
REI SNAPSHOT: Capabilities, Equipment, Workforce, Facilities, Achievements, Major Customers

SMT ASSEMBLY: Equipment & Capability:

- ◆ Three SMT Pick and Place lines
 - ◆ **First Line:** In-Line set up of Two MyData SMT machines Used for prototypes and small volume, Semi-Automatics MPM Screen printer and Manncorp 7 seven zone reflow machine
 - ◆ **Second Line:** Semi-automatic MPM Screen printer, Europlacer iineo-1 High Speed SMT Pick and Place machine and Electrovert 7 zone Reflow Oven. Conveyorized set up with Inspection stations
 - ◆ **Third Line:** Fully Automatic Europlacer Screen printer, Europlacer iineo-1 High Speed SMT Pick and Place machine and Heller 8 zone Reflow Oven. Conveyorized set up with Inspection stations
- ◆ Discrete Component smallest size 01005 (10 mils x 5 mils)
- ◆ Fine Pitch up to 11 mil
- ◆ PCB Size: Smallest: 1"x1", Largest 18"x 24"
- ◆ Maximum Component Height: Top Side: 4", Bottom Side 2"
- ◆ Micro BGA placement
- ◆ All BGA placements inspected twice with live X-Ray, before reflow and after Reflow
- ◆ Glenbrook Technology RX113 live X-Ray Inspection Machine
- ◆ BGA removal & replacement
- ◆ Water soluble and no-clean chemistries

THROUGH HOLE ASSEMBLY

- ◆ Two Wave Solder Machines
 - Electrovert: for Leaded Solder
 - Manncorp: for RoHS compliant solder
- ◆ RPS Selective Soldering Machine with Leaded and Lead free solder pots
- ◆ Soldering is done either manually or on Automated Soldering Machines depending upon the configuration of the PC boards.
- ◆ Various Axial and Radial Part prep machines.
- ◆ IPC Certified Solderers for manual soldering components.
- ◆ In-house IPC Certified Soldering Trainer
- ◆ Misc wire processing equipment such as Wire crimpers, wire cut and strip units and lead tinning pots

PCB ASSEMBLY - OTHER SERVICES

- ◆ Conformal coating
- ◆ Potting Services
- ◆ Pin Insertion & Press Fit Connectors
- ◆ Swage Terminals
- ◆ Cable & Wire Harness assembly
- ◆ Full Functional Testing
- ◆ IC (Device) programming
- ◆ Ultrasonic Plastic welding
- ◆ Pad printing on irregular plastic parts
- ◆ Box Build and configuration of finished product

PCB ASSEMBLIES – Process Control

- ♦ REI assigns Unique PNC NUMBER for each job. Revised job gets new PNC Number
- ♦ For each PNC Number REI makes a list and prints of Documents needed.
- ♦ These documents always accompany customized travelers
- ♦ Job does not proceed further unless each required operation is signed off.
- ♦ Functional testing of each assembly when required
- ♦ AOI testing of each assembly when needed
- ♦ When required by customer, each PCB assembly gets its own serial number and/or testing report.
- ♦ All BGA and BGA look alike parts inspected by X-Ray twice, before and after reflow

PCB ASSEMBLIES – Workforce Training

- ♦ IPC certified in-house manual soldering trainer
- ♦ IPC certified Manual Solderers (Trained and certified in house)
- ♦ New Hires: On the job training for 3 months.
- ♦ Formal Class Room training for soldering per IPC J-STD-001F
- ♦ Most of the staff cross-trained for multiple departments
- ♦ Periodic Scheduled Training for all employees
- ♦ Periodic Scheduled Review of Skills attained for all employees

Quality Control:

- ♦ Mirtec MV6 OMNI 3D Automated Optical Inspection Machine
- ♦ Glenbrook Live X-Ray Unit for BGA inspection
- ♦ BGA repair station
- ♦ Mantis Visual Inspection units (Four Units)
- ♦ Microscopes (two units)
- ♦ Oscilloscopes (two units)
- ♦ Checksum In-Circuit Testing Machine
- ♦ Variable Power supply's (4 units)

MISC. Capabilities:

- ♦ 3 separate assembly areas for manual assembly
- ♦ 2 separate dedicated areas for Electronics Box Builds
- ♦ Separate areas for functional testing of assembled unit
- ♦ Separate Area and equipment for potting of PCB assembly
- ♦ Quincy thermal oven 300F for baking raw PC boards
- ♦ Fully computerized stock room (6000 Sq.ft) for managing turnkey or customer supplied parts

Our Company:

- ♦ Office Staff: 5
- ♦ Engineering Staff (Production) ~ 4
- ♦ Engineering Staff (Design) ~ 5
- ♦ Factory Staff: 30
- ♦ Office Area: 3000 Sq. Ft
- ♦ Production Area: 25,000 Sq. Ft
- ♦ Location: 145 Shepherds Lane, Totowa, NJ 07512
- ♦ Off-Site Warehouse: 10,250 Sq. Ft in Paterson , NJ

Certification and Standards:

- ♦ ISO 9001:2015 Certified by Dekra expires on 8-15-2024
- ♦ ITAR Registered
- ♦ ISO13485:2016 certified by Dekra, expires on 8-05-2024
- ♦ In Process of implementing 5S Methodology for Organized, Safe, Clean and Efficient Workplace
- ♦ RoHS & REACH Compliant
- ♦ Compliant to AS9100 but not certified and currently no plan to get certified.
- ♦ Currently not compliant to CMMC but will get the compliance if needed.

Company Achievements:

- ♦ Certified to standards ISO9001:1994 in year 2002 by BSI America, Inc. Since then, kept ISO9001 certification uninterrupted. Currently certified to ISO9001:2015.
- ♦ Certified to standards AS9001 in year 2005 by BSI America, Inc. However, it became a costly affair & let the certification lapsed in 2009.
- ♦ Received ITAR registration in year 2004
- ♦ Registered Cage Code in year 2004.
- ♦ In 2016, participated with Columbia University in LIGO project to prove Albert Einstein's theory of Existence of Gravitational waves proposed in year 1916. REI was recognized by local Newspaper with heading "Totowa's Link to Einstein –Electronics firm help discovery of Gravitational Waves." That gave us our bragging rights for Excellence.
- ♦ In 2021, certified to ISO13485:2016

Approval by Major Customers:

- ♦ 2004, approved by Picatinny Arsenal, a Department of Defense R & D facility in New Jersey.
- ♦ 2005, approved by Westlock Corporation (later on TYCO, Pentair and Crane) for Valve Control assemblies for US Navy.
- ♦ 2006, approved by Harris Corporation, a dept. of defense contractor, for PCB assemblies as a second-tier supplier.
- ♦ 2006, approved by Avionic Instrument for aerospace related PCB assemblies.
- ♦ 2007, approved as second tier supplier by Boeing for aerospace related PCB assemblies.
- ♦ 2007, approved by Bogue Systems for US navy related PCB assemblies.
- ♦ 2010, approved by Dataprobe for communication related PCB assemblies
- ♦ 2012, approved by Precision Medical for Medical related PCB assemblies
- ♦ 2015, approved by Miltec UV for UV curing equipment
- ♦ 2016, approved by Skurka Aerospace for aerospace related PCB assemblies