

Accelerating Innovative Solutions

**A core engineering,
full turn-key and
task-oriented
domestic
outsourcing
solutions company**

**CORE
SOURCE
TECHNOLOGIES, LLC**

Mechanical Engineering

Capabilities

- High Performance Engineering in Emerging Technologies
- Electronic Packaging in Sheet Metal, Injected Plastics and Castings
- 2D/3D Mechanical Design / Drafting
- Thermal, Structural, and Modal Analysis
- EMI Shielding
- Flex Circuit and Cable Design
- Complete Documentation

Development Tools

- Pro/Engineer 2001 / Wildfire2
- AutoCAD
- SolidWorks
- Solid Edge
- Pro/MECHANICA
- CFdesign

PCB Design

Capabilities

- PCB Layout
 - Digital, Analog, RF, High Voltage
 - Controlled Impedance and Matched Lengths
 - High Density, Microvias, Blind/Buried Vias
 - Buried Capacitance and Resistance
 - Flex and Rigid-Flex Circuits
 - Power Supplies, Heavy Copper
 - Mechanical Solid Model Interface, to check Component "Z" Axis Interference
 - Complete Documentation and Data Files to match your standards
- Constraint Management
- Library Development and Maintenance
- Schematic Capture
- Database Translations

- Comprehensive Checking and Validation
- Fabrication and Assembly Consulting
- Pre-prototype through Volume Production

Development Tools

PCB Layout

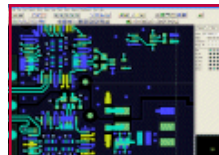
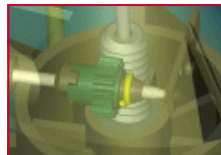
- Cadence Allegro
- Mentor Expedition Pinnacle Layout
- PADS Layout
- Netlist Interface (with most front-end tools)

Auto-Routing

- Cadence SPECCTRA (Allegro Router)
- Mentor VeriBest Autorouter
- PADS Blazerouter

Schematic Capture

- OrCAD Capture
- Cadence ConceptHDL
- Mentor DxDesigner



Hardware Engineering

Electrical Design

- Digital Design
- Analog Design
- RF Design
- Control Circuits
- Power Supply Design - DC to DC
- Board Level Design Implementation – Schematic Capture, Component Selection, PCB Layout Guidance, Placement, Routing, and Engineering Analysis
- Design for Manufacturability – High Volume

Engineering Analysis

- Power Analysis
- MTBF / Reliability Analysis
- System Architecture Design Engineering Analysis

Development Tools

- Cadence Allegro
- PADS
- Altium
- Mentor Expedition

Model Shop & Prototyping

Electrical Support

- PCB Assembly and Inspection
- PCB Rework and Change Management
- Electrical Debug and Testing
- Rework and Repair Analysis
- Test Fixture Development and Fabrication
- Cable Design & Fabrication
- Reverse Engineering Component Research and Selection

DFX Services

- BOM Analysis
- Top Level and Sub-assembly Build Evaluation
- Fabrication and Assembly

Mechanical Support

- Prototype Fabrication, Assembly, Test, & Rework
- QA Inspections & Reports
- DFX (Manufacturing, Fabrication, Test, & Cost)

General Services

- BOM Generation, Purchasing, Receiving, & Kitting
- Prototype Mainframe Assembly
- Regulatory Compliance Support
- Assembly Aid Design & Fabrication

Full Turnkey and Task-Oriented Requirements

Supply Chain Management

Manufacturing Consulting

- Skill Set Development
- Problem Resolution
- DFMA Analysis: Product - Process - Supplier Interfaces

Supply Chain Development

- Selection, Audits
- Negotiations
- Contract Development

Component Selection

- Part Analysis (research, validate, obsolescence check, component alternatives)
- Component Availability Check
- Risk Mitigation
- Manufacturer Identification (identify those who can meet schedule)

Procurement and Supply Chain Strategy and Support (prototype through production)

- Planning and Forecasting (based on client's schedule and need)
- Supply Chain Management
- Logistics and Distribution
- Lean Manufacturing Techniques
- Just in Time (JIT) Inventory Practices
- Best Practices and/or Six Sigma Quality Control

Price Negotiation

- Market Introductions with Aggressive Unit Cost Analyses
- Component Alternatives and Price Negotiation
- Optimized Bids and Purchases via Trends and Seasonal Cycles

Kitting

- Supplier Identification and Negotiation
- Collaborative Relationship Management (coordinate kitting with client, contract manufacturers, or both)
- Coordinate schedules to ensure on time delivery

Cost Tracking

- Plan, Forecast, and Track Costs
- Project Actual to Plan Cost Analysis



Regulatory Compliance

Capabilities

- Safety - UL 60950, CSA - C22.2 Certification Support
- CE Mark Certification Support
- EMC Testing Support
- EST (Environmental Simulation Testing) Support
- Telecom - FCC Certification Support
- NEBS Consulting
- Project Management
- Complete Test Documentation Deliverables
- Risk Management

Compliance Partners

MET Laboratories, Inc.
914 W. Patapsco Ave.
Baltimore, MD 21230

Technical Publications

Technical Publications

- User Guides
- Operator Guides
- Installation Guides
- Maintenance and Service Manuals
- Instructions, Bulletins, and Notices
- Product and Service Brochures

System Documentation

- Interface Control Documents (ICDs)
- Technical Design Descriptions (TDDs)
- Command Reference Documents

Support Services

- Editing
- Templates
- Style Guides
- Quality Control

Internal Business Documentation

- Standard Operating Procedures (SOPs)
- Policies
- IT and Workflow Processes
- Disaster Recovery and Contingency Plans

Development Tools

- Word, Powerpoint, FrameMaker
- Dreamweaver, HTML
- Acrobat
- Visio
- Paint Shop Pro
- Photoshop Elements
- Illustrator



Benefits - Savings

Our services mean savings to your project through reliable and efficient outsourcing — a value proposition with proven product development savings of over 25 percent to our customers, while reducing in-house operational costs and improving overall quality.

Our Facilities

Core Source Technologies is located in Germantown, Maryland. Our facility includes approximately 7,000 square feet. The two primary activity areas include engineering and model shop, which provides seamless engineering solutions for our customers' product development needs.

Our Team

The Core Source Team includes employees, contractors, and consultants who average 20 years experience in their respective fields of expertise:

- Mechanical Engineering
- Hardware Engineering
- PCB Design and Development
- Supply Chain Management
- Prototype Development
- Regulatory Compliance
- Manufacturing Consulting
- Technical Publications
- Project Management

Key Market Sectors

- Consumer Products
- Government and Defense
- Medical
- Security
- Telecommunications
- Transportation
- Green Technologies

About Us

We are a US-based core engineering firm, specializing in partial and full turn-key outsourcing solutions. Our business focus is on accelerating product development timelines through innovation, experience, and cost-effective solutions. As a domestic engineering solutions provider, we enable organizations to manage the peaks and valleys of today's competitive business environment.

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www.coresourcetek.com
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