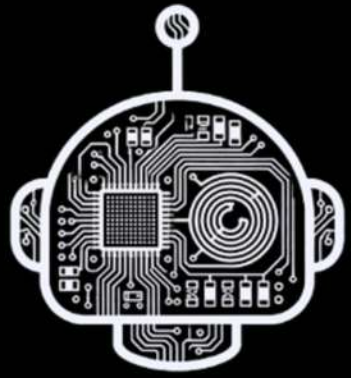


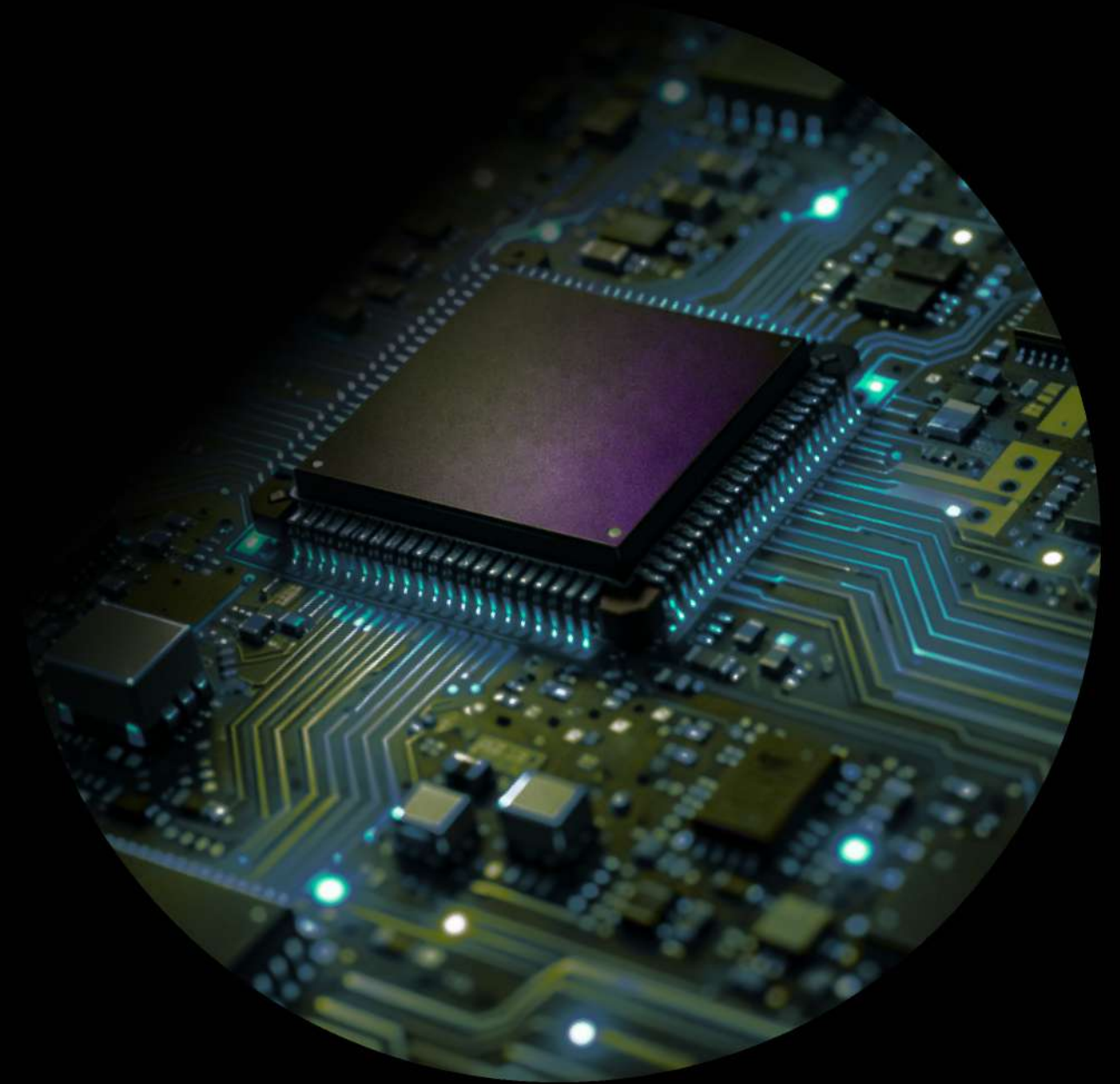


PCBTECH.AI

PCB Global Physical AI
Supply Chain

Since 2009

AI-POWERED ELECTRONICS MANUFACTURING



About Us

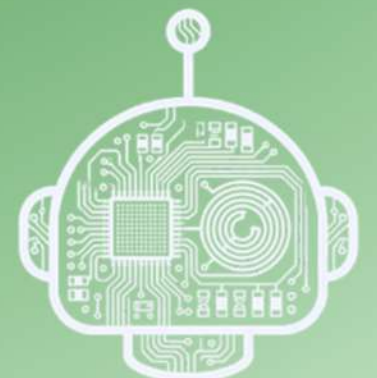
PCBTECH.AI is a U.S.-based electronics hardware supply-chain and PCB technology partner built to help companies move faster in the era of complex hardware. Since 2009, we've operated as an extension of our clients' engineering, manufacturing, and procurement teams—so they can focus on their competitive advantage: IP, AI innovation, product development, and market expansion. By absorbing the complexity of global hardware execution, we reduce risk, accelerate timelines, and give innovators the ability to scale with confidence.

Our global footprint spans the United States, Philippines, Poland, India, Malaysia, China, Taiwan and Vietnam. This network was intentionally designed to provide resilience, flexibility, and speed. It enables our partners to diversify production, access specialized regional capabilities, and maintain continuity in an increasingly unpredictable geopolitical and supply chain environment. We bridge the gap between vision and product. As Physical AI transforms industries, we provide the infrastructure, expertise, and global capacity required to turn breakthrough ideas into world-class products.

PCBTECH.AI

Our Mission

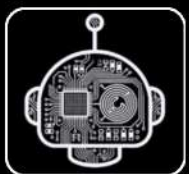
Deliver engineering innovation and AI-powered electronics manufacturing that strengthens and scales global operations to help companies build better and execute faster.



