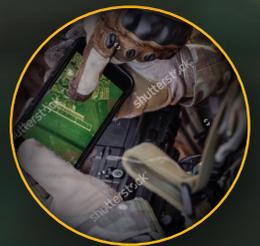


Smart Manufacturing of Electronics

Automated, Optimized & Fully Traceable
Manufacturing of Advanced Products



SMT HAUTES
TECHNOLOGIES

Smart Process

What Sets Us Apart

Smart, Automated, Optimized & Fully Traceable

1. Vetted & Computerized Supply Chain

Your orders are automatically processed, generating RFQs to our pre-vetted suppliers. Automatic email alerts will warn you of any parts with long leadtimes so you can plan accordingly.

2. Powerful Capacity Optimization Means Short Lead Times

To maximize our operational flexibility (and shorten our delivery times), we leverage Universal® Dimensions® software to achieve production of 4 million PCBAs, operating at 40% current capacity. Dimensions' control tools gives us real-time shop floor reporting and analysis, enabling us to track all materials during all steps of production. Its powerful changeover tools and NPI capabilities streamline your new product's introduction.



High speed placement of discrete electronic components.



3. Smart Management using Microsoft® Dynamics GP ERP and Universal® Dimensions®

- **Material Control:** Including barcode printing, management, MRP, kitting, consumption tracking and low feeder notifications
- **Production Planning:** Management, changeovers and setups, with customer access to all planning and reports
- **Manufacturing Operations:** Offline setup, validations, flexible setups
- **Manufacturing Engineering:** Data import, program creation and optimization, line balancing, productivity simulations, offline component teach and board validation
- **Production Floor:** Feeder and reel tracking, attrition notifications, auto-changeovers, auto setup validation, data collection
- **Process/Production Engineering:** Machine/line level performance monitoring and analysis, threshold-base process control, KPI limit email and mobile alerts
- **Management Reporting & IT:** Real-time OEE, downtime, and scrap dashboards; factory performance; SQL transfer tables; interface with MRP enterprise systems; and traceability data retrieval



Internal view of pick-and-place machine.



Highly precise and exceptionally powerful printers for high-end, ultra-fine-pitch SMT.

Smart Management

4. A Truly Smart Floor

Our shop floor is paperless: All employees tasks and setups are computerized, and human intervention is reduced to a minimum. This gives us fully automated (and documented) control at every step of the way: user authorization, process flow management, task scheduling, auto data storage, time monitoring, right tooling, authorizing of benches and even remote maintenance.

5. Remote Management of All Processes

Our management and engineering teams can remotely monitor and control virtually every aspect of the shop floor. And you can have a front row seat for all of your products' activities via real-time monitoring on our Customer Portal:

- Planning: PO tracking, physical inventory, scheduling, and employee assignment.
- Engineering Development & Maintenance: Documentation, specifications, and automated testing.
- Reporting: Procedure results, employee performance, product efficiency, and yield.
- Automatic Alerts: Shipping, procedure failure, and other critical developments.



Pick-and-place machines.

6. 100% Traceable and 100% Accessible

100% of your components and their manufacturing processes are archived for your real-time tracking of all WIP. If you can access the cloud, you can access the complete pedigree of every unit we've ever produced for you — from their incoming materials inspections to their final functional testing.

And you can intelligently sort your data by materials supplier, date/lot code, your PO number, manufacturing process, results, tasks per user, date and time of tasks, and setup/benches.

7. Customer Access

- Planning
- Reporting
- Yields in real-time

It's like having your EMS in the next room!



A view of our multiple lines.



A typical test station.

Comprehensive PCBA Services

Design for Manufacturing

Increase the quality of your PCBAs while reducing their manufacturing costs by using SMT's DFM analysis. By leveraging Mentor Graphics®, SMT's DFM ensures the integrity of both your printed circuit boards and their assembly processes. Design for Manufacturing includes:

- Circuit Board Analysis
- Parts Placements
- Manufacturing Rule
- Footprint

Our DFM can be used during your NPI — or to improve an existing product.

Design for Testing

Realize substantial cost reductions by streamlining your PCBA design for in-circuit, Flying-Probe, and functional testing. Our DFT optimizes:

- Net Accessibility
- Test Coverage
- Signal Integrity
- Testability Reporting

Our test development tools include:

- Test Jigs
- Software Services
- Test Strategy
- Troubleshooting Tools

And of course you can always access real-time test results for every one of your products on our floor.

