

Compact Multicell Test System

/ Highly modular concept design

Semi-auto (operator-ready) or full-auto (conveyor line)

Fully convertible solution

Different configurations according to test requirements and production demands

/ Footprint optimization

Full advantage of available height

Up to 24 DUTs (Devices Under Test)

/ Increased Throughput

Dual gripper automation

Dedicated docking with 2 loading & unloading docks



PRODUCT DESCRIPTION

The **CMTS - Compact Multicell Test System** is a multipurpose test machine designed for precision, efficiency and footprint optimization by accommodating a large number of test positions while maintaining functionality comparable to other standard test systems. The station functions as an automatic pick & place system, enabling easy placement and removal of Multicell Test Modules (MTM) based on test requirements and production demands.

Its modular design allows for a simple line layout reconfiguration, by removing some test cells (modules) without interrupting the production line. Another main advantage of this concept is space saving: the vertical modular configuration supports up to 12 independent modules, each with a dual test nest (24 DUTs total), without increasing production floor footprint.

KEY FEATURES

/ **Modular and flexible concept design:** facilitating the selection and assembly of different configurations.

/ **Exceptional space-saving capability and versatility:** enabling easy upgrades and incorporation of new products.

/ **Multipurpose functional testing:** incl. complete run-in testing with high temperature profiles, (re)flashing, and RF testing with customized shielded box.

/ **Complete electrical approach:** without pneumatic supply required.

/ **Removable side panels:** for easy maintenance.

/ **Custom-built lift:** for pick and place functions.

PRODUCT CONFIGURATION

/ Station capacity

Max. simultaneous testing of 12 MTM (24 DUTs)

Suitable for modular configuration according to test requirements.

/ Integration of specific test equipment

Bottom and/or top position rack.

/ Front and/or rear monitor for HMI display

/ Safety panel sensors, barriers, and other safety equipment

/ Optional hardware

Air extraction/ventilation system.





Multicell Test Modules

/ Multipurpose functional testing

Run-in tests with high temperature profiles, (re)flashing, RF tests

/ Double-cell configuration with independent operation

/ DUT-specific mechanical design

/ Fully electrical movements

Electrical axis for DUT precise coupling

No compressed air supply required

/ Maximum simultaneous testing of 24 devices per test station



PRODUCT DESCRIPTION

Controlar **MTM - Multicell Test Modules** are incorporated within the **CMTS - Compact Multicell Test System** and have the capacity to execute multiple functions, enabling the integration of diverse functional tests.

The modules are designed with multicell capability, allowing for two Device Under Test (DUT) per module, according to the specific product and functionality.

Due to the high complexity and numerous configurations, a modular design approach was employed for ordering and assembling different modules. Thus, smaller reusable modules can be utilized across various designs. This facilitates easier development of complex modules for different products and functionalities.

KEY FEATURES

/ Modular design approach: fits complex test modules for different products and functionalities.

/ Independent modules changeover:

Specific module insertion/removal does not affect other modules' test process.

Custom loading lift available for safety/ergonomic standards.

/ Careful optimization in terms of: wiring, space availability, and shared resources within the multicell capability.

/ Featuring specific modules: including a multicell shielded box for RF testing, a temperature box for run-in tests and flashing.

PRODUCT CONFIGURATION

/ Main components

Mini-PC
DUT base plate
Connector box
Electrical box
Interface panel

/ Modules capacity

Dependent on the specific product and functionality.
Multicell capability (up to 300mm DUT width).

/ Rear connections

Modular rear panel interface connector.
Extra rear panel connections for mini-PCs direct access (USB + HDMI).

/ Modules changeover

Similar handling to other standard lifters.
Semi-automatic system for locking and unlocking modules.
Can be used as a quick debug station.

/ Modular PCB system with "Plug & Play" solution

TECH SPECS

CMTS

Dimensions (in mm)

1200 (W) x 2030 (L) x 2500 (H)

Communication protocol

EtherCAT network

Power supply

/ Voltage: 3P/N/PE 400 Vac (standard)

/ Frequency: 50/60Hz

/ Current: 25A

/ Electrical power: 17,3 kW

Pressure

6 bar (max)

MTM

Dimensions (in mm)

560 (W) x 960 (L) x 140/210 (H)

Weight

~30-40 kg

Power supply

/ Voltage: 230VAC

/ Frequency: 50/60Hz

/ Current: 3A

/ Electrical power: 0,7 kW

Pressure

6 bar

Software/ Communication protocol

EtherCAT network

Tests

- / Bluetooth and WIFI embedded and external antennas loopback test
- / Audio production self-test
- / Video in/out loopback
- / RF antennas
- / Automotive audio bus – A2B self-test
- / Ethernet loopback tests
- / Check ground pins
- / Undervoltage
- / CAN test communication
- / Software flash to unit
- / Automotive Ethernet
- / HDBaseT
- / Current consumption
- / Voltage and current monitoring

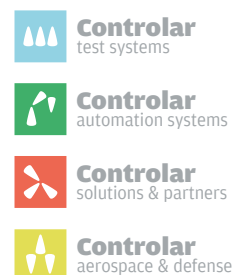
MAIN APPLICATIONS

This concept is specifically suited for the Automotive industry for functional testing of electronic components, with the possibility to be integrated into automated factory production lines and worldwide distribution.

Innovation, Quality and Passion for Engineering.

+351 225 898 410
info@pt.controlar.com
www.controlar.com

Controlar, S.A.
Rua do Caulino, 314
4445-259 Alfena
Portugal



01 PORTUGAL | 02 SPAIN | 03 MEXICO | 04 GERMANY | 05 INDIA | 06 MALAYSIA | 07 CHINA | 08 USA

