

COMPLETE PACKAGE

This complete test environment encompasses hardware, software, and support providing competitive advantage for all customer requirements.

EVOLVING TECHNOLOGY – INDUSTRY STANDARD

The 5th generation SMART^E continually adapts and embraces the latest technology to consistently provide best in class, cutting edge results and performance. Our software and hardware are based on well established and proven industry standards. This allows for quicker production, system integration, delivery and start-up.

PERSONALIZED

A modern, open architecture allows each SMART^E to be customized for your requirements.

RELIABLE – COST EFFECTIVE – FUTURE PROOF

Our modular implementation limits obsolescence costs, facilitates updates and upgrades, and greatly extends the test environment's overall life cycle.

SMART^E 5100 TRM

Synthetic Multifunction Adaptable Reconfigurable Test Environment

AEROFLEX
A passion for performance.



- The SMART^E's cutting edge performance is a result of the configurable modules utilizing the best industry standard hardware and software.
- The TRM configuration provides all standard tests in CW and Pulsed modes including:
 - 12-term error corrected s-parameters
 - Output power
 - Amplitude Linearity
 - Spurious/harmonics
 - Noise figure
 - Time domain
 - DC power
 - and more....
- This combination of hardware and software easily adapts to a variety of applications: electronic warfare, radar, communication, navigation and identification, military automated test equipment, and general purpose microwave test applications.

The SMART^E 5100 Transmit and Receive Module test environment provides a modular approach for implementing multi-function, configurable test systems. The SMART^E is a completely integrated environment with all the hardware and software needed for test execution, test reporting, test analysis and calibration. A SMART^E RF/microwave subsystem can perform measurements that traditionally would require five or more separate RF/microwave instruments. SMART^E utilizes multi-functional stimulus and response measurement hardware channels coupling Digital Signal Processing software (rather than a collection of dedicated function instruments) to generate signals and perform measurements.

This unique combination of integrated tests, system calibration methods, and superior throughput yields the lowest total cost of test over the life cycle of the test environment.

5000 **SMART^E**TM
SMART ENVIRONMENT 5000 SERIES

For the very latest specifications visit www.aeroflex.com

TURNKEY SOLUTIONS

Aeroflex offers complete turn-key environments. This means that the customer does not have to fund the internal development, integration and validation of the individual tests. Aeroflex does this for you.

ZERO DOWNTIME

Our quick responding technical support staff provide 24/7 support worldwide. This ensures your demanding schedule is not impaired by unforeseen issues.

OPEN ENVIRONMENT

The SMART^E software architecture allows your developers to write code interfacing with our APIs. This powerful capability allows further customization of existing measurements or design you own.

TECHNICAL TRAINING

Experts for each aspect of the test environment are available to provide a wide range of technical training.

For more information on any of our products or services please visit us on the web at: www.aeroflex.com or contact us at +1 614 888 2700

SMART^E 5100 Characteristics

A SMART^E 5100 TRM may be configured with variable combinations of the following hardware, software and support elements



Hardware

■ Stimulus subsystem

- One or more synthetic RF/microwave stimulus channels operating to 8, 12, 20, 26.5 or 40 GHz in pulsed, CW or AWG source modes
- Noise generator
- Auxiliary stimulus channel(s) for multi-tone measurements or other multi-source applications
- Power amplifier units
- General purpose DIO modules providing up to 400 MHz clock rates at LVDS levels; up to 200 MHz at programmable levels
- High performance DIO modules at up to 100 MHz clock rates in configurable control word widths and serial bit depths with timing synchronized to the T/R control signals and pulse modulation edges
- Configurable COTS DC modular or other DC power supplies
- Numerous choices of other mixed signal stimulus components

■ Signal calibration and routing

- Local calibration unit for calibrating RF/microwave signals to NIST traceable standards
- RF Switch Matrix for multiplexing RF/microwave I/O signals to multi I/O port UUTs – standard and customized designs available
- s-parameter test set for microwave vector measurements

■ Measurement subsystem

- One or more Synthetic RF/microwave Response measurement channels configured for operation to 8, 26.5 or 40 GHz with RF bandwidth of 400 MHz and either narrowband or both narrowband and broadband digitizer subsystems
- Optional auxiliary measurement channels implemented as synthetic channels or as specific purpose instrumentation components
- Switched low noise amplifier units
- High performance digitizers which may be used for a variety of signal capture functions
- Interrupt-enabled DC power supply monitoring subsystem with programmable limits

Software

- Microsoft® Windows operating system and Microsoft® Office
- National Instruments TestStand - test management software
- .NET framework
- Aeroflex Measurement Console (AMC), sequencer and user operating interface
- Aeroflex designed API DLL functions enable customer driven interfaces to the system
- TRM module measurements library
- General measurements library
- Test customization
- Simulator software

