TESTMESH TMA-100

Characterization Platform for NVM Technology Development
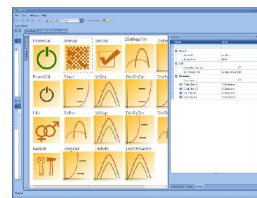
Millions of Cycles in a Flash

Accurate Signals and Measurements

- 200 Msample/sec Arbitrary and Functional Waveforms
- 10 nsec sampling time multi-channel PMU
- Low-leakage fast sensing circuits
- External SMU integration option

Speed-Optimized Architecture

- Hardware support for fast algorithmic cycling
- Waveform and range switch in microseconds
- 1-bit ADC for fast decision
- Sequencer for array address generation

Compatibility with Every Technology and Structure

- Package and wafer level operation
- Transistor and resistor based cells
- For single cells and test arrays with analog interface
- Emulates charge pumps, sense amplifier, digital logic

Fast Track to Your NVM

N·PLUS·T
KNOWLEDGE AND TECHNOLOGY

ready-to-go technology evaluation
at the best cost of ownership

Feature	Performance
Waveforms	▪ up to 12 channels ▪ Arbitrary and algorithmic waveforms ▪ Multiple waveform storage with fast switching ▪ -12V..+12V, 5 nsec step time, 100mA, 0 or 50 Ohm impedance
PMU	▪ Operation modes - Voltage force current measurement - Current force voltage measurement - High impedance voltage measurement - Pass-through voltage measurement - Pass-through current measurement ▪ Measurement ranges - ±1uA, ±10uA, ±100uA, ±1mA, ±10mA, ±100mA, 2A - ±1.2V, ±12V ▪ Sampling - 10 nsec sampling time - On-the-fly averaging - 2k sample buffer - Features - Peak detection, averaging, 1-bit decision
Digital IO	• 32 channels (extendable) with per-pin direction control • Vih 1.8V .. 5.5V programmable in groups of 8 • 100 MHz engine (full speed in the low voltage range)
Power Supplies	• 4 channels • 0.5V..7V, 2A each • Programmable current limit • Built-in ramp generator
References	• Dual-channel voltage reference - ±12V 20mA • Single-channel current reference - ±1mA 5V
Architecture	• Dedicated PMU for each group of 4 waveform generators • Additional PMU for the digital IOs, supplies and references • Switch matrix for output configuration • Integration of external SMU