PCBTECH.AI



End to end manufacturing in USA



24-hour quick turns in USA



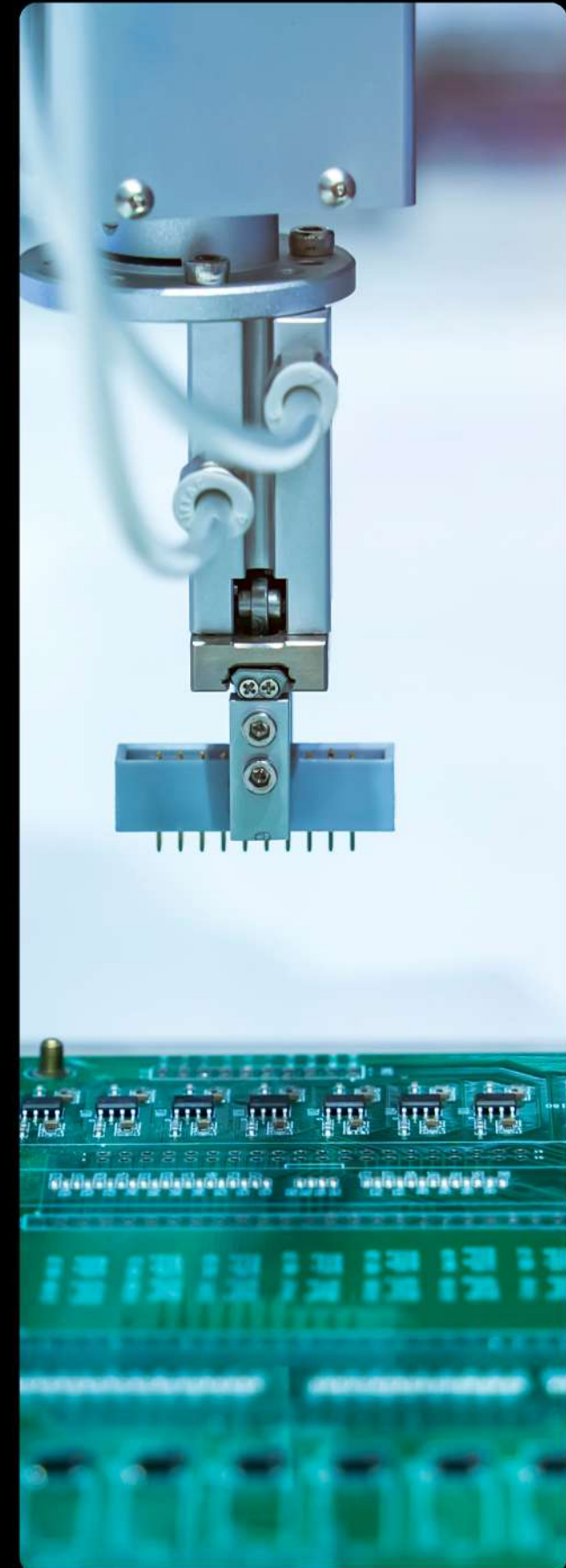
Same-day PCBs, assembly,
cables, rework



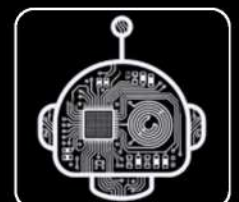
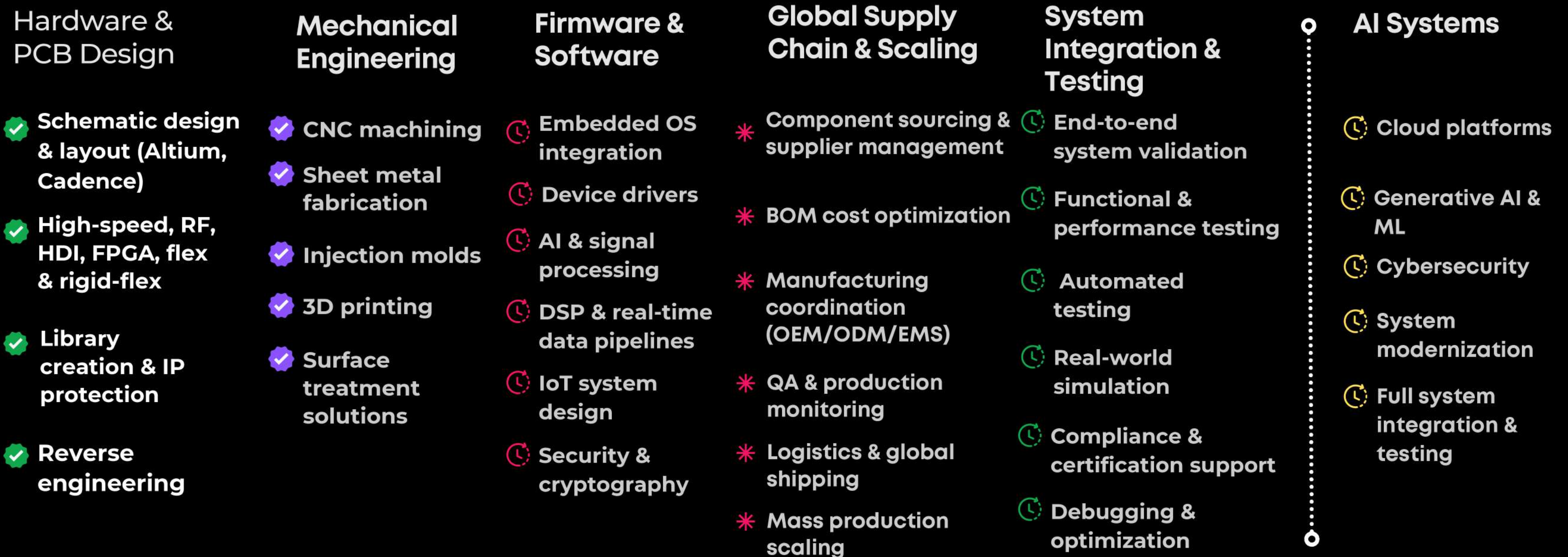
DFM & DFT, risk analysis,
process development,
redesign, cost improvement

