

A close-up photograph of a microelectronics assembly line. A robotic arm with a precision soldering tip is positioned over a series of small, green printed circuit boards (PCBs) mounted in a white plastic carrier. The PCBs are populated with various electronic components, including resistors and integrated circuits. The background is blurred, showing more of the assembly process.

CYIENT

DESIGN-LED MANUFACTURING: AN INTEGRATED APPROACH TO MANUFACTURING

Manufacturing with an emphasis on cost efficiency, quality,
and speed-to-market

Cyient: Your Integrated Manufacturing Partner

Cyient, a leading provider of global solutions, delivers Design-Led Manufacturing (DLM) using an integrated manufacturing approach. We support the entire product life cycle, from concept through manufacturing and beyond. Our engineers design products to specifications while considering potential challenges that could occur during the manufacturing stages.

Cyient Benefits

With Cyient as your value-added partner for both design and manufacturing services, you can:

- Avoid costly manufacturing challenges with our obsolescence management services
- Reduce product costs with our value engineering recommendations, resulting in more efficient designs, components, and production processes
- Benefit from seamless transitions, from the design phase to the manufacturing phase

We take ownership of the complete development and manufacturing process, which ensures enhanced accountability. Our extensive knowledge and experience with various design and manufacturing processes includes Design-for-Excellence (DFX) methodologies.

Cyient focuses on reducing costs, and improving quality and reliability, while decreasing time-to-market. We employ a proactive approach to obsolescence management, taking extra steps during the design phase to ensure that there are no delays during the manufacturing process.

Cyient identifies components by performing risk analysis of the electronic component life cycle. We identify alternate and interchangeable bill of materials (BOMs), stockpile parts for future production, and avoid out-of-stock, allocated, or

costly last-time buy situations. We avoid redesigns and provide multisourcing options that proactively assist with design decisions.

We understand how critical it is to get your product to market quickly. To ensure your new product introduction is a success, Cyient gives equal focus to the quality of the products and speed-to-market goals.

Services

We handle all aspects of design and manufacturing such as:

- Software design and development
- Hardware design and development
- Mechanical design and development
- Test engineering
- Verification and validation
- Certification
- Quick-turn prototypes
- Electronic manufacturing
- Mechanical manufacturing
- Product manufacturing

**CYIENT FOCUSES ON
REDUCING COSTS,
AND IMPROVING
QUALITY AND
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DECREASING
TIME-TO-MARKET.**

Electronic Manufacturing

From our world-class electronic manufacturing facilities, we develop designs such as:

- Printed circuit board assemblies (PCBA)
- Cable and wire harness assemblies
- Product integration (box build)

Utilizing both surface mount technology (SMT) and plated through-hole boards (PTH), we are equipped to handle an array of mixed technology products.

Our various methods of soldering include:

- Wave soldering
- Convection reflow
- Vapor phase reflow
- Selective soldering

Cyient's electronic manufacturing team offers various PCBA processing techniques such as conformal coating (for silicone, polyurethane, acrylic, or epoxy), encapsulation, potting, bonding, Press-Fit connector installation, bonding, gold removal (de-golding), lead-free soldering, mixed metallurgy BGAs, 2D X-Ray and 3D automated X-ray inspection (AXI).

Cyient offers a broad range of manual and automated testing and inspection services with advanced testing capabilities. We have dedicated rework and repair stations, and our team is certified in IPC-7711/21 standards.



Mechanical Manufacturing

We offer high-precision machining and castings, creating complex mechanical components and assemblies. Managed by our skilled workforce, we are experts in machining complicated parts, produced with our state-of-the-art equipment and facilities. Our range of manufacturing equipment includes:

- CNC precision milling (3-axis, 4 axis, 5-axis) and turning
- Jig boring
- Precision grinding/polishing
- Advanced metrology labs
- 3D printing (metal and plastic)
- EDM-Sparking (Plunge & Wire Electrode Discharge Machining)

Our mechanical manufacturing processes yield precision machining, capable of 10 micron tolerances. We have a full range of qualifications and capabilities, including chrome plating, anodizing, and hardness testing.

Cyient has experience producing more than 30,000 parts for global original equipment manufacturers from various alloys, including:

- Aluminum
- Titanium
- Magnesium
- Inconel
- Nimonic
- Molybdenum



Inventory Management

We offer a variety of methods for inventory management, including vendor-managed inventory (VMI). We can take full responsibility for maintaining your desired level of inventory with proximity warehousing for fast delivery. We also have the capability to drop-ship direct to your end-customer.



Credentials

Cyient's electrical manufacturing team adheres to global best practices by developing all of our assemblies according to the latest revisions of J-STD-001 that conform to IPC-A-610 and IPC-WHMA-A-620 Class II/III standards. We comply with Restriction of Hazardous Substances (RoHS) directives; Compliance, Safety, Accountability (CSA) and Factory Mutual (FM) standards; and TÜV Rheinland product safety specifications.

Our personnel are qualified in the latest revisions of IPC-A-600, J-STD-001, IPC-A-610, IPC-WHMA-A-620 and IPC-7711/21 standards, including customer-specific Source Certifying Agent (SCA) qualifications from the Performance Review Institute.

Our additional certifications include:

- ISO 9001:2015 (organizational quality)
- AS9100:2016 (aviation, space and defense industries)

- NADCAP -AC7120 for Circuit Card Assembly and Product Integration (National Aerospace and Defense Contractors Accreditation Program)
- NADCAP -AC7121 for cable and wire harness
- ISO 13485:2016 (medical industry)
- ISO/TS22163:2017 (transportation industry)
- ISO 14001:2015 (environmental management)
- OHSAS 18001:2017 (Occupational Health and Safety Assessment Series)
- ISO/IEC 27001:2013 (Information Security Management)
- Industrial license to manufacture defense equipment and assemblies

We are among the first manufacturing services providers to earn AS9100 aerospace certification and the first in India to obtain NADCAP-CCA certification

About Cyient

Cyient (Estd: 1991, NSE: CYIENT) provides engineering, manufacturing, geospatial, networks, and operations management services to global industry leaders. We leverage the power of digital technology and advanced analytics capabilities, along with domain knowledge and technical expertise, to solve complex business problems. As a Design, Build, and Maintain partner, we take solution ownership across the value chain to help our clients focus on their core, innovate, and stay ahead of the curve.

Relationships lie at the heart of how we work. With more than 15,000 employees in 22 countries, we partner with clients to operate as part of their extended team, in ways that best suit their organization's culture and requirements. Our industry focus spans aerospace and defense, medical, telecommunications, rail transportation, semiconductor, utilities, industrial, energy and natural resources.

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