







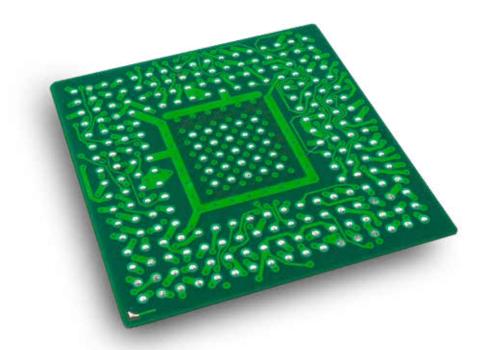


## Innovation while driving down costs

The world's largest and most diverse collection of specialized analytical instrumentation can help innovate and build your brand.

Whether connecting the internet of things, guiding surgical lasers or powering the latest smart phone, integrated circuits and microelectronics touch nearly every aspect of human life. In this business, innovation and continuous improvement are imperatives, and being able to quickly and reliably test, debug, diagnose failures and take corrective action can make the difference between a doomed product launch and building a successful global brand.

Eurofins | EAG Laboratories offers you the world's largest and most diverse collection of specialized analytical instrumentation, capacity to perform a variety of microelectronic tests in parallel, and the multi-disciplinary expertise required to critically evaluate results and provide true insight into a solution. Whether you need to develop and execute a robust test plan, debug early prototypes, determine the root cause of failure quickly or ramp production of your product, ask Eurofins | EAG Laboratories. We know how.



### ATE Test & engineering

Eurofins | EAG Laboratories provides optimized services to bring you the resources, tools, instruments and talents of an ATE test engineering staff. We will help you resolve your semiconductor testing needs and challenges; achieve your goals and meet your deadlines. We can provide a limited scope project or a full turnkey solution where we analyze a data sheet and provide a comprehensive test plan.

- 24 x 7 engineering and production floor
- Online reservation system
- Large and experienced engineering, technical, and production support teams
- Large inventory of peripherals, temp forcing units, probers and handlers

# Burn-in & reliability qualification

Reliability qualification demonstrates the fitness of a microelectronic product or IC for use in the field. This helps our clients better understand the fundamental wear-out mechanisms, detect design marginality combined with parameter drift, and determine failure rates due to latent manufacturing defects. Eurofins | EAG Laboratories provides stress-based reliability qualification and knowledge-based reliability qualification methodologies based on industry standards.

- High Temperature Operating Life Test (HTOL)
- · Thermal shock
- Preconditioning
- · Temperature humidity bias
- · Highly accelerated temperature
- Humidity Stress Test (HAST)

#### ESD & latch-up testing

Our highly experienced engineering team uses industry-leading knowledge and years of real world experience with the latest semiconductor technologies, circuit design and device physics to optimize our customer's ESD and latch-up results. When you choose Eurofins | EAG Laboratories, you will be working with recognized experts in the field of ESD and latch-up testing. We are committed to providing our customers with the most up-to-date methodologies, along with technical interpretation of the test data and accurate assessment of the results.

#### Failure Analysis

Eurofins | EAG Laboratories goal is to accurately determine the cause of the failure. We have developed a methodology that has proven to be effective and efficient, yet allows us to customize the process to fit your needs. We can offer the level of support tailored to meet your

project, operation and business needs, with the capability and capacity to support full root cause investigations, in addition to specific techniques and analysis.

Coupled with our expert interpretations and engineering assessments, we provide critical analytical insight into investigations and causes of failures.

#### FIB circuit edit and debug

Using Focused Ion Beam (FIB) circuit editing, Eurofins | EAG Laboratories engineers are able to quickly make precise nanoscale cuts and create nanowire jumpers on integrated circuits without the need for lengthy and costly re-fabrication. This technique is employed to implement and verify experimental design changes, investigate logic failures and other anomalies, and produce prototypes to inform decision-making. We offer end-to-end services, from sample preparation to circuit modifications on a range of package formats and in both front side and back side/flip chip technology.

#### PCB Design and assembly

Our PCB team offers a wide variety of standard-style reliability testing hardware solutions, as well as ESD and ATE interconnect solutions for multiple and large pin count device testing, with fair pricing for the quality and integrity of all your test hardware. Our expertise includes:

- Reliability burn-in boards for criteria, MCC, Incal, AEHR, and any other systems
- ATE interconnect, load boards, and probe cards
- · ESD verifier boards

Ongoing design reviews allows our customers current, progressive board applications. Flexibility and understanding your unique needs sets us apart from our competitors.

#### Advanced microscopy

Eurofins | EAG Laboratories offers a broad range and large installed base of microscopy tools and services to match your application, ranging from process development to failure analysis. In addition to providing high resolution imaging, our analytical capability makes us a unique partner that can help you during research, development, and analysis of failures. Microscopy techniques can be used to characterize many types of defects, including

- · Metal migration
- Voids
- Particles
- · Cracks and delaminations
- · Thickness and uniformity