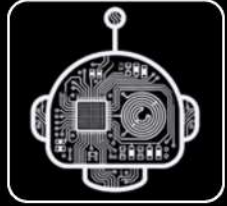


ITAR, AS9100, DDTC Approved



End-to-End Product Development





Human-first. USA-based. We become your extended manufacturing operations and procurement arm—so you can focus on IP, AI innovation, and growth.



Telecom

Semiconductor

Robotics

Networking

Autonomous Vehicles

Life Sciences

Aerospace & Defense

Industrial Systems

Data Centers

Energy & Battery

amazon



LUCID

AglaiaSense



Amphenol



BD

We Deliver

End-to-End Product Realization

Global supply-chain orchestration & mass-production scaling

PCB design, fabrication & assembly

Mechanical engineering, CNC machining, injection molding

Firmware, embedded systems, AI integration

System-level testing

Seamless Scaling: prototypes to mass production (domestic + offshore)

No minimum or maximum quantity

Resilient supply chains engineered
for speed and certainty.

5-Day

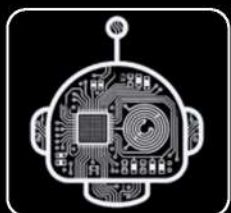
Asia Prototype
Turnaround

8

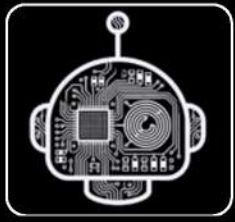
Global
Manufacturing
Regions

50%

Cost Reduction via
Offshore
Manufacturing



Solutions across USA, Vietnam,
Philippines, India, Poland, China,
Taiwan and Malaysia



PCB Fabrication

PRODUCTS

- Rigid
- Flex
- Rigid-Flex
- Hybrid RF / Digital
- Back Planes / ATE
- Metal Core
- Aluminum Backed PCB
- HDI

Capacity

- Quick-Turn Prototypes & Production
- Prototype as quick as 24 hours
- 5 days Standard lead times
- High Volume Production / Supply Chain Management
- 2 To 48 Layers
- 30:1 Drill Aspect Ratio
- Maximum Panel Size - 28" x 42"
- BBV's & Micro Vias
- Via in Pad with Fill Options
- Conductive
- Non Conductive
- Copper Plug

Surface Finish Options

- ENIG - Electroless Nickel Immersion Gold
- HASL - Hot Air Solder Leveling
- OSP - Organic Solderability Preservative
- Hard & Soft Gold
- Immersion Silver
- Selective Finishes
- ENEPIG

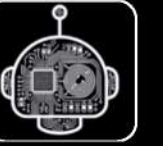
Base Material

- EMC line
- High Frequency RF Options
- High Temperature Options
- Isola Laminates
- Megtron 6/6G/7/7G
- Ventec Laminates
- Copper Core
- Aluminum Core
- Rogers 3000, 4000, 5000,6000
- Taconic & Arlon
- Polyimide & GETEK

Specs & Tolerances

- Outerlayer Trace/Space - .002" / .002"
- Innerlayer Trace/Space = .002"/.002"
- Minimum Drilled Hole - .003"
- Standard Drilled Hole - .010"
- Drill Aspect Ratio - 20 To 1
- Minimum Pad Size - .006"
- Minimum Feature to Edge - .010"
- Minimum Core Thickness - .002"
- Controlled Impedance Tolerance - 5%
- Controlled Depth Drilling - YES
- Sequential Lamination - YES

Back Planes



Fast Prototyping & NPI

- Quick-turn backplanes in under 10 days

Large-Format Backplanes

- Supports very large boards up to 28" x 42"
- Perfect for data centers, telecom, networking, and compute systems

