

About Us

When Creative Hi-Tech Ltd. began operations in 1998, we had a 7,000 square foot building and only one pick and place machine. Today, CHTL operates out of a 25,000 square foot building with two fully automated SMT assembly lines. With the ability to be flexible as a small business and being able to cater to the varying needs of customers in all types of industries, CHTL has developed a national customer base with a variety of customers from military and medical to gaming and LED lighting. For over 15 years it has been our goal to consistently build high quality circuit board assemblies here in the USA.

Service Offered :

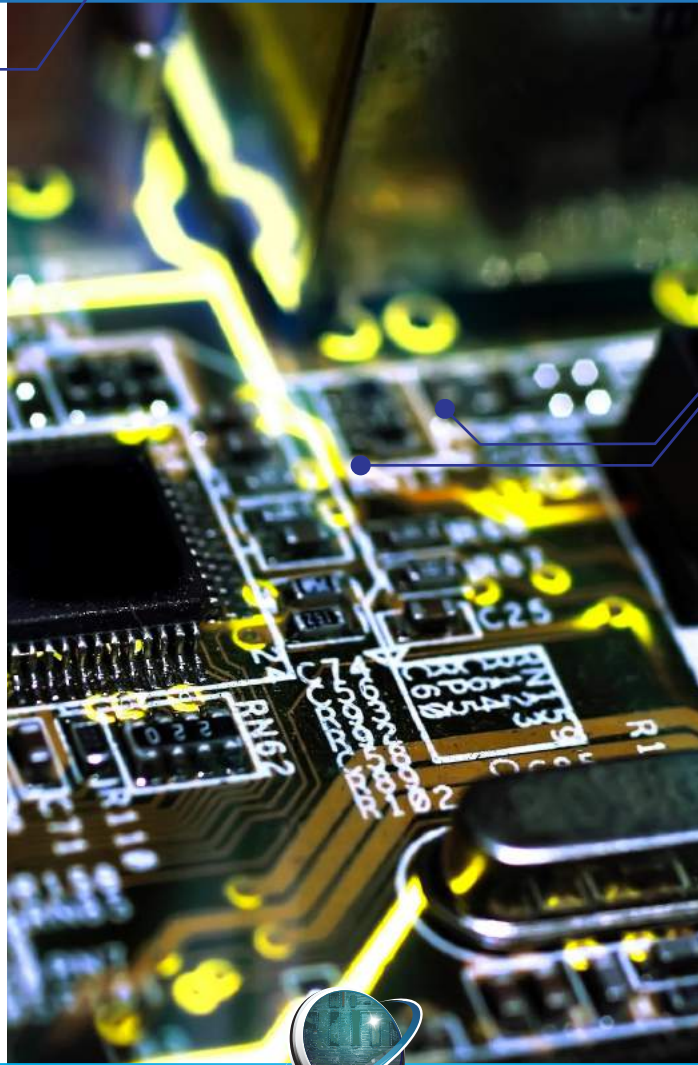
- PCB ASSEMBLY
- BGA & MICRO BGA PLACEMENT
- CABLE AND WIRE HARNESS ASSEMBLY
- PCB DESIGN & REVERSE ENGINEERING
- BOX BUILD ASSEMBLY
- CONFORMAL COATING
- IC PROGRAMMING
- IN CIRCUIT TESTING/FUNCTIONAL TESTING
- X-RAY INSPECTION
- AUTOMATED OPTICAL INSPECTION
- BGA REWORK

Our Facility

- 25,000 square foot air-conditioned, static free environment.
- Two surface mount lines & one through hole line.
- Mechanical assembly area provides box build capability.
- Separate prototype area with capability for manual & semi-automated assembly.
- Test areas for fixture & fixtureless ICT plus functional test.
- Inspection & finishing area including optical inspection, X-Ray stations, rework stations & burn-in capability.
- Warehousing area for component & FG inventory.
- ESD safe shipping, receiving & inspection area.

CERTIFICATIONS

- ISO 9001:2008 Certified.
- AS9100C (Pending)
- ITAR Registered
- IPC-WHMA-610 Certified.
- ISO/TS 16949 Compliant.
- ANSI ASQC Compliant.



CreativeHi-Tech

YOUR CREATIVE THINKING, OUR HI-TECH SOLUTIONS



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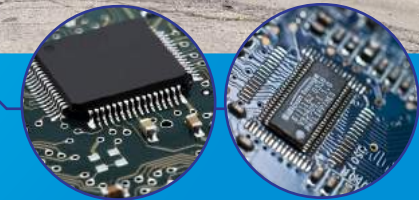
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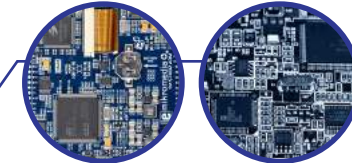
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Our Capabilities

Technical

- Laser alignment & vision systems for SMT placement.
- Auto-calibration for SMT lines.
- BGA, μ -BGA, ultra-fine pitch QFP, QFN, CSP, FCP & 0201 placement & repair.
- Component placement to 7-mil pitch.
- High layer & ultra-dense component counts.
- On site firmware programming.
- 10-zone air convection reflow system with nitrogen atmosphere option.
- X-Ray laminography & optical inspection.

