PRODUCT BRIEF

M SERIES

M5512

GDDR7 Memory Test System

ATE on Bench for GDDR7 Characterization and Test

The M5512 GDDR7 Memory Test System is a category-creating solution for characterizing and functionally testing memory integrated circuits based on the JEDEC Graphics Double Data Rate 7 SGRAM Standard (GDDR7). Featuring high-speed, bidirectional PAM3 signaling, low-speed NRZ signaling, and complete protocol training capability, this solution is the optimal tool to help bring next-generation graphics memory to the industry.

KEY FEATURES:

- **Complete memory testing:** connects to all channels in a single graphics memory IC, thus providing test coverage on all pins

- **Programmable device power supplies:** precision programming of the power up and power down sequence of the memory IC under test

- **Superior signal integrity:** world-class pin-electronics running at 40 Gbps in PAM3 mode

- **AC characterization:** picosecond resolution timing and mV resolution shmoo capability

KEY BENEFITS:

- **Fastest time to market:** perform deep memory read/write operations and characterize electrical and timing specifications

- **Most capable PAM3 signaling:** leveraging years of expertise in SerDes technology, the PAM3 pin-electronics exceed the requirements of the GDDR7 specifications

- **Automated:** scripting capability ideal for debug tasks, verification, and full-fledged production screening of devices and system boards

Access to Every Pin and Every Memory Cell

Graphics Memory IC
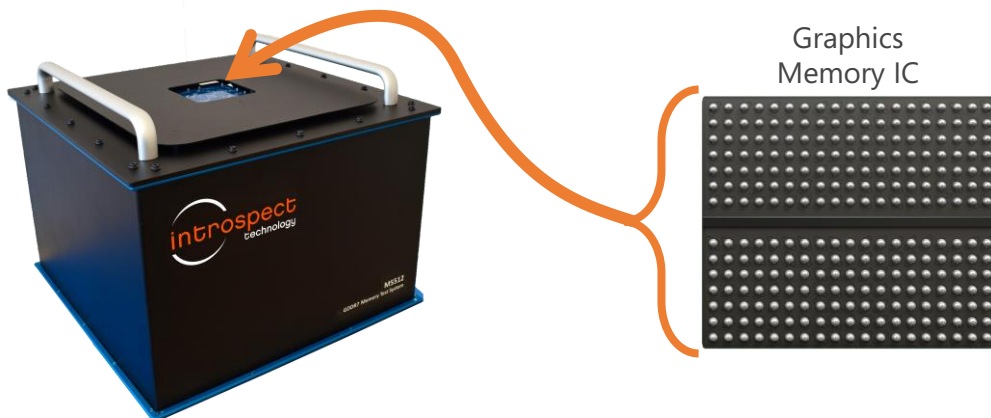
The M5512 includes an integrated test board for easy DUT attachment.

Native GDDR7 Virtual Memory Controller
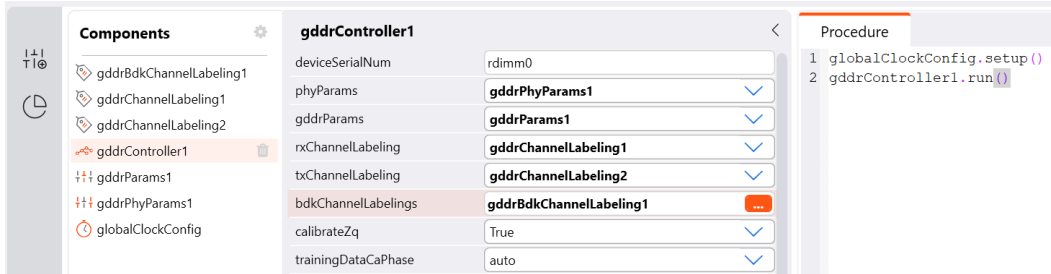
Focus on your test algorithms and let the M5512 virtual memory controller manage the protocol.

Specifications

PARAMETER	VALUE	UNITS	DESCRIPTION
Maximum NRZ Data Rate	20	Gbps	Exceeds JEDEC specifications
Maximum PAM3 Data Rate	40	Gbps	Exceeds JEDEC specifications
Tx Phase Setting Resolution	1	ps	Per-pin phase control
Rx Phase Setting Resolution	1.5	ps	Per-pin phase control
Voltage Range	0 – 1.2	V	Per-pin voltage control
Tx Voltage Setting Resolution	10	mV	Enables sensitivity testing
Rx Voltage Resolution	10	mV	Enables eye diagram testing

Physical Layer Performance: 40 Gbps PAM3 Eye Diagram
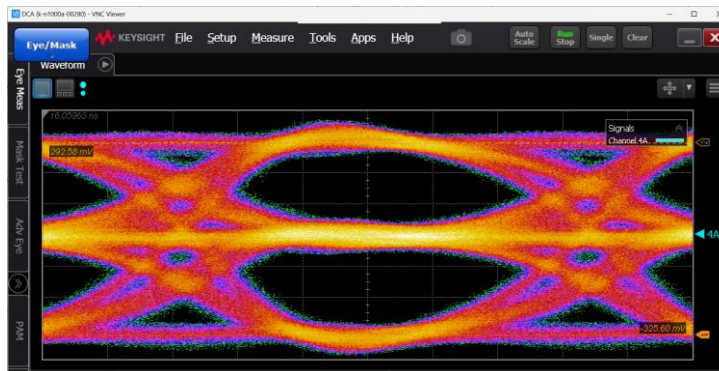
Achieve high-confidence memory testing with the M5512's superior signal integrity.