Thick & Robust Board Builds

- Board thickness up to 0.375"
- Ultra-high aspect ratios up to 30:1
- Handles high-power, high-layer-count, and mechanically demanding designs

Advanced HDI Structures

- Board thickness up to 0.375"
- Ultra-high aspect ratios up to 30:1
- Handles high-power, high-layer-count, and mechanically demanding designs

Advanced HDI Structures

- Blind, buried, and stacked vias
- Multi-lamination HDI for compact, high-performance systems

VIPPO for Clean Signal Integrity

- Via-in-pad plated over (VIPPO)
- Improves thermal performance and reduces signal loss

Backdrill for High-Speed Performance

- Removes stubs to clean up high-speed signals
- Essential for networking, RF, and high-frequency designs

Specialized Plating Options

- Complex waveform plating for uniform copper distribution
- Supports demanding power and RF applications

High-Speed / High-Frequency Ready

- Engineered for RF, microwave, and high-speed digital applications
- Low-loss materials and structures for clean signal integrity

High-Density Rigid & Rigid-Flex

- Complex rigid and rigid-flex architectures
- Ideal for compact, lightweight, or vibration-sensitive systems
- Supports dense interconnects and multi-layer HDI structures

High-Performance Material & Finishes

- Lead-free and ultra-low-loss materials
- ENIG, ENEPIG, Immersion Silver, Immersion Gold
- Full-body hard gold, selective hard gold, wire-bondable gold
- HASL, OSP-HT, edge plating, fused tin-lead
- Supports everything from consumer to aerospace requirements
- PTFE, CLTE, ceramic, polyimide, FR-4
- High-temperature and high-frequency laminate families

Advanced Lamination & Sub-Assemblies

- Sequential lamination for multi-stage builds
- Supports extremely dense, multi-material, multi-layer backplanes
 - Hybrid Laminate Stacks Mixes RF + digital materials in one board
 - Heavy copper builds for high-current, high-power designs
 - Ideal for power electronics, EV systems, industrial controls

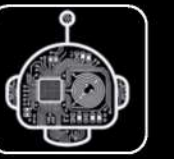
Precision Registration & Class III Quality

- High-density registration for tight-tolerance designs
- Meets IPC Class III for mission-critical reliability

Advanced Cavity & Coin Technologies

- Recessed cavities, RF cavities, and coin inserts for thermal + RF performance
- Supports PTFE, ceramic, and other low-loss materials

PCB Assembly



Flexible Assembly Models

- PCB assembly consignment or turnkey
- Supports prototype, NPI, and production volumes

SMT, PTH & Precision Soldering

- High-speed SMT
- Through-hole (PTH)
- Selective solder for precision joints

System-Level Integration

- Full system integration and validation
- Supports complex electromechanical assemblies

Engineering-Driven Manufacturing

- DFM / DFT for manufacturability & testability
- Full process development for stable, repeatable builds

Protective Coatings & Traceability

- Conformal coating for environmental protection
- Serialization & QR tracking for full traceability

Packaging, Logistics & Fulfillment

- Packaging, labeling, and drop-shipments
- Materials management & warehousing

Global Component Procurement

- Worldwide sourcing with AVL control
- Cost-optimized BOM strategies
- Integrated custom MRP system

Comprehensive Testing

- In-circuit test (ICT)
- Functional test (FCT)
- Reliability and stress testing

After-Market Support

- Repair, refurbishment, and lifecycle service

Box Build Assembly

Custom & Standard Enclosures

- Packaging, labeling, testing, software installation
- True end-to-end system integration

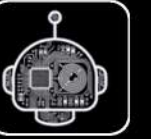
- Small and large form factors
- Metal, plastic, and hybrid enclosure options

Complete Life-Cycle PCBA Solutions

- From bare PCB → assembly → test → system integration → logistics → after-market



BGA Rework



Same-Day BGA Rework & Reball

- Supports low- or high-volume projects
- Same-day turnaround for urgent repairs

Broad Device Support

- BGA and QFN rework
- Debug, reball, and repair

Ultra-Fine Pitch Capability

- Smallest BGA pitch: 0.007" (0.178 mm)
- Micro-modifications for signals under BGA
- Up to 25 jumper wires under BGA reball

