

Custom Automated Test Equipment



*Computer Driven Test Equipment
Customized to Unique End-User
Requirements*

*Automates Production, Field, or Depot
Testing of Customer Equipment*

*System, Chassis, Module, or Board Level
Verification and Validation*

*Graphical User Interfaces for Ease of Use
and Minimal Operator Training*

*Significant Improvements in Fault Detection
and/or Isolation Capabilities*

*Maximum Utilization of Commercially
Available Off-the-shelf Hardware and
Software to Minimize Development Cost and
Schedule*

*Designs Based on Extensive Experience
with RF, Analog and High Speed Digital
Circuitry Testing*

Summation Research, Inc (SRI) has been developing automated test equipment (ATE) for organizations since its inception in 1989. The company's first major contract was for the development of module, subsystem, and system level test sets for the production verification of a multi-channel advanced technology military UHF transceiver terminal. The prime contractor for the terminal made use of SRI's experience base with communications, cryptographic equipment, and high-speed data processing logic to produce multiple ATE systems that were rated at 99.99999% fault detection for the end product. Further capabilities provided user-friendly means for fault isolation and correction, even for low level test and/or maintenance personnel.

Subsequent ATE developments have included systems ranging from rack level to simple box level test stations. Almost all systems have been designed around standard Windows based PC's, incorporating standard commercially available software packages to provide graphical user interfaces and report processing. The use of standard software packages allows customers to develop or maintain these elements after system delivery, if so desired. Depending on specific end-user requirements, highly reliable test sets to verify RF, analog, and/or digital circuitry can be specified, designed, developed and verified to the levels necessary to support either low or high volume production efforts in a cost effective and timely manner.



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Custom Automated Test Equipment Capabilities

General Technologies

Communications Equipment

RF Frequency Converters
Demodulators/Bit-Synchronizers
Decoders/Frame Processors
Encoders and Modulators
High Power Amplifiers
Spread-spectrum (Direct or Frequency Hopping)
DC to 40 GHz

General Electronics

Audio/Visual Interface Equipment
High-speed Data Processing
General Purpose Processing Logic

Typical Features

Low Cost Development, Fast Turn-Around
Free Technical Support
Reusable Test Systems with Expandability
User-Friendly Operation
Custom Designs (where necessary)
Complete Fixture Capabilities
Thorough and Complete Documentation

Services

Requirements/Concept Development

Identify Critical Test Requirements
Specify Fault Detection/Isolation Needs
Test Procedure Documentation
ATE Concept Development

Design/Development/Support

Board/Module/Equipment/System Level Testers
Full Validation and Verification of Resulting Designs
Final System Installation, Verification, and On-site support

Other Support Services

Equipment Certification for FCC, IC, ETSI and Others
Environmental Qualification
Equipment Calibration

Custom Hardware

Wiring equipment racks
Custom test fixtures
Custom cables & connectors
Specialized Test Designs and Equipments

Typical Software

LabVIEW
LabWindows/CVI
ComponentWorks
Test Executives
NI-DAQ
Database (Misc)
Web reporting
Web monitoring/control
Data acquisition and analysis
Instrument/process control

* All specifications subject to change without notice or obligation to retrofit.

Consult factory for custom options and/or alternate specifications



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