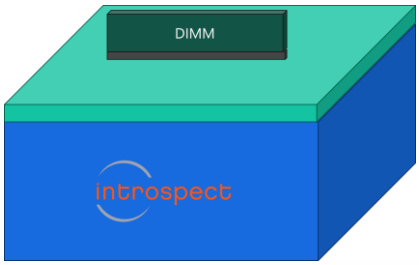
PRODUCT BRIEF

M SERIES

M5513

DDR5 MR-DIMM Module Test System



Complete Characterization and Functional Testing of MR-DIMM Modules

The M5513 is an all-inclusive memory test system for next-generation DDR5 multiplexed-rank dual inline memory modules (MR-DIMM). Operating at blisteringly fast speeds, this test system is an ideal solution for long-term DIMM development and test. It contains a complete side-band bus controller and provides full access to all command, address, and data pins on a standard 288-pin DIMM under test. The M5513 can **characterize** the DDR interface at its maximum speed, and it can also perform exhaustive **memory read-write testing** and **functional stress testing**. A true ATE-on-Bench, the M5513 reduces cost and enhances interoperability of DDR5 systems.

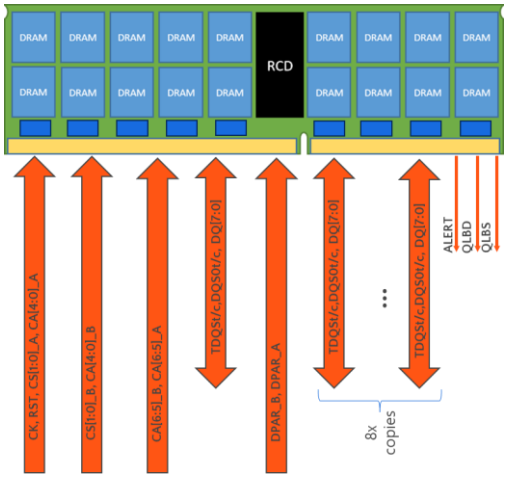
KEY FEATURES:

- **User configurable training:** full suite of DDR5 training and equalization algorithms
- **Complete memory test:** read and write capability into any DRAM on the DIMM
- **Programmable device power supplies:** completely brings up the DIMM and the on-board PMIC
- **Shmoo and AC characterization capability:** easily adjust voltage and timing parameters on all input and output pins of the tester

KEY BENEFITS:

- **Fastest time to market:** use a single investment in hardware to evolve DIMM testing over multiple generations of product development
- **Best-in-class signal integrity:** based on Introspect's award-winning ATE-on-Bench tester technology, the signal integrity is superior to conventional ATE
- **Automated functional stress testing:** scripting capability based on the Python language

Functional Block Diagram: Access to Every Pin and Every Cell



General Specifications

FEATURE	VALUE	DESCRIPTION
Physical Dimensions	50cm x 50cm x 35cm	Compact bench-top form factor
Protocol Support	SidebandBus, DDR5	Completely autonomous bring up and training of the DIMM
Pattern Simulation Tool	Available in Python	Provides enhanced debugging capability
Command Vector Depth	16 GByte	Commands can be sequenced and looped for longer executions

Electrical Specifications

FEATURE	VALUE	DESCRIPTION
Maximum Data Rate	17.4 Gbps	Reaches all generations of MR-DIMM technology
SidebandBus Rate	14 MHz	Exceeds JESD403 specifications
Skew Mismatch	15 ps	Across all channels
Maximum Voltage Level	1.1 V	Covers DDR5 specifications

Signal Integrity: 6400 MT/s Eye Diagram Measurement