Industry-Leading Rework Equipment

- 3× SRT-Summit automated rework systems
- Split-image alignment + zero-force pull
- Nicolet X-Ray with 45° solder-joint rotation

Advanced SMT Rework

- Low or high volume BGA rework or reball project, same day turn
- Smallest BGA reworked is 0.007" (0.178 mm) pitch with micro modifications for signals under BGA, up to 25 jumper wires under BGA re-ball in house
- BGA/QFN rework, debug,
- We have 3 SRT-Summit automatic BGA rework system with split image and zero force pull as well as a Nicolet X-Ray inspection system with 45 degree solder joints rotation.

Repair & Refurbishment

- RMA repair
- Component-level refurbishment

System Integration & Test

Reliability & Stress Testing

- ESS / Burn-in (BIT), RF, ICT
- Vibration & reliability testing

Core System Testing

- System-level validation
- Reliability testing
- QA/QC processes

Functional & RF Test Coverage

- AOI, RF, and functional testing
- Supports high-speed and high-complexity systems

Advanced Inspection & Metrology

- In-house 3D X-ray
- CMM (coordinate measuring)
- XRF (X-ray fluorescence)
- AXI (automated X-ray inspection)

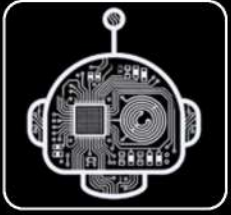
Test Engineering Development

- Test program development
- Boundary scan development
- Custom fixture design & manufacturing

Electrical Test Coverage

- ICT (In-Circuit Test)
- FPT (Flying Probe Test)
- FCT (Functional Circuit Test)





CABLE ASSEMBLY, INTERCONNECT SYSTEM DESIGN

Design and manufacturing services for a wide range of cost-effective, high performance interconnect solution cable assemblies and wire harnesses.

- ✓ Full design + manufacturing for cable assemblies and wire harnesses
- ✓ Built for cost-efficiency, reliability, and high performance
- ✓ Supports complex interconnect architectures

Medical-Grade Cable Systems (ISO 13485)

- Designed to solve reliability and EMI challenges
- Built for regulated medical environments
- Precision manufacturing with compliance focus

Industrial & Energy Cable Solutions

- Engineered for industrial automation, energy systems, and field deployments
- High-durability materials and construction

Defense & Aerospace Cable Assemblies (AS9100)

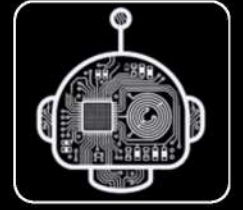
- Ruggedized subsystems for mission-critical applications
- Built to aerospace and defense quality standards
- Supports harsh-environment performance

Complex Cable Harness Capabilities

- Multi-branch, high-density harnesses
- Supports large-scale systems and electromechanical integration
- Designed for reliability under demanding conditions



