



SATTVA eTECH

POWER



SATTVA eTECH India Pvt Ltd, is proud in its contribution to the Indian Power Industry, and its association with BHEL, ABB, Rockwell Automation, Brooks Automation to name a few, for Design, Development, Manufacturing and Qualifications of various electronics Products and Services, for control instrumentation packages.

SATTVA eTECH's sustained involvement with Power Industry includes providing support for operating stations at various Power plants in India.

SATTVA eTECH specialize in providing cost-effective, high performance control instrumentation product design and engineering services to customers in industrial automation, test and instrumentation, motion control, medical electronics, defence industries & labs, computers & communications and an array of related industries. SATTVA eTECH is an ISO-9001-2008 and AS 9100 REV C CERTIFIED Company. Our products are CE, UL, cUL and MIL 451E complain as per customer needs.

Our Design and Manufacturing spans across:

- High Speed CPU Boards
- Intelligent Analog and Digital I/O Boards
- Intelligent Contact output Modules
- Embedded Alarm Modules
- Multipurpose Intelligent Module
- Signal Conditioning Module
- Back Planes
- VME Boards
- Token Bus Controller & Dual Media Modem
- Test Jigs
- Facia & Enclosures
- Linux Kernel Porting
- Software and Firmware Design
- System Level Testing
- LAN Validation of PLC's
- Ethernet Card Manufacturing
- Qualification Test - Thermal, Vibration, EMI/EMC, Seismic, Bump



CPU, I/O boards Integration Test Jig

SATTVA eTECH adheres to the following standards while developing products

- IEC 60987
- IEC 60880
- AERB Safety Guide
- IS 9000:1977
- PC-E-710
- PP-E-2061
- PP-E-1443 R-1

National Geode based CPU board



ISO 9001-2008 / AS9100 Rev C Certified

SAMPLE PRODUCTS / PROJECTS DELIVERED :

PROJECTS	SCOPE
Smart TCP/ICP Gateway	Hardware Design, Firmware Design & Development, Qualification & Manufacturing
PCI LAN Open Master Card	Hardware Design, Software and Firmware Design & Development, Qualification & Manufacturing
National Geode based CPU with enclosure and PCI I/O Card	Hardware Design, Software and Firmware Design & Development, Qualification & Manufacturing
National Geode based double Euro size boards	Hardware Design, Software and Firmware Design & Development, Qualification & Manufacturing
TelTage Board PCB Re-engineering & Embedded Software migration	Hardware Re-engineering, Software and Firmware Design, Prototype Development
Digital I/O Modules	Re-engineering, Hardware Development & Manufacturing
Analog I/O Module	Re-engineering, Hardware Development & Manufacturing
VME Slave Board	Hardware Design, Firmware Design & Development, Qualification & Manufacturing
LAN validation of PLCs (With associated Test Jigs)	Validation at different Power Plants (RAPS, KAIGA & TAPS) leading to increase the uptime
CPU Board	Hardware Design, Software and Firmware Design & Development, Qualification & Manufacturing
Token Bus Controller Modem	Hardware Design, Firmware Design & Development, Qualification & Manufacturing
Dual Media Modem Board (Redundancy Card)	Hardware Design, Firmware Design & Development, Qualification & Manufacturing
Test Jigs for CPU, VME IO, DIM, DOM, AIM	Hardware Design, Software and Firmware Design & Development, Qualification & Manufacturing
AOM, ROM, WDT Boards and Token Bus Controller Modem	Manufacturing and Testing
Ethernet Card (D-NET)	Hardware Design, Software & Firmware Design and Manufacturing
Contact Output Module	Hardware Design, Software & Firmware Design and Manufacturing
System Diagnostic Module	Hardware Design, Software & Firmware Design, Enclosure Design and Manufacturing
Isolated Signal Conditioning Module	Hardware Design, Software & Firmware Design, Enclosure Design and Manufacturing
Embedded Alarm Module	Hardware Design, Software & Firmware Design, Enclosure Design and Manufacturing
Multipurpose Intelligent Module	Hardware Design, Software & Firmware Design, Enclosure Design and 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 BGA's & 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)