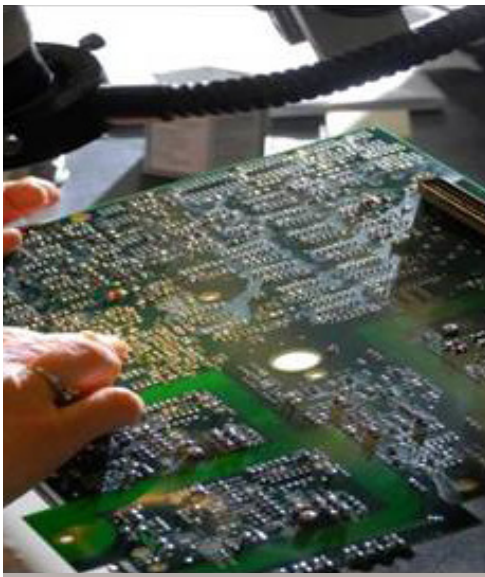


API Technologies operates a 110,000 sq. ft. facility near Johnstown, PA with a skilled staff of over 122 employees. The facility is equipped for assembly of 100 percent surface mount technology, mixed technology, and hybrid design PC boards, including single or double sided, multilayer circuit boards, fiberglass resin, polyester, flexible and ceramic. It features a full through-hole assembly line, for both low and high volume production.

The facility is qualified under IPC-A-610 and J-STD-001 Workmanship Standards. API can also meet special assembly requirements such as system integrated turnkey assembly, mechanical assembly, cable assembly and testing of all electrical assemblies. All customer kits and turnkey inventory are tracked and audited by an MRP database system. Additionally, a secured inventory area is available for processing and storage of drop shipped inventories.

Certifications:

- ISO 9001 : 2008 Certified
- AS-9100 : 2009 Certified
- ISO-13485 : 2003 Certified
- IPC-610E Class I,II,III, IPC-620, J-STD-001D Certified Instructors and Operators
- ANSI/ESD S20.20 Compliant
- RoHS – compliant products available
- Restriction of pure tin certifications
- CE, UL, FCC, CSA



Circuit Card Manufacturing Assembly

- J-STD-001/ J-STD-001DS
- IPC-610 Class 2 and 3
- Printed circuit board design
- Mirae / Quad pick and place equipment
- BGA and Micro-BGA Assembly and Rework
- Ersa PL650A BGA rework station.
- Vitronics 8 Zone reflow ovens
- Vitronics Delta 5 Wave solder capable of RoHOS soldering
- Harmony Selective Solder Capable of RoHOS Soldering
- Conformal Coating
 - AR, UR, SR, ER, Arathane 5750 A/B, Parylene
 - All Coatings conform to MIL-I-46058C and IPC-CC-830

Surface Mount Technology

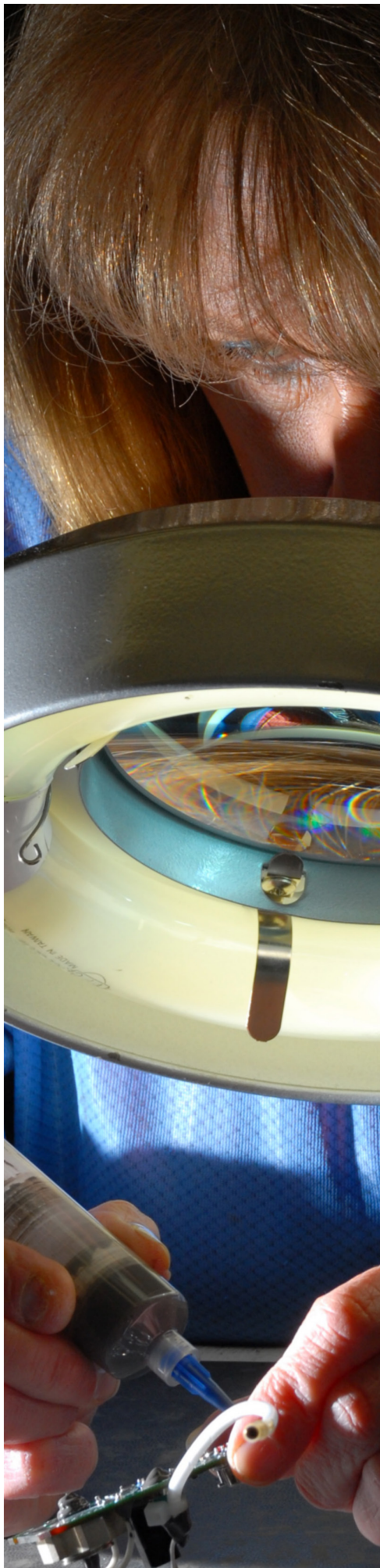
- 01005
- 0201
- uBGA
- BGA (.08mm Pitch to highest I/O count)
- Leadless Chip
- Ultra Fine pitch
- MCM
- Flip Chip
- Boards as large as 24 "x 20", 30+ layers
- Board materials: FR-4, Thermount, Arlon, Rodgers Material, Ceramic, Flex Circuits
- Surface Finishes: HASL, OSP, ENIG, Immersion Silver, Immersion Tin
- RoHOS Soldering Lead Free