Thermal stress testing, including near instantaneous changes from -40°C to +40°C and back again.

3D Automatic Optical Inspection (AOI)

- 5 VeriFast™ benches
- 100% board verification
- 100% data archived and customer accessible



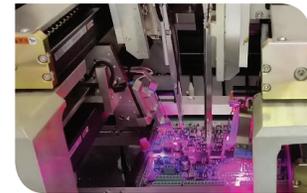
3D AOI machine.

Washing

- Automatic Cleaning
- Automatic Cleanliness Measurement

Flying Probe

- 4 Head Probes
- 1000 Measurements per minute
- Fast Development: 48 hours to develop test sequence for flying probe



Flying probe in action.

Other Equipment

- Wave Solder Lines: RoHS & Lead
- Temperature Chambers
- Repair Stations
- Shear Testing
- X-ray Verification



SMT's lead-free wave soldering machinery.



Smart Assembly

Our PCBAs & Box Builds

Circuit Board Assembly

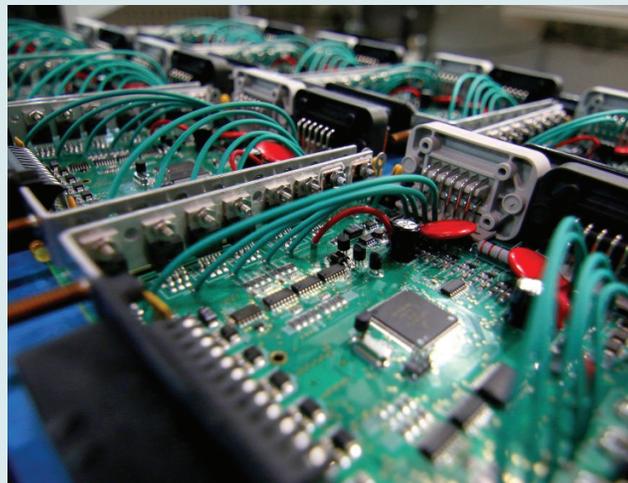
- Placement Qualification: 01005; 35 micron; BGA 0.20mm pitch.
- Package on package (POP) commonly used.
- Simple to complex configurations; for example, more than 7200 placements on one PCBA.
- Flexible production runs: prototype, low, medium, or high volume capabilities.

Types of PCBAs Offered

- Aluminum
- Ceramic
- Flex Circuit
- Rigid Flex
- Standard PCBs

Turnkey, Box Build Services

The full computerization of our production, assembly, and inspection allows us to provide the highest quality finished products, with fast, dependable delivery times.



Smart Solutions

Advanced PCBA Solutions Delivered In As Fast As 2 to 15 Days*

- Shorten Your Time To Market
- Remotely Monitor All WIP in Real-Time
- Maintain 100% Traceability of All Components
- Remote Management



Who is SMT Hautes Technologies?

We're an EMS specializing in moderate-to-highly complex PCBAs requiring very high quality standards and short manufacturing lead times. To meet these goals, we:

- Aggressively automate our systems, continually reducing the amount of human intervention.
- Optimize our floor utilization so we can run at 30% to 40% capacity for maximum flexibility and short turnaround times.
- Leverage a paperless shop floor (Smart Floor) while capturing all process and test data that, in turn, we make available to you in real-time via our cloud-based Customer Portal.
- Reinvest 5% of our revenues in R&D, with special emphasis on developing innovative test equipment for the verification of pioneering PCBA designs.
- Continuously improve our offerings by investing in leading-edge machinery to delivery ever more advanced and powerful PCBAs.

SMT is proactively looking for innovative opportunities to improve all of our EMS processes. Our ideal customer values a long-term EMS partner who is committed to offering technology that is ahead of the market.



Stéphane Deschesnes,
SMT's founder, CEO and owner.

Capability Overview

SMT, fully computerized	4 lines, over 100 workstations
Component Placements	18 million/day
Placement Qualifications	01005; 35 micron; BGA 0.20mm pitch
POP (package-on-package)	Yes
PCB Types	All types: aluminum, ceramic, etc.
PCBA Layers	Up to 26 layers
Inspection	100% 3D AOI
DFM	Using Mentor Graphics®
Traceability	100%; trace all your components through the entire process flow
PCBA Experience	Since 2001
Plant Utilization	30% to 40%, offering excellent production & turnaround flexibility

Available Services

- Full Turnkey Design
- PCB Layout
- Design for Manufacturing (DFM)
- Design for Testing (DFT)
- PCB Assembly
- Box Build
- Test Station Development
- Firmware Development
- Debugging

Industries Served

- Industrial Controls & Monitoring
- Mining
- Medical Devices
- Entertainment/Gaming
- Aerospace
- Test Equipment
- Telecom
- Military
- Transportation

*After receipt of all materials; ask your Sales Rep for complete details.

