इलेक्ट्रॉनिकी एवं
सूचना प्रौद्योगिकी मंत्रालय
MINISTRY OF
**ELECTRONICS AND
INFORMATION TECHNOLOGY**
सत्यमेव जयते

उत्तर प्रदेश सरकार

सी-डैक
CDAC

ICEA
INDIA CELLULAR
& ELECTRONICS
ASSOCIATION
Inspire.Enable.Lead

EDTC

ELECTRONICS DESIGN AND TESTING CENTRE

**"CATALYZING INDIGENOUS SOLUTIONS FOR
MOBILE INDUSTRY"**

EDTC OFFERINGS

Design Services

- M-CAD DESIGN
- E-CAD DESIGN
- PRODUCT DESIGN

Testing Services

- ELECTRICAL TESTING
- ANALOG & DIGITAL SIGNAL ANALYSIS
- EMI/EMC TESTING
- ESD TESTING
- WIRELESS POWER TRANSMISSION
- SURGE & SAFETY STANDARD TESTING
- RF ANALYSIS
- AUDIO ANALYSIS

Reliability Services

- DROP TEST
- VIBRATION TEST
- SHOCK TEST
- SALT SPRAY TEST
- THERMAL SHOCK TEST
- THERMAL TEST

PCB Services

- PCB PROTOTYPING
- PCB ASSEMBLY
- PCB STENCIL MAKING

3D Printing Services

- 3D MODEL PRINTING
- PRE / POST PROCESSING
- PRODUCT ASSEMBLY

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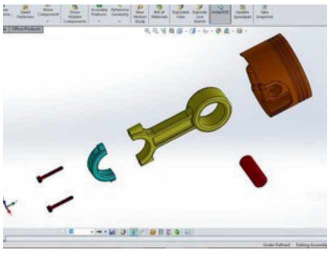
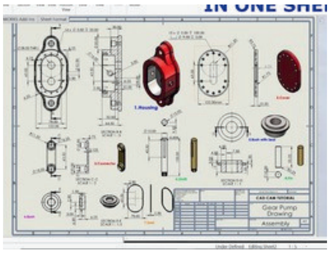
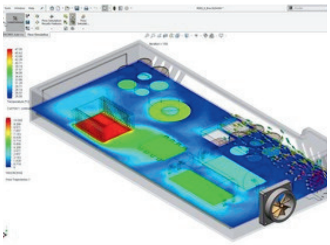
DESIGN SERVICES





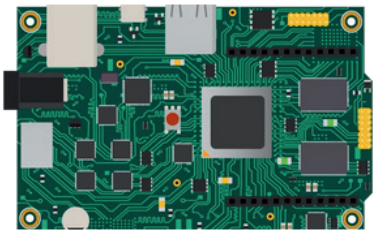


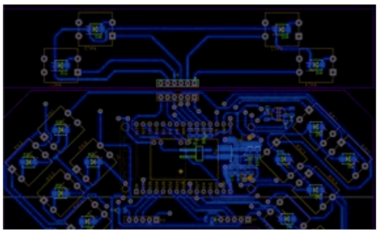
M-CAD Design

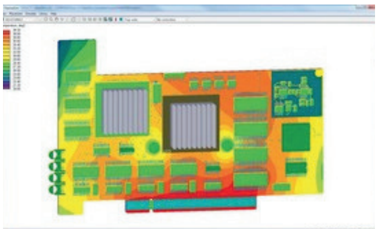
- Mechanical drawings and drafting
- Model designing 2D & 3D
- Mechanical mold designing
- Design analysis and optimization
- Thermal Flow Simulation

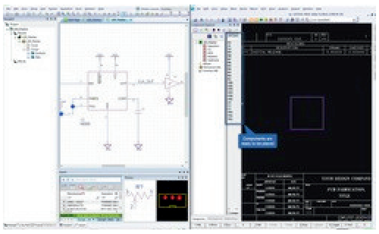
E-CAD Design

- Electronic circuit architecture
- Schematic & Layout capture
- High-Speed PCB Design
- Circuit design validation
- SI analysis
- Thermal EMI/EMC









