Controlar Presents the Upgraded CMTS – Compact Multicell Test System at Productronica 2025

Two years after its debut at Productronica 2023, Controlar returns to Munich with a new and enhanced version of its **CMTS – Compact Multicell Test System**, a modular and multipurpose test station designed to maximize productivity, footprint efficiency, and flexibility in electronic component testing.

Building on the proven performance of the original CMTS, the latest version introduces **significant upgrades** that further increase throughput and operational efficiency:

- **Dual Gripper Automation** – enabling simultaneous loading and unloading of two products, effectively doubling handling capacity and minimizing idle time.
- **Dedicated Dual Docking Stations** – two independent loading and unloading docks now allow parallel product exchange and smoother test flow management.

These advancements translate into **faster testing cycles** and **optimized use of test modules**, as the system can now perform **parallel, concurrent, or sequential tests** depending on product type and test requirements.

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Vertical Testing Concept with Maximum Space Efficiency

The CMTS continues to stand out for its **vertical testing architecture**, supporting up to **12 Multicell Test Modules (MTM),** each capable of testing two Devices Under Test (DUT), while maintaining a compact footprint. This approach allows manufacturers to achieve **high-density testing without increasing production floor area**.

The automated dual gripper can handle up to **two products simultaneously**, transferring them between the dual docking stations and the available MTMs. When one gripper is occupied, the system continues operations with the other, maintaining continuous testing flow and minimizing downtime.

MTM – Multicell Test Modules: Modular Precision and Flexibility

The **MTM – Multicell Test Modules** are the core functional elements of the CMTS concept. Each module can perform multiple test types independently, integrating a variety of testing procedures, such as **run-in, (re)flashing, RF, and communication tests**, within a compact, modular format.

Designed with **multicell capability**, each MTM accommodates up to **two DUTs**, operating independently or concurrently depending on the product and test profile. The modules are easily interchangeable, allowing quick setup changes or maintenance without interrupting other ongoing tests.

A **custom loading lift** is available for loading and unloading the test modules, providing a familiar handling experience similar to standard lifts. It includes a **semi-automatic system for locking and unlocking modules** within the tower, ensuring secure operation and user ergonomics. Additionally, the lift can serve as a **quick debug station**, adding convenience and versatility during setup and maintenance.

Key characteristics include:

- **Modular “Plug & Play” architecture**, facilitating reconfiguration and reuse across different products
- **Fully electrical operation**, ensuring precise movements without the need for pneumatic systems
- **Independent module changeover** without interrupting other test processes

- Support for diverse testing equipment, including RF shielded boxes and temperature chambers

This modular design provides **exceptional flexibility** for production lines where testing needs evolve rapidly, ensuring scalability and future-readiness in automated environments.

Engineered for Modularity and Flexibility

The CMTS is designed with a **highly modular concept**, allowing easy configuration based on specific test requirements. Its structure enables:

- Quick changeover of independent test modules without interrupting ongoing processes.
- Seamless integration of specialized modules such as RF shielded boxes or temperature-controlled run-in chambers.
- Easy upgrades for new product introductions or production line adaptations.

The station operates with a **fully electrical approach**, requiring no pneumatic supply, and includes **removable side panels** for maintenance convenience.

Main Applications

Ideal for the **automotive electronics industry**, the CMTS supports a wide range of functional tests, including:

- Run-in testing under high-temperature profiles,
- (Re)flashing processes,
- RF testing,
- Communication and connectivity tests.

It can be integrated into **semi-automatic** or **fully automatic** production lines, serving as a flexible and scalable testing platform for complex, high-volume production environments.

See It Live at Productronica 2025

Visitors can experience the upgraded **CMTS** in action at **Controlar's stand A1.335/9** where live demonstrations will showcase its dual gripper automation and parallel testing capabilities.

About Controlar

Founded in 1995, ***Controlar Innovating Industry*** *is a Portuguese company specializing in* ***Industrial Automation and Test Systems****, primarily serving the automotive sector.*

With over 400 employees and operations across Portugal, Spain, Mexico, Malaysia, India, Germany, the USA, France, Poland and Morocco, Controlar designs, develops, and integrates advanced solutions for the validation and verification of electronic components and systems, as well as for production line automation and quality control.