Manufacturing

- Complex RoHS & non-RoHS PCAs up to 18"x20".
- PTH, SMT & mixed technology assembly.
- Single and double-sided assembly.
- No clean flux process & closed loop aqueous cleaning system.
- Conformal coating & potting compliant with IPC-CC-830B.
- Cable & harness assembly.
- Complete mechanical assembly.
- Fixtured & fixtureless in circuit & functional testing.
- Repair/rework including BGA & QFP.

Our Comprehensive Services

Design

- Electrical, PCB & layout capabilities.
- DFT & DFM engineering support.
- Component selection/BOM creation support.

Prototyping

- Quick turn – 1 to 5 days.
- Turnkey, consignment, or mixed model.
- One piece through beta run.
- Machine & hand placement.
- Reflow and hand soldering.
- Optical inspection & flying probe test with data logged results available.
- DFT, DFM, FMEA feedback.

NPI (New Product Introduction)

- Dedicated program management.
- Documentation requirements defined.
- Program review; kick off meeting & Project development.
- Final SOW, materials, processes, & schedule documentation & sign off.
- 1st article inspections (Tooling, materials, & assembly) & acceptance.
- Release to production.

Supply Chain Management

- Component sourcing - Full turnkey to full consignment based on customer needs.
- BOM analysis & suggestions for cost, availability & serviceability improvement.
- Demand aggregation for cost optimization.
- AVL management & supplier certification.
- Demand forecast & supplies management.
- RoHS & non-RoHS Inventory management.

Quality management

- ISO 9001:2008 certified & ISO/TS 16949 compliant.
- IPC-A-610 & ANSI/J-STD-001 workmanship standards.
- On line procedures documentation.
- Hard copy work instructions documentation.
- ESD, Moisture, sensitive, FIFO procedures.
- Statistical Process Control Points.
- Solder Paste (height & volume).
- Reflow oven peak temperature & belt speed.
- Incoming inspection.
- MRB for non-conforming material identification, segregation & disposition.
- Performance metrics tracking & reporting.

Our State of the Art Equipment

Prep / Kitting

- **Material Storage with RoHS Compliance Area**
- **Hepco-APS 1500-1** Radial Lead Formation System
- **Hepco 8000-1** Axial Lead Formation System
- **Ideal Wire Processor**
- **PEI OLAMEF TP6** Lead Formation System
- **GPD CF-8** Component Former

Surface Mount

- **Production Line 1** *** RoHS Compliant ***
 - **Flex Link Board Loader & Conveyor**
 - **Speedline MPM / Ultraflex 3000**
 - Screen printer with 2D Camera System, Auto Pin Placement, Auto Wiper etc.
 - **Juki KE2060E** Pick & Place
 - Laser Alignment & Vision System
 - 7-mil Pitch, BGA, MicroBGA placement
 - Placement at 12,500CPH (laser centering/effective tact)
 - One multi-nozzle laser head plus one high-resolution head
 - From 0201 to 74mm sq. component placement capability
 - **Juki Matric Tray Changer**
 - Capable up to 44 different types of QFP, QFN, BGA, CSP etc.
 - **Vitronics Soltec XPM2** with Brush Roller Output
 - Lead Free Compatible
 - 10-zone air convection reflow including a 3 zone cooling system with nitrogen option

Production Line 2

- **Speedline MPM Accuflex**
 - Screen printer with Camera System, Aperture to Pad learning, "Gridlock" board support system etc.
- **Juki JX-100** Pick & Place
 - Laser Alignment & Vision System
 - Fine Pitch, BGA & MicroBGA placement at 16,000 CPH
- **Juki FM760** Pick & Place
 - Laser Alignment & Vision System
 - Fine Pitch, BGA & MicroBGA placement at 11,000 CPH
- **Vitronics Soltec XPM3** with Brush Roller Output
 - Lead free Compatible
 - 10-zone air convection reflow

Through Hole

- **IAC TH Assembly Work Station**
- **Tech-Mation Assembly Line**
- **Electrovert Vectra Elite Wave Solder System**
 - Lead free capability & "Quick Change" solder pot
 - 3 convection preheaters, 1 infra-red preheater & dual wave capability
 - ServoJet programmable fluxer module with self contained external fluxer cabinet
 - Real time 3-D graphic animation of system & process
 - User friendly operator interface console with storage for 5000+ unique recipes
- **Conveyer Tech. Unloader**
- **Lead Trimming System** - Q2G-2000

Testing & Inspection

- **AOI - Automated Optical Inspection**
 - Orbotech Symbion S-36**
 - Multiple cameras with 3D Image acquisition & processing
 - DPIIX (Dimensional Picture Information Extraction) Technology
 - High First-Pass Yield
 - Adapts automatically to product & component change over
- **ICT - In Circuit Testing**
 - GenRad 2283 & GenRad 2280S**
 - Bed of nails with fixture
 - OpenExpress equipped & Boundary Scan capable

X-Ray System

Glen Brook RTX-113

Vision Systems

- **Sciscope**
 - 19" camera system
- **Microscopes**
 - Vision Engineering
 - Mantis
 - Clearview

Rework

- **Bandit APE Rework Station** for QFP & BGA components
- **Tektronix 7704A Oscilloscope**

Mechanical Assembly / Wire Harness

- **Eubank Model 9800**
- **Kodera C300**
- **Wisconsin Oven Burn in Chamber**
- **Palatek Dry Air System**
- **Mechanical Tools**
 - Various automatic screwdrivers