Product Design

- Concept sketching from ideation to creation
- Complete end-to-end product prototyping
- Support in complete product testing & reliability as per IS standard
- Manufacturing support
- Support in the field failure analysis
- Support in supply chain

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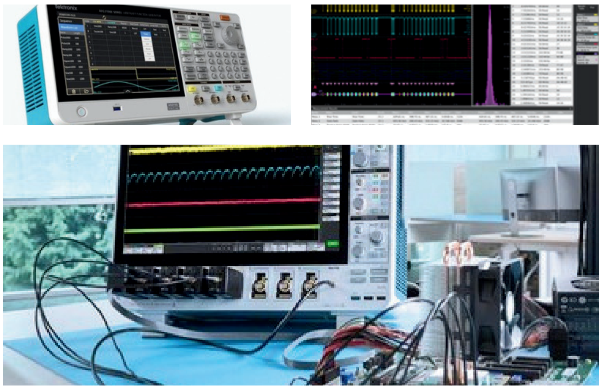
TESTING SERVICES

Electrical testing

- No load & full load Output Test
- Load Transition Test
- Power Factor and Harmonic measurement
- Temperature profiling
- Efficiency Measurement
- Power profile measurement
- Battery Cycle Test & Battery Capacity Test

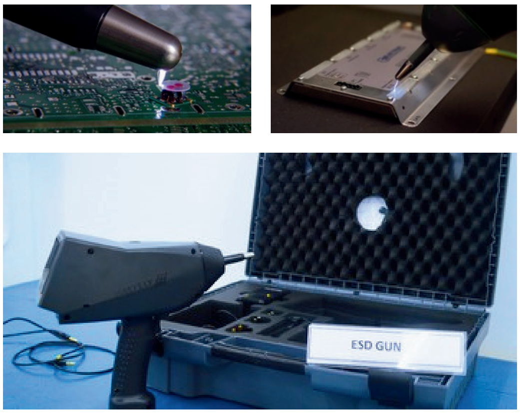
Analog & Digital Signal Analysis



- Digital Signal measurement & decoding
- Protocol analysis Analog or Digital
- Customized signal building
- Switching frequency, Ripple voltage measurement

ESD Testing

- Air discharge voltage 1kV to 16 kV
- Contact discharge voltage 1kV to 16 kV
- Discharge counter 1 to 9999
- Discharge polarity positive & negative
- Operating modes single & continuous



EMI/EMC Testing

- Conductive emission Test
- Radiated emission Test
- EMI/EMC analysis with CISPR peak, QUASI- Peak and Average detectors
- General purpose modulation analysis up to 7 GHz

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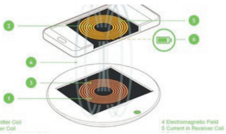
TESTING SERVICES

Surge & Safety Standard Testing

- Ground Leakage Testing
- Hi-voltage withstand testing
- Leakage current testing
- Surge test & EFT/Burst Test
- Voltage Dips & Ring Wave test
- Telecom wave test & Magnetic Field test



Wireless Power Transmission

- Wireless power efficiency test
- Power profile test
- Temperature profiling
- Active charge area
- Impedance matching area
- Transient response test

Audio Analysis

- Frequency response
- Distortion THD, THD+N, k2-k35
- Impedance response
- Sound pressure Level dB SPL
- Speaker polarity

RF Analysis

- Bluetooth Low Energy, Basic Rate and EDR Test
- Adaptive Frequency Hopping (AFH) test function for Bluetooth devices
- Supports 30 Bluetooth low energy test cases
- Wi-fi measurement
- Antenna measurement
- Multiple Frequency measurement and techniques

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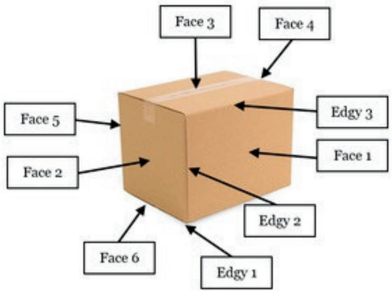
RELIABILITY SERVICES