2001: Founded by Stéphane Deschesnes, current CEO and owner

2004: RoHS compliant

2004: Certified to ISO 9001

2008: Six Sigma implemented

2010: Shop floor becomes paperless

2010: First ceramic PCBA

Smart Floor

Why Partner With SMT?

Fast PCBA Deliveries

2 to 15 days after receipt of all materials.

100% Traceability & Real-Time Performance Monitoring

All components are barcoded and all materials and processes (WIP) can be tracked in real-time by you via SMT's cloud-based Customer Portal. SMT also has the ability to remotely manage all aspects of production.

Aggressive Investments In Leading-Edge Manufacturing & Verification Technologies

- PCBAs with up to 26 layers
- Specialty printed circuit boards, such as ceramic PCBAs (wire bonding available)
- 3D inspection machines (an North America exclusive)

Quality Assurance Systems

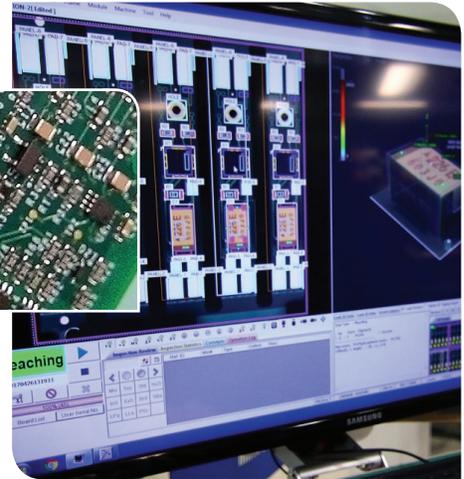
- Yields consistently 99%+
- Six SIGMA since 2008
- 100% incoming inspections using IQC
- ISO 9001-2008
- ITAR, Control Goods Certified
- Annual Bureau Veritas (BV) Certification
- Annual TÜV audits for QSM
- Internal Audits
- Customer Surveys



We're competitive with offshore EMS, with much shorter lead times.



100% bar coding of all components.



3D Automatic Optical Inspection (AOI).

Fully Integrated Manufacturing

Take advantage of our carefully qualified supply chain, 100% incoming inspections, fully computerized inventory management, automated PCB and housing assembly, automated test systems, and full box build capabilities. All with an emphasis on limited human intervention for outstanding quality and repeatability.

Excellent First-Pass Yields & Deliveries

We've applied the same rigorous principles and manufacturing techniques used in the avionics industry to deliver first-pass yields that typically exceed 99%.

Very Competitive Pricing

SMT specializes in developing our own in-circuit and functional test systems to meet your specific PCBA needs. These advanced techniques, and highly advantageous exchange rates, make us very competitive compared to suppliers in emerging markets — but with faster turnarounds and higher quality.

**Based on projects built from in-stock inventory; ask your Sales Rep for complete details.*

2010: 100% traceability of all components

2011: 01005 placement

2012: DFM using Mentor Graphics®

2013: ITAR, Control Goods Certified

2017: Int'l sales with local support; R&D engineering/ Hong Kong

See SMT Action Videos

www.smttechnology.com



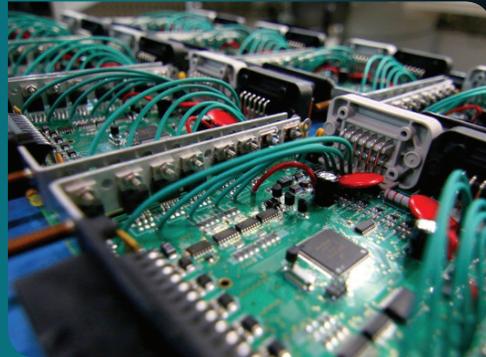
Capable of 1000 measurement a minute, only a video can do our flying probe justice.



See our pick-and-place machines in action.



Watch a short video of our high speed, highly accurate placement of components.



www.smttechnology.com

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