Cable and Electro-Mechanical Assembly

- Cable & Harness manufacturing
 - Schleuniger wire cut, mark and strip system
 - Automated Crimp machines
 - SUMIMARK IV - 300 DPI Marking System
 - Cable Harness: PTP Continuity / Short to Ground and Hi-Pot (manual and automatic) Eclipse 1502 Cable/ Harness Tester
- Hardware Integrations
 - Enclosures
 - Chassis
 - Hardened Shelters

Test & Inspection

- Automated Optical Inspection (AOI)
- X-Ray
- BGA J-Tag Testing
- CCA: In Circuit and Functional Testing
- Genrad 2287
- Takaya APT 9401CJ Flying Probe Tester
- Thermotron Environmental Chambers
- Unholtz-Dickie Vibe Table



Ball Grid Array Troubleshooting / Re-work

For companies experiencing problems with competitor-made components, Ball Grid Array (BGA) Troubleshooting and re-work offers a highly cost effective method to repair “dead” boards or eliminate bone piles.

New Product Introductions (NPI)

API offers rapid prototyping services, incorporating the hands-on service of a small EMS vendor with the engineering expertise of a large, established firm.

Unique Customer Service Model

API assigns a skilled technician to oversee each project from initiation to completion (design, production, incoming inspection, and shipping). This eliminates confusion and ensures that each project is given ample attention and is completed successfully.

Invested Employees

With Certified Six Sigma Greenbelts, 5S training, and an average tenure of over onedecade of service, API employees are second to none.

Prediction & Elimination of Problems

API leverages state-of-the-art software to render a virtual board build. In a matter of minutes, API can spot engineering mistakes, check electrical clearances, review it against standards, check component sizes, and much more. This detects and corrects errors before manufacturing begins, thus saving customers time and money.

Re-Ball Specialists

Due to the ruggedized nature of military products, lead is a major component in EMS manufacturing. Recent environmental restrictions regarding the use of lead in products means that many small parts in military-grade components must be replaced. API Technologies is one of the few EMS organizations to offer re-balling of ball grid assemblies.

Major Equipment List

- Surface mount placement equipment with a total placement capacity of 163,000 components per hour
- BGA, Fine Pitch, 0201 assembly, repair, test, and rework capability
- Hot air convection surface mount reflow
- A full array of the latest inspection and rework equipment
- Automatic optical inspection
- Lead and lead free wave solder system
- Water treatment systems
- Environmentally compliant aqueous cleaning system
- Automated through hole lead forming and trimming
- Conformal coating system for application of Urethane, Acrylic, Epoxy, Silicone, Arathane 5750, Parylene
- Scan Cad capability for creation of Gerber and ASCII data
- Functional and Genrad testing available
- Custom MRP business system
- ESD production area compliant to ANSI/ESD S20.20
- DFM (Design for Manufacturing) Software Suite

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