Drop Test

KEY FEATURES

- Adjustable drop heights for simulating various impact scenarios
- Drop platform for securely placing the test specimen
- Drop height 300mm to 1000mm.
- Load Capacity up to 50kg
- Customization options to meet specific testing needs



Vibration Test

KEY FEATURES

- Electrodynamic shaker for controlled vibration generation
- Wide frequency range for testing across different frequencies
- Support for multi-axis testing (X, Y, Z axes)
- Precise control system for accurate and repeatable testing
- Vibration modes: sine, random, and shock testing
- Integration of accelerometers and sensors for data measurement

Shock Test

KEY FEATURES

- Simulates high-impact events
- Acceleration 10 'g' to 200 'g'
- Adjustable shock levels for different intensities
- Generates controlled shock pulses
- Measures acceleration and forces with sensor

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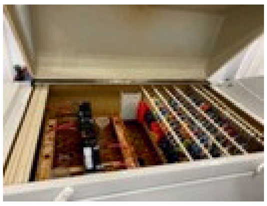
RELIABILITY SERVICES

Salt Spray Test

KEY FEATURES

- Conducts corrosion resistance tests on materials and coatings
- Atomizes and sprays salt solution onto test specimens
- Adjustable parameters for customization (spray duration, temperature, humidity, salt concentration)
- Simulates harsh and corrosive environments



Thermal Shock Test

KEY FEATURES

- Dual-zone construction for rapid temperature transitions
- Cold Zone -40°C and Hot Zone +150°C
- Performs thermal shock tests with extreme temperature changes
- Quick temperature transition times for efficient testing
- Reliable temperature control in both hot and cold compartments
- Observation windows for real-time temperature monitoring

Thermal Chamber Test

KEY FEATURES

- Precise control of temperature range -40°C to 150 °C and humidity range 20% to 95 % RH
- Adjustable parameters for customization
- Capable of thermal cycling tests
- Control system for stable and uniform conditions
- Wide temperature range for extreme testing

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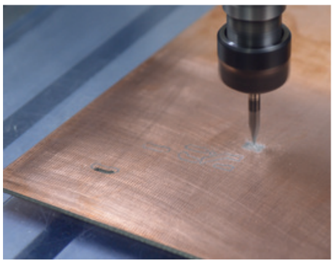
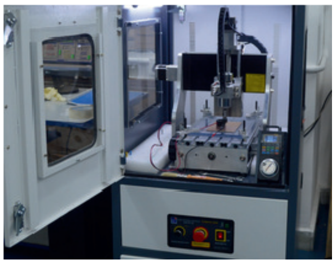
PCB SERVICES





PCB Prototyping

- Proof of Concept
- Quick-Turn Box-Build
- Quick-Turn PCB Prototyping
- DFM Review
- Components cost-down

PCB Stencil Making

- Quick Stencil Prototype 200x300mm
- Frame and Frameless Stencil
- Stainless steel SMT stencil
- Quick turn Rework stencils

PCB Assembly Capability

- Assembly Types: Surface mount, Single or double sided placement
- Solder Type: Lead-free – RoHS
- Parts Procurement: Full Turnkey, Partial Turnkey, Kitted/Consigned
- Component types: SMT 01005 or larger BGA 0.4mm pitch, POP (Package on Package), Hard metric connectors
- SMT Parts Presentation: Bulk, Cut tape, Partial reel, Reel, Tube, Tray.

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3D PRINTING SERVICES

Stratasys J55 Prime

3D model Printing

- PolyJet Resin based prototypes to convey final product aesthetics.
- Horizontal build layer thickness down to 0.018mm.
- Print multiple materials with Endless combinations of color (Pantone® verified).

Pre/Post Processing

- Design Preparation
- Orientation and Supports
- Final Inspection and Printing
- Support Removal
- Surface Finish
- Surface Treatment

Product Assembly

- Combine printed parts.
- Consider design and fit.
- Remove supports, finish surfaces.
- Check alignment before finalization.

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Electronic Components

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