MTEK SERIES

TESTER UPGRADE SOLUTION FOR LEGACY TEST SYSTEMS

- Test system upgrade for legacy semiconductor test systems
- PXI-based, cost-effective, open-architecture add-on solution
- Compatible with legacy test platforms including Teradyne, LTX/Credence, and Verigy
- Easily add performance: RF, digital, and analog capabilities

DESCRIPTION

The MTEK (Marvin Test Expansion Kit) Series is a cost-effective, PXI-based test solution that offers modern instrumentation with advanced specifications - extending the life and capabilities of legacy ATE. Based on Marvin Test Solutions' portfolio of PXI chassis and instrumentation, the MTEK Series can be readily integrated with a legacy ATE platform, providing advanced digital, analog or RF test capabilities. Based on the open architecture of PXI, the MTEK system offers a flexible and scalable solution which can be specifically configured to address a range of test needs for both packaged and wafer test applications. Designed to support both engineering and high volume production installations, the MTEK Series is the ideal low-cost solution for extending the life cycle of legacy semiconductor ATE systems.

FEATURES

The MTEK Series core platform includes a 9-slot, PXI Express chassis and a MXI interface which provides the control interface to the host ATE system.

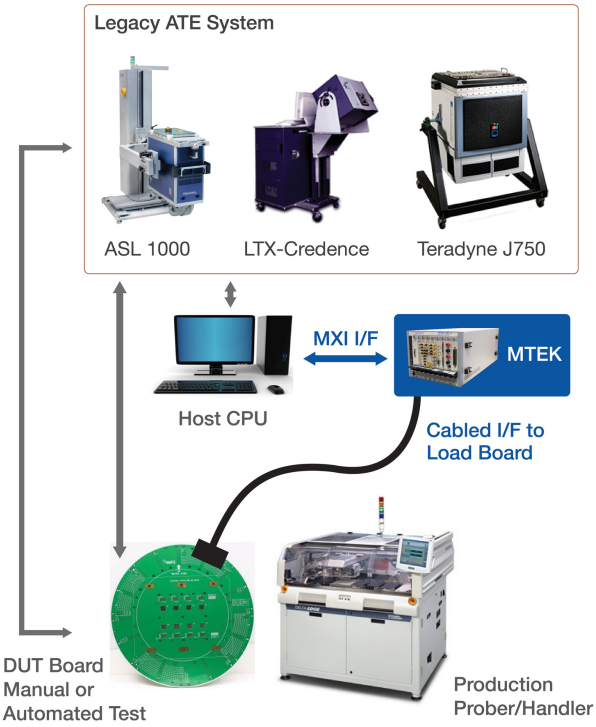
8 peripheral slots are available for supporting PXI and PXI Express instrumentation. Availble PXI instrumentation offers analog and digital capabilities including:

- 6.5 Digital DMM
- Performance Digital I/O with PMU per pin
- 200 MS/s AWG
- 70 MS/s Digitizer
- RF generator & analyzer
- Time Measurement Unit (TMU)

The MTEK's compact form factor simplifies mechanical integration with the legacy test system and users have the option to interface the MTEK's resources via the DUT's load board or the tester's receiver interface.

SOFTWARE

The MTEK system is supplied with Windows® compatible instrument drivers and virtual instrument panels, which provides interactive control and monitoring of the instruments from a window that displays the instrument's current settings and status. In addition, digital instrumentation is supplied with graphical vector development / waveform display tools and as an option, a file import tool is available for importing and converting STIL, WGL, VCD, eVCD and ATP file formats.



SEMICONDUCTOR

MARVIN TEST SOLUTIONS
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SPECIFICATIONS

MTEK PLATFORM - ELECTRICAL AND MECHANICAL	
Mainframe GX7610 9-slot, 3U PXI Express Chassis	• Supports a 3U MXI controller, 2 PXI Express hybrid slots, 5 PXI slots, and a PXI Express system timing slot • Integral Smart functions provide per-slot temperature monitoring and system power supply voltage monitoring • Note: Requires (1) PCIe slot in host computer
Input AC Power	• 115 VAC @ 10 A, 50 / 60 Hz, or • 230 VAC @ 5 A, 50 / 60 Hz • Autorange switching
Input Voltage Range	90 VAC to 264 VAC rms
Weight	22 lbs max., fully-populated
Size	4U (7" H x 8.9" W x 18" D)
ANALOG / DIGITAL INSTRUMENT OPTIONS	
GX2065 6.5 Digital DMM/Digitizer	• AC true RMS measurements: 10 Hz to 300 KHz • Voltage range: 1 μV to 300 V • Resistance ranges: 100 Ω to 100 MΩ • Current ranges: 2mA to 2 A
GX5295 Dynamic Digital I/O with Per Channel Programmable Logic Levels and PMU	• 32 input / output channels, dynamically configurable on a per-channel basis • 64 M of vector memory per channel • Drive / sense voltage range of -2 V to +7 V with PMU per pin • 100 MHz vector rate • Stimulus / Response and real-time Compare modes
GX1120 2-channel Arbitrary Waveform Function Generator	• 250 MS/s sample rate • 16-bit vertical resolution • 32 M sample memory • PLL clock generator for AWG mode
GX2472 / GX2475 Dual Channel Digitizer	• 70 MS/s 14-bit digitizer • Differential or single-ended inputs • 1 V to 20 Vpp full scale (GX2472) • 75 V to 600 Vpp full scale (GX2475)
GX3104 4-channel SMU	• 4-quadrant operation: ±20 V, ±250 mA • 24-bit ADC's,18-bit DAC's • 7 current ranges, ±250 nA to ±240 mA full scale • Up to 1 A capability for any one channel

RF INSTRUMENT OPTIONS	
M9420A, M9421A RF Vector Transceiver	• 60 MHz to 6 GHz • 160 MHz analysis BW
M9381A Vector Signal Generator	• 1 MHz to 6 GHz • 160 MHz I-Q BW
M9393A, M9391A RF Vector Signal Analyzer	• 9 KHz to 50 GHz • 160 MHz analysis BW • Supports cellular and WLAN stds
M9370A Series VNA	• 300 KHz to 26.5 GHz • Two port VNA • Single PXI slot
M9830A CW Signal Generator	• 1 MHz to 6 GHz
COUNTER / TIME MEASUREMENT UNIT AND CLOCK GENERATOR OPTIONS	
Counter / Time Measurement Unit	• Measure jitter, frequency, time interval (skew), pulse width, risetime, event timing, time interval error (TIE) • DC to 500 MHz frequency range, 6 GHz prescaler option • 20 million continuous measurements / second • 2 ps single-shot resolution (13 digits/s frequency) • Single PXI slot
Clock Generator	• DC to 4 GHz squarewaves • Differential or single-ended output • Ultra-low phase noise (0.3 ps jitter) • 20-digit resolution • Single PXI slot
ENVIRONMENTAL	
Operating Temperature	0 °C to +50 °C
Storage Temperature	-20 °C to +60 °C
Relative Humidity (Non-Condensing)	90%
Altitude	30,000 ft

Note: Specifications are subject to change without notice

ORDERING INFORMATION

MTEK Series	Tester Upgrade Solution for Legacy Test Systems

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