

**HCL**

# EMC and Environmental Testing



HCL Technologies is a next-generation global technology company that helps enterprises reimagine their businesses for the digital age. Our technology products, services, and engineering solutions are built on four decades of innovation, with a world-renowned management philosophy, a strong culture of invention and risk-taking, and a relentless focus on customer relationships. With a worldwide network of R&D, innovation labs and delivery centers, and 149,000+ 'Ideapreneurs' working in 45 countries, HCL serves leading enterprises across key industries, including 250 of the Fortune 500 and 650 of the Global 2000.

As a global engineering services provider, we help organizations maintain their competitive advantage, through an integrated strategy that facilitates continuous cost improvement across the product realization value stream, while accelerating revenue growth through innovation. Leveraging combined strengths in mechanical engineering, manufacturing engineering, and electronics and engineering IT, we bring together a blend of traditional and next generation global engineering services and global engineering solutions, enabling customers to achieve productivity targets. That's why we are the preferred global engineering consultancy firm and engineering services provider for leading organizations.

HCL is one of the first companies to have planned for a complete product development environment and invested in EMI/EMC and Environmental and Durability Testing facilities. EMI and EMC testing ensures that the electrical /electronic equipment is able to work well in the presence of interference from other devices around it. It further warrants that the tested device doesn't become a source of interference for other devices. EMC testing routines span areas like magnetic fields, voltage drops, power line surges, radiated electromagnetic noise, and fast transients. These are tested using highly sophisticated equipments. We also have a semi-anechoic chamber for radiated emission testing and immunity tests. Any new product that needs to be tested for unwanted generation of interference or for vulnerability to interference, benefits from testing in a controlled environment provided by a semi-anechoic chamber. It is also used for acoustic noise testing for developmental purposes. Thermal imaging is another such service that helps design engineers locate and fix thermal hot spots in a product. Our full-fledged test facility also supports Environmental and Durability Testing for temperature, humidity, salt spray, dust, rain and altitude and thus ensures holistic product testing. HCL can also support Safety testing to help products meet LVD requirements

HCL's test facilities, ranging from the semi-anechoic chamber and immunity test setups for EMC testing to the vibration shaker and climatic chambers for climatic and durability testing, act as a one-stop shop for customers, help in meeting compliance requirements and reduce time to market and cost.

HCL can test to global standards and help customers with certification, including FCC and CE certification.

Climatic Chamber (large) ESS Chamber



Altitude Chamber



Humidity Chamber



Thermal Shock Chamber



Dry Heat Chamber



Thermal Imaging



Salt Spray Chamber



Acoustic Noise Testing



HALT Chamber



Vibration shaker



## What are today's industry needs?

- Reputed, reliable & accredited test lab with EMC testing, and Environmental and Durability testing facilities
- Knowledge and Support for different test standards across various domains
- One-stop for engineering solutions, testing, and certification services
- Pre-certification test support during product development phase
- SME support from cross-functional teams to analyze and solutionize
- Cost effective & competitive market rates

## Our value proposition:

1

HCL lab is **ISO/IEC 17025** accredited and is a state-of-the-art facility

2

**One-stop-shop** for complete testing - pre-compliance testing and certification testing

3

HCL has **long-standing relationship** with top Notified Bodies

4

**Equipped with a fully compliant Semi- Anechoic Chamber** suitable for Radiated Emission Testing and Radiated Immunity Testing

5

HCL offers a **complete array of services** to customers - troubleshooting, debugging, and fixing product failures

# Hcl lab services & offerings:

## EMI & EMC testing

- Conducted and Radiated Emission
- Radiated & Conducted Susceptibility
- Voltage Dips & Interruptions
- Harmonic Current Emissions
- Flicker emissions
- ESD
- Magnetic field immunity
- EFT and Surge immunity
- Conducted Transient Emission
- Bulk current injection

## Environmental and Durability Testing

- Thermal Shock Chamber
- Humidity Chamber
- Climatic Chamber
- Drop Test Set-up
- Salt Spray Chamber
- Dust & Rain Chamber
- Electro-dynamic Vibration & Shock Table
- Altitude Chamber
- Acoustic Noise Testing
- Thermal Imaging

## Safety testing

Safety testing for the following domains:

- Information Technology
- Industrial
- Medical

## Verticals we serve:



Aero & Defence



Consumer Electronics



Medical Devices



Telecom & Networking



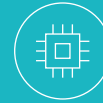
Servers & Storage



Industrial



Automotive



Semiconductor Devices

## Other related lab services

RF & Antenna Lab

Post Silicon Validation

Simulation Services & Reliability Engineering

Optical and 50GHZ electrical characterization



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For more details please reach out to or write to [InfoLab@hcl.com](mailto:InfoLab@hcl.com)

**HCL**