



synergetics

Where precision meets innovation.

Synergetics is a leading EMS provider in California.

Since our establishment in 1993, we have been at the forefront of managing electronic products from NPI through to final production.

Services



Box Build Assembly

We employ advanced design and manufacturing expertise and meticulous attention to detail to deliver a fully functional and market-ready product.



PCB Assembly

Specializing in SMT, THT and lead or lead-free assembly processes. We utilize state-of-the-art equipment and over 30 years of experience, resulting in high-quality PCB assemblies.



Cable & Harness Assembly

Comprehensive cable and harness assembly services, with expertise that ensures reliable connections and seamless integration within electronic systems, enhancing overall performance and durability.

Design & Engineering

Our design and engineering services encompass a broad range of technical disciplines, including electrical engineering, mechanical engineering, and PCB design. From initial concept to final prototype, we leverage our expertise to deliver designs optimized for manufacturing and performance.

Expert Disciplines and Skills: Electrical engineering, mechanical engineering, PCB layout design, schematic design, product prototyping, DFM/DFA/DFT review.

Design and engineering services include:

PCB Layout Design

Utilizing industry-standard software and specializing in complexity, we design the layout of printed circuit boards, optimizing component placement and routing for efficient signal flow and manufacturability.

Schematic Design

Our engineers create detailed schematics outlining the electrical connections and components of the electronic system, ensuring accuracy and functionality.

Firmware and Hardware Design

Leveraging expertise in both firmware and hardware design to develop integrated solutions that optimize performance, functionality, and compatibility in electronic systems.

Product Prototyping

Prototyping involves building early-stage versions of the product to test functionality, performance, and user experience before full-scale production. Rapid prototyping techniques may be used for quick iteration and validation.

Design for Manufacturability (DFM) and Design for Assembly (DFA) Review

We review designs to ensure they are optimized for manufacturing and assembly processes, minimizing rework costs and time-to-market.

Design for Testability (DFT) Review

Ensuring that products are designed with testing in mind, facilitating efficient and effective testing during production and after deployment.



Manufacturing

Our manufacturing services combine technical skills in box-build assembly, PCB assembly, and cable and harness assembly with expertise in complex component sourcing and material management.

With efficient inventory control, we ensure seamless production processes and high-quality results.

Manufacturing services includes:

PCB Assembly (SMT and THT)

Our facility handles surface mount technology (SMT) and through-hole technology (THT) assembly processes, including component placement, soldering, and inspection.

Cable and Harness Assembly

Crafting and integrating wiring assemblies to ensure seamless connectivity and optimal performance in electronic systems.

Box Build Assembly

Integrating PCBs, components, wiring, and enclosures into finished electronic products, ensuring proper fit, functionality, and aesthetics.

Component Sourcing and Procurement

Managing the sourcing and procurement of electronic components and materials from reputable suppliers to ensure quality and reliability.



Material Management and Inventory Control

Managing inventory levels and material flow to optimize production efficiency and minimize lead times.

Testing and Quality Assurance Services, including:

Functional Testing

Ensuring that each product performs as intended and meets specified requirements under normal operating conditions.

In-Circuit Testing (ICT)

Testing individual components and connections on PCBs to detect defects or faults before assembly.

Automated Optical Inspection (AOI)

Utilizing automated systems to inspect PCBs for defects, such as missing components, misalignment, or soldering issues.

X-Ray Inspection

Non-destructive testing method used to inspect internal features of PCBs, detecting defects such as hidden solder joints or component placement errors.

Environmental Testing

Subjecting products to various environmental conditions (e.g., temperature, humidity, vibration) to assess performance and reliability in real-world scenarios.

Service and Repair

We provide end-to-end lifecycle management of electronic products and PCBs, including timely diagnostics, repairs and maintenance to keep your devices or equipment optimized in the market.

Our skilled technicians and quality processes minimize downtime and maximize product optimization.

Expert Disciplines and Skills: Electronics troubleshooting, component-level repair, diagnostic testing, preventative maintenance, advanced electronics technical expertise (electrical engineering, systems diagnostics, hardware) and component supply and end-of-life knowledge.

In addition to general servicing and maintenance, we offer product enhancement and upgrade services, including:

Product Redesign and Optimization

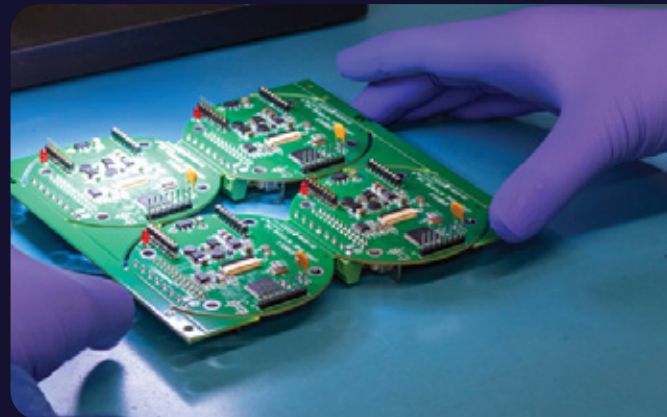
Reviewing existing products to identify opportunities for improvement in performance, reliability, cost-efficiency, or manufacturability, and implementing redesigns as needed.

