

DEFENCE SERVICES

The most challenging area of catering to Defence services domain is the complexity of the Electronic Systems requirements of the customers and meeting the stringent Military and Aerospace standards of these systems. We have gained a great deal of quality experience and knowledge of the standards to be followed and the system complexity to be expected in the Military, Naval and Aerospace domain by catering to these industries for over 12 years.

We have provided a variety of custom solutions to major defense research & development labs of India. Most of these electronic systems are being used in weapon systems and battle vehicles of the Indian Defense establishment. The electronic systems had to be rugged and very reliable in battle scenarios and had to meet the highly demanding Military Standards. We were not only able to meet these requirements but were able to provide upgraded versions of these systems to our customers.

Another major contribution of SATTVA eTECH to the Defense Establishment of India is to carry out Re-engineering projects on various electronic systems used in Fighter Ships. We are in the midst of upgrading various electronic systems, which are more than 20 years old and are in need to be upgraded from legacy system to the most modern technology system.



5 kw Generator Control Unit

SATTVA eTECH adheres to the following standards while developing products

MIL 1553 B
MIL STD 704 D
MIL STD 810 D
MIL STD 461 C



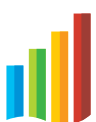
SAMPLE PRODUCTS / PROJECTS DELIVERED :

ISO 9001-2008 / AS9100 Rev C Certified

PROJECTS	SCOPE
Encryption Device	Design, Development, Qualification & Manufacturing
Generator Control Unit 5Kw	Design, Development of Engineering Model
Generator Control Unit 20Kw	Design, Development of Engineering Model
Generator Control Unit 4Kw	Design, Development of Engineering Model
Generator Control Unit 110Kw	Design, Development of Engineering Model
Electro Mechanical Linear Actuator	Design, Development of Engineering Model
5Kw GCU Test Jig	Design, Development & Manufacturing
32 Channel Multiplexer	Design, Development & Manufacturing
PCI Based MIL1553-B Board	Design, Development & Manufacturing (Proprietary)
Customized Packet Processing Card	Design, Development, Qualification & Manufacturing

PRODUCT DEVELOPMENT & QUALITY:

Project Concept	Validate the Design and Concept of the Project
Hardware Design	Validate using Reference Board, using Emulators and Evaluation Boards. Developing sub modules and validating with jigs before the schematics. Component reliability studies, Signal integrity, Thermal engineering
Software Proto Development	Proto Software is validated on Evaluation Board, Writing the Critical Timing Diagrams, Compilers and Platform using Bench Mark Codes. Checking the Critical Signal Responses and Throughput response
Firmware Development	The Project platform Kernel Customization, Development of Device Drivers, Implementation of the Application of all I/O's. Validation of the Software with Sample Applications
Test Cases	Test Applications for validating the Worst cases of the Design and Performances of the Project Test Cases for Recording the Performance Validation
Component Procurement	Procuring Industrial, military & commercial grade JSS components from approved vendors with COC. Developing Custom Components
PCB Fabrication	Fabricating the PCB from JSS, Military & UL approved Vendors
Component Assembly	SMD components are assembled with stencils. Baking of BGAs & PCBs are done as per the standards.
Testing	Using calibrated measuring Equipment. Preliminary testing (Design Verification and Functional Verification), Functional Verification-1. Burn-in (168 hours). Functional Verification-2. Final qualification at customer place
Test Jigs	We build custom test jigs with custom software to verify the complete product functions
Inspection	Visual Inspection done at multiple stages
Packing	Use High quality antistatic sheets and environmental friendly packing material
EMI/EMC	We test the products for EMI/EMC emissions
Certification	Our products are CE, UL, cUL and MIL 461E compliant as per customer needs
Waste Management & Productivity	We are practicing Lean Manufacturing Techniques (Sponsored by government of India, MSME)



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