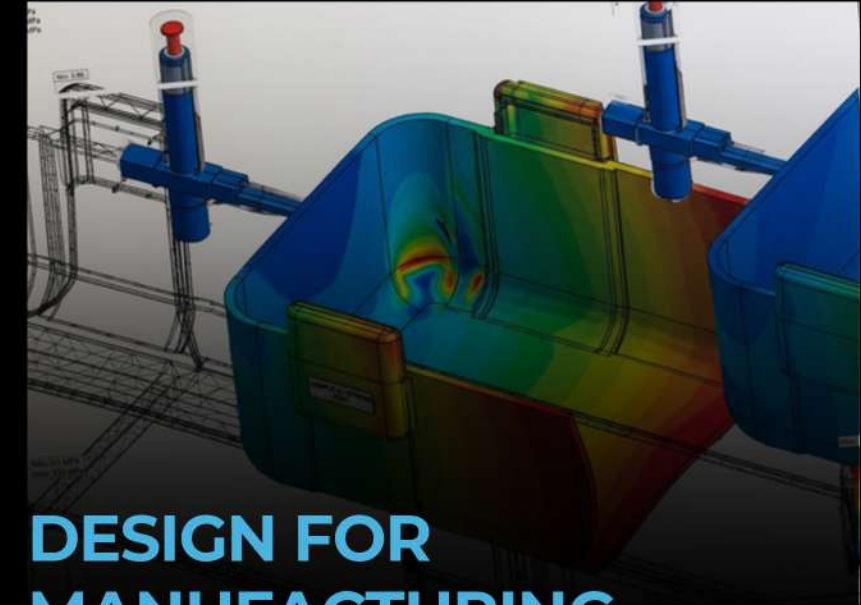
PLASTIC INJECTION MOLDING



**TOOLING AND MOLD
SOLUTIONS**



RESIN EXPERTISE



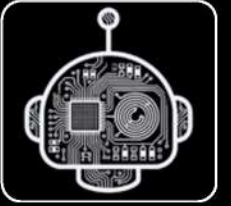
**DESIGN FOR
MANUFACTURING**

PCBTECH.AI engineers bring deep expertise across a wide range of resins—from common polypropylene to advanced engineered materials like PEEK and Polyetherimide. We guide customers through resin selection based on cosmetic requirements, mechanical strength, product life expectancy, and compliance.

**High-mix, low-volume precision
molding meeting stringent
requirements**

Unique technology:
In mold labelling

Our tooling, process, quality, and resin engineers work in parallel using a scientific molding approach to create cost-effective, highly reliable manufacturing solutions. Mold-flow analysis is used to evaluate temperature, fill rate, and pressure, ensuring optimal part quality.



MECHANICAL SYSTEMS

Design and Manufacturing of electromechanical assemblies

PCB Tech provides precision machining, enclosure metal fabrication, complex welding, and electronics manufacturing services. We assemble and test complex electromechanical systems for leading capital equipment suppliers.

Our latest technologies includes 5-axis machining, multi-function laser/punch systems, robotic welding & automated material handling.



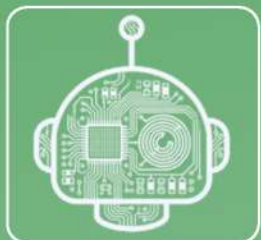
Our in-house engineering and machining teams work alongside tool makers in the U.S. and Asia to design and deliver hundreds of Class 102, 103, and 104 steel and aluminum tools each year.

Through proactive tool management and maintenance, we maximize cost efficiency, performance, and tool life—ensuring consistent quality and reliable production at scale.

Value Add technology partners



Company certifications



Physical AI Expertise

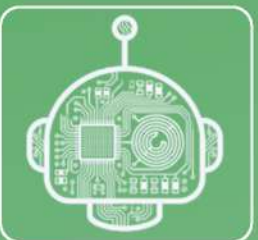


Investing & tariff strategies



Subject Matter Experts:

- AI optimization
- Autonomous vehicles
- Camera Design
- Data Center
- Dual Purpose Tech
- Robotics
- Safety & Security
- Sensors



Leadership



Jennie Nguyen

Founder, Entrepreneur, Tech Investor

Based in Silicon Valley, Jennie built PCB TECH AI into a global supply chain integrator.

She bridges the technical rigor of Silicon Valley with real-world global logistics, leading the shift toward regionalized manufacturing and the rising role of AI in hardware manufacturing.

She also consults on supply chain best practices, start ups, and is a subject matter expert in multiple areas. In her spare time, she travels the world to discover food, fashion and friends.



Leslie Kanthan, PhD

Leslie, CEO of TurinTech AI and a leading voice in AI optimization from UCL, provides the strategic framework that pushes AI integration beyond basic deployment and into measurable, performance-driven optimization.

He is a foodie and dad to Georgi, a Border Collie with green eyes.

[Jennie Nguyen](#)



[Leslie Kanthan, PhD](#)



PCBTECH.AI

**Let's Build Your Next
Intelligent System**

1.888.488.0777

hello@pcbtech.ai