Component Replacement and Upgrades

Offering services to replace outdated or obsolete components with newer, more advanced alternatives to extend product lifespan and enhance performance.

Firmware and Software Updates

Providing updates and patches to firmware or software components of electronic products to address bugs, add new features, or improve compatibility.



Value Add Services

Supply Chain Management

Managing the end-to-end supply chain, from component procurement to final product delivery, to ensure efficiency, cost-effectiveness, and timely fulfillment.

Regulatory Compliance Support

Providing expertise and guidance on regulatory requirements and standards (e.g., RoHS, REACH, FCC) to ensure product compliance and market acceptance.

Product Lifecycle Management

Supporting products throughout their lifecycle, from initial concept to end-of-life management, including updates, revisions, and obsolescence planning.

Packaging, Transport and Logistics

Offering comprehensive packaging solutions and efficient logistics services to ensure safe and timely distribution of products to the market worldwide.

Capabilities



Product optimization

We optimize your product for performance, manufacturability, and cost-effectiveness while ensuring long-term sustainability by proactively identifying components approaching obsolescence. Our collaborative approach enhances design efficiency, streamlines production processes, and anticipates future challenges, safeguarding your product's lifespan and market competitiveness.

Advanced manufacturing disciplines

Our advanced manufacturing disciplines encompass cutting-edge techniques such as surface mount technology (SMT), through-hole technology (THT), and precision machining. Leveraging these capabilities, we ensure the highest quality and efficiency in every stage of production, from PCB assembly to box build assembly, meeting the most stringent industry standards with precision and expertise.

Testing & quality assurance

Our testing and quality assurance services leverage technical skills in quality engineering, electrical and mechanical testing, and a range of testing methodologies. From initial inspection to final validation, we ensure that every product meets rigorous quality standards.

New product introduction

Our NPI services leverage technical expertise in early-stage consultation, feasibility assessments, and rapid prototyping to accelerate time-to-market for new products. With a focus on design integrity and optimization, we help customers bring innovative products to market efficiently.

Supply chain & logistics

Our supply chain and logistics services draw on technical skills in supply chain management, logistics management, and component sourcing to optimize supply chain processes. With efficient material management and inventory control, we ensure reliable and timely delivery of components and materials.

Multi-industry expertise

With our extensive experience across diverse industries, our comprehensive understanding of regulatory requirements, product certifications, and market dynamics results in high-quality, compliant, and robust solutions that drive success across various sectors.

The Synergetics Way

Customer-centric approach

At our core, we embody a relentless pursuit of excellence, driven by a commitment to prioritize our customers at every juncture of the product journey.

By placing their needs and satisfaction at the forefront, we ensure that each stage of our process is meticulously tailored to exceed their expectations.

Reliable deliverables

With steadfast precision, we adhere to predetermined timelines and milestones with unwavering commitment, ensuring that projects progress seamlessly and products reach the market punctually as planned.

Partnership mentality

We approach our customers as strategic partners rather than just suppliers. Alignment with customer objectives, proactive guidance, and value-added services enable them achieve goals and succeed in their markets.

Quality bring trust

At the heart of our operations lies an unwavering commitment to excellence, where we seamlessly integrate high standards into every facet of our business.

By prioritizing quality as a foundational element of our approach, we cultivate trust and inspire lasting loyalty among our clients.

Tailored solutions

Acknowledging the diverse demands of different industries and the rapid pace of technological evolution, our operations remain adaptable.

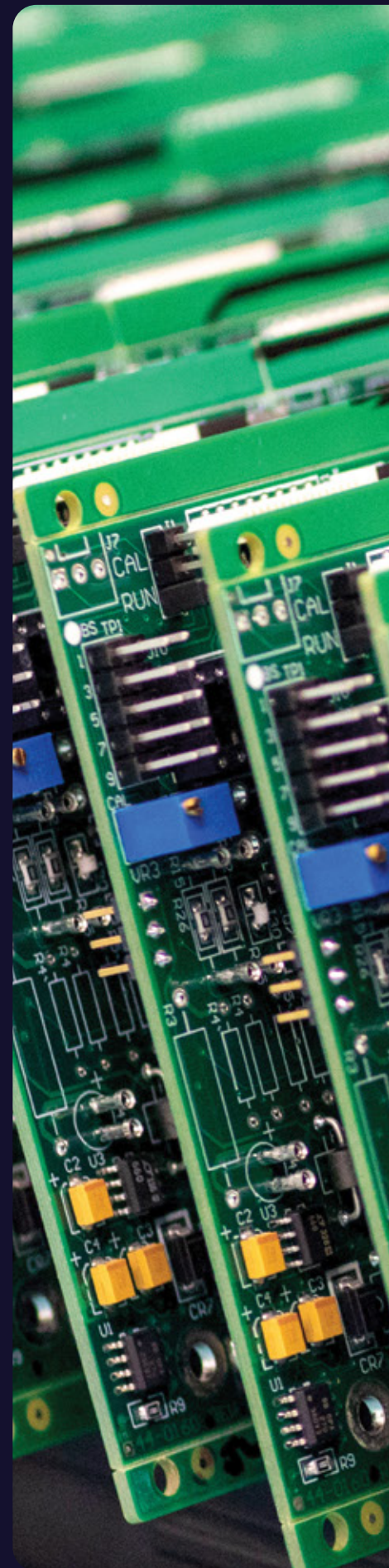
We adeptly customize our approach to address the unique requirements of each customer, ensuring that our solutions effectively meet their specific needs and challenges.

Accreditations

We pride ourselves in a commitment to quality and reliability. We deliver this through our rigorous quality control processes, adherence to industry standards and regulations, and a 30+ year track record of delivering products that meet or exceed customer expectations in terms of performance, durability, and reliability.

Our accreditations include:

- ✓ ISO 9001:2015
- ✓ ISO 13485:2016
- ✓ ITAR
- ✓ IPC



Solving Challenges Since 1993

All too often we see companies come to us after anticipating one thing with their current EMS, only to find themselves experiencing something different. This discrepancy between expectation and reality can lead to frustration and dissatisfaction.

By addressing these discrepancies head-on and ensuring clarity and consistency in our offerings, we aim to build trust and loyalty with every customer interaction. See below for just a few examples of common challenges we pride ourselves in eliminating for our customers.

Complexity and flexibility

Advanced technology brings complexity. It can be difficult to find a partner willing to accommodate unique requirements, often leading to compromises on design or functionality.

Tailored solutions: We pride ourselves on our ability and passion to work with complex. We tailor solutions to meet each specific requirement and preference, ensuring that the product vision is realized.

Adaptability to change: Whilst we have best-practice milestones in place to ensure quality and avoid delays, we welcome design iterations and adjustments early in the process, ensuring the final product is fully optimized and meets the expectations outlined in requirements.

Broad range of skills and disciplines: Our diverse team brings expertise in a wide range of disciplines, including design, engineering, manufacturing and logistics, ensuring we have the capabilities to meet even the most complex product requirements.

End-to-end solutions

Struggling to coordinate multiple vendors for different stages of the product process often leads to communication gaps, rework, non-optimized products, quality issues and delays.

Streamlined and specialized process: With advanced design, engineering and manufacturing capability in-house, we offer a seamless, integrated approach, eliminating the need to manage multiple vendors for market readiness.

Enhanced communication: Our centralized project management ensures clear communication and collaboration at every stage, minimizing errors and ensuring real-time transparency.

Faster time-to-market: By handling the entire process in-house, we can accelerate project timelines and deliver products to market faster.

Accessibility across all levels: Our team is accessible throughout the program of works, from project managers to engineers and escalation points, ensuring direct access to the expertise needed at every stage of the project.

Quality and reliability

Whether it's a start-up, highly regulated industry or strict deadlines, receiving products of inconsistent quality or reliability from suppliers who lack robust quality control processes or adherence to industry standards can make or break a company.

Stringent quality control: We implement rigorous quality control measures throughout the design and manufacturing process, ensuring that every product meets industry standards for performance, durability, and reliability.

Compliance assurance: We adhere to industry regulations and standards, such as ISO certifications and ITAR, to ensure products are safe, compliant, and market-ready.

Long-term reliability: Our commitment to quality and reliability means our customers can trust their products will perform consistently and withstand the rigors of in-situ use.

Innovation

Work with outdated or inefficient manufacturing facilities limit the ability to innovate and compete in the market.

Cutting-edge equipment: We invest in state-of-the-art technology and equipment to ensure precision, efficiency, and reliability in our manufacturing processes.

Innovation-driven culture: Our company fosters a culture of innovation and continuous improvement, encouraging creative thinking and the adoption of new technologies to drive competitive advantage, across a significantly diverse range of industries.



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