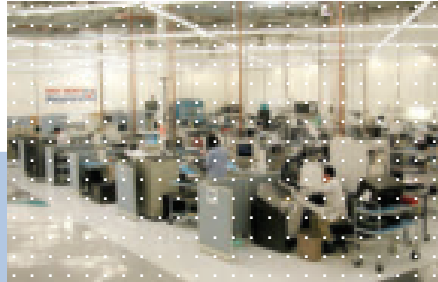
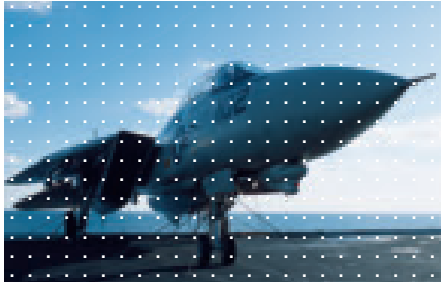


Defense and Aerospace Manufacturing Solutions





Defense and Aerospace Manufacturing Solutions

CTS Electronics Manufacturing Solutions is an experienced provider of products and services to the defense industry and both civil and military aerospace sectors worldwide. We have a strong track record of working with customers who require ultra-reliable, highly complex products, which enables us to develop expert solutions for OEMs seeking a credible manufacturing partner for all of their outsourcing needs.

New Product Introduction (NPI)

Product development and qualification is both a time and cost-critical process for every OEM – particularly for those in the defense and aerospace industries, where the need for safe, reliable, high-technology solutions is ever more crucial in today's world.

Our experienced and skilled program management personnel work closely with the customer to commercialize products quickly and to minimize any 'scope creep' that may occur.

NPI Services

- ⦿ Local, Experienced Cross-Functional Program Teams
- ⦿ Project Management Approach
- ⦿ Designated NPI Program Manager
- ⦿ Focus on Practical Product Manufacturability:
 - ⦿ Design for Manufacturing (DFM)
 - ⦿ Design for Assembly (DFA)
 - ⦿ Design for Test (DFT) and Parallel Test Development
- ⦿ Flying Probe Test & Automated Optical Inspection (AOI)
- ⦿ Working Knowledge of Defense & Aerospace Regulatory Documentation
- ⦿ Ability to Introduce Products Locally & Transition to Other Facilities for Volume
- ⦿ FMEA Service

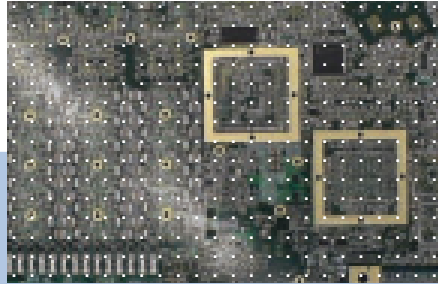
Volume Manufacturing for Defense & Aerospace Customers

Ramping to volume can be a complex process that often presents a high level of risk for the customer. And this risk increases when products are being transferred between facilities. Whether transferring products between the customer and CTS, or between our own facilities worldwide, CTS program management teams implement a robust, detailed product transfer process to ensure that transition is seamless, thus minimizing potential supply disruption.

Product mix is equally important. Defense and aerospace programs are frequently higher mix, mixed volume in nature and managing fluctuating demand without escalating cost and product delays is a core competency for CTS. CTS' operations are structured to be flexible, agile and responsive to customer demand. Our focused program teams ensure that this responsiveness is sustained throughout the program lifecycle.

Defense & Aerospace Products & Services

CTS' worldwide operations are specially equipped to support product manufacturing for defense and aerospace customers. Our facilities are accredited to AS9100 as well as ISO9001: 2000 and have program teams on-site for localized customer support. CTS also participates in the National Industrial Security Program in North America.



Products & Services

Products

- PCB Assembly:
 - Complex Technologies
 - Sophisticated Materials & Component Assembly
 - High-End Manufacturing Technologies
 - Press-Fit SMT Backplane Assembly
 - Conformal Coating
 - IPC Class III Assembly
 - Wire Bonding / Chip on Board Assembly
 - Class 10,000 Clean Room Environment
- High Level Assembly (Box Build):
 - Plastics Integration
 - Sheet Metal Integration
 - Full System Configuration & Test

Specialist Market Services

- Class 10,000 Clean Room Manufacturing
- Manufacturing Processes Aligned with AS9100 Requirements
- Lot Traceability, Source Inspection & First Article Build
- Traceability & Record Retention

Global Manufacturing Services

- Global Manufacturing Opportunities – North America, Europe, Asia
- Design & Engineering Services
- Lean Manufacturing Methodologies
- Program Management
- NPI & Product Transfer Management
- Supply Chain Management – Global Leverage
- Direct Ship & Logistics Services

- Service & Warranty
- Test Engineering:
 - Manual Defect Analysis
 - In-Circuit Test
 - Functional Test
 - Final Assembly Test
 - Hi-Pot Test
 - Audit Testing on Complete Integrated Systems
 - Accelerated Lifecycle Testing (Burn-In)
 - Environmental Test Chambers
 - HALT & HASS Testing
 - Flying Probe Test

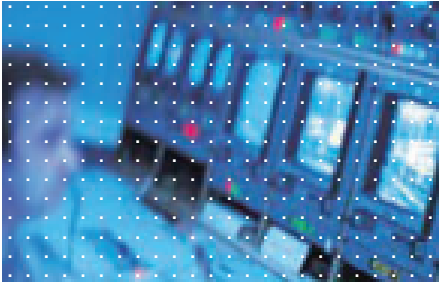
Quality & Regulatory

- AS9100 for Aerospace Applications
- ISO9001-2000
- IPC Class III Workmanship Standards
- Participating in National Industry Security Program (NISP)

Defense & Aerospace Experience

CTS has extensive experience supporting OEMs both large and small. Some of the applications include:

- Tactical Military Communications Networks
- Vehicle Firepower Enhancement Systems
- Thermal Sight Weapons Programs
- Airborne & Ground Radar Systems (Civil Aviation)
- Airport Security Devices & Equipment
- Air Traffic Collision Avoidance Systems
- Anti-Lock Braking Systems for Civil Aircraft



www.ctscorp.com/ems

ISO9001-2000 • ISO14001 • AS9100 Aerospace • NISP Participation
IPC Class II & III Workmanship Standards



CTS Manufacturing:

Moorpark CA, USA
Santa Clara CA, USA
Matamoros, Mexico
Glasgow, Scotland
Londonderry, NH, USA
Tianjin, China
Singapore
Bangkok, Thailand

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