

Controlar Offers Advanced Tooling and Fixturing Solutions to Speed up Production

Controlar develops and builds tooling, test fixtures, and scalable test systems for a wide range of PCB and electronics manufacturing applications, including ICT (In-Circuit Testing), functional test, ISP (In-System Programming), RF testing, LED testing, and end-of-line testing.



Many test challenges in production environments are not only related to the test itself. They are often linked to cycle times that do not match line speed, fixtures that are difficult to maintain, false failures that stop production, operator dependency on manual processes, or test systems that were not originally designed for scalability.

Controlar addresses these challenges by developing solutions built around real production requirements, from stand-alone stations to fully automated in-line systems.

With more than 40 years of experience in industrial automation and test engineering, Controlar designs fixtures and test solutions for both in-line and off-line systems, ranging from simple mechanical setups to complex solutions with thousands of test points, custom handlers, multi-stage actuation, and full mechanical and electrical integration.



The company's approach is built around customization, supported by a structured development process that helps reduce lead times while maintaining consistency and quality. Fixtures and systems are designed to match each manufacturer's production rhythm, quality requirements, and product

complexity—whether the application requires pneumatic, vacuum, or manual operation, custom software, traceability, or integration into a variety of industry-standard test platforms.

For ICT applications, Controlar provides both complete fixture solutions and mechanical-only fixtures. Complete ICT fixture solutions can include mechanical design, electrical integration, and custom software, resulting in ready-to-run systems that simplify implementation and speed deployment. Mechanical-only ICT fixtures are designed to be compatible with a wide range of test platforms, helping manufacturers extend existing systems while reducing adaptation costs.

These solutions can be adapted for multiple industry test platforms, including CheckSum, Digitaltest, Keysight Technologies, Teradyne, and TRI Innovation systems.

“Our focus is on building fixtures that work reliably in real production environments,” said José Cuevas, Business Developer Engineer for México and USA at Controlar. “That means not just meeting test requirements, but making sure the solution fits into the customer’s process, supports the required cycle time, and holds up over time. Fixture design plays a big role in overall test performance. If the fixture isn’t right, it affects everything—cycle time, repeatability, false failures, and ultimately product quality.”

Controlar’s fixturing solutions support multiple test technologies within a single platform, including ICT, ISP programming, functional test, boundary scan, RF testing, LED analysis, and end-of-line testing. Through partnerships with technology providers such as FEASA and SMH, the company integrates specialized capabilities like optical LED testing and advanced flash programming directly into the fixture environment.

Beyond standard test interfaces, Controlar develops custom adaptations to address specific application challenges. These can include multi-level probing, connector actuation, signal conditioning, noise filtering, and the integration of dedicated circuits for switching, protection, or load simulation. The company also supports custom handlers, mechanical and electrical integration, custom software, and traceability requirements to help manufacturers improve repeatability, reduce manual intervention, and scale production more effectively.

Fixtures are commonly used in conjunction with Controlar’s in-line test systems, including the [XILS](#) and [MILS](#) platforms, where fast changeover, repeatability, and mechanical precision are critical. Designed for high-mix and high-demand production environments, these systems allow manufacturers to balance test coverage with throughput, floor space constraints, and operator usability.

Controlar supports projects ranging from standalone fixtures to full turnkey test solutions, including application development, system integration, custom automation, software and traceability, and production ramp support at the customer site.

Some manufacturers need ultra-fast cycle times, others need flexibility for high-mix production, and others need reliable systems that operators can run without constant engineering support. Controlar builds around those realities.

For more information about Controlar’s tooling and fixturing solutions, download its [Tooling and Fixturing Catalog](#).

About Controlar

Controlar Innovating Industry LLC is the North American branch of the global Controlar brand, specializing in advanced board-level testing solutions. Headquartered in Anderson, South Carolina,

our company offers commercial and technical support across the United States, supporting industries such as automotive, aerospace, and electronics. Backed by a local team and global engineering expertise, it develops customized systems for in-circuit and functional testing of electronic assemblies, ensuring precision and efficiency in quality assurance processes.