A2500 FUNCTIONAL TESTER

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A 2500 Functional Tester

Functional Test Solutions
- **Go/No Go Testing**
- **Card Edge Functional Test**
- **End Use Simulator**
- **Diagnostic Testing**

System Architecture
- **Application specific**
- **Custom Graphical User Interface**
- **Pre-Configured Platform**
- **Scalable**
- **Expandable**

Test Program Set
- **Avionics**
- **RF**
- **Digital**
- **Analog**
- **Boundary Scan**

Tools and Standards
- **Industry Standard Software Tools**
- **Interactive Program Flow**
- **Built in Virtual Reality Interfaces**
- **LabView Based**

System Support
- **System Self Test**
- **On-Site Support**
- **Calibration Services**
- **System and Instrumentation Warranty**

System Overview

The A2500 is designed to be a scalable and expandable ATE capable of providing reliable functional test solutions for any electronic assembly or Circuit Card Assembly.

A2500 System
- Scalable to allow for further growth in functional testing
- Ease of use through custom Graphical User Interface and developed Test Applications
- Can be integrated into existing test environment
- Minimal maintenance and Built in Self Test
- Meets and exceeds technical requirements in the industry

A2500 Architecture

A2500 is an integrated comprehensive test system built on industry standards that incorporates readily available commercial test instrumentation. Applications written by AES Engineers are executed from the on board Embedded Computer that controls all system Capabilities. With intuitive applications and instrumentation, the A2500 provides effective analysis in providing pass or fail results.

Hardware Architecture
- 19" standard rack enclosure with industrial PC
- Integrated PXI instrumentation Rack
- Programmable PSU
- GPIB integrated instrumentation as needed
- VPC Interconnect Solutions for wide range of test ability

A2500 Application

Example application to the right shows end use simulator developed for Inertial Navigational Unit testing.
AES engineers can build and design virtual Reality into your display applications to enhance ease of use of graphical user interface

Software Architecture
- Microsoft Windows Environment
- LabView/ LabWindows CVI
- Mil Std 1553/ Arinc Protocols
- Third party software integration
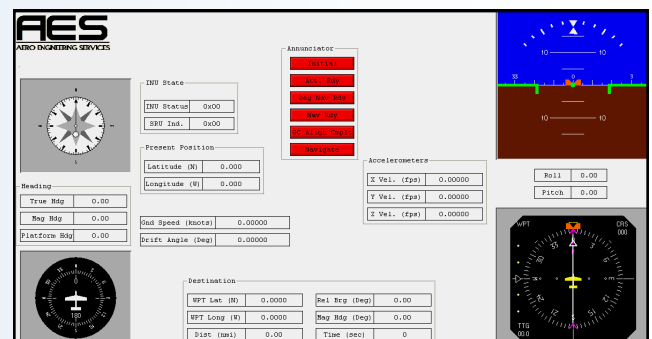
A2500 and ICFT

The A2500 and ICFT Tester combination can serve as a complete, cost effective electronics test solution replacement for obsolete test equipment.

The A2500 can be used in combination with the Integrated ICFT Tester in order to accomplish complete diagnostics testing to the level of In Circuit Functional Testing.
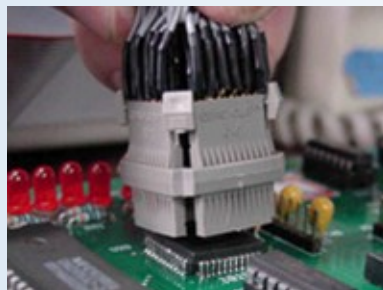
Compete ICFT programs enables user to trouble-shoot, identify, and replace failure components in Circuit Card Assembly testing.

ICFT System

Features Include

- In Circuit Functional Test
- VI Learn and Compare
- R, L, C, V, F Measurements
- Guided Probe Back Track
- Boundary Scan Test

ICFT Overview

ICFT Tester is a cost effective ATE system, designed to cater to the needs of PCB test and repair depots, keeping in mind the changing PCB technology and the challenges in testing them off-line. It can provide complete PCB test and diagnostic functions for any kind of PCB, including the latest very high density, complex PCBs with high pin count PQFP, FPGA and VLSI chips.

ICFT Test Software

An Innovative Test Software for ICFT

- Functional test facility for testing individual ICs in or out of circuit
- IEEE Standard VHDL used in behavioral description of the function of the chip in its library
- Test Language for Analog/ Mixed signal device stimulus and output evaluation
- Auto compensation is extended for all digital devices and thus LSI/VLSI chips can be tested in its In-Circuit configuration without the need to learn from a known good board
- On-line instant simulation helps testing devices in any In-Circuit condition
- Identify Unknown or House codes devices including LSI devices
- Unified library of 31k+ devices and device test comprehensives report for validation of library test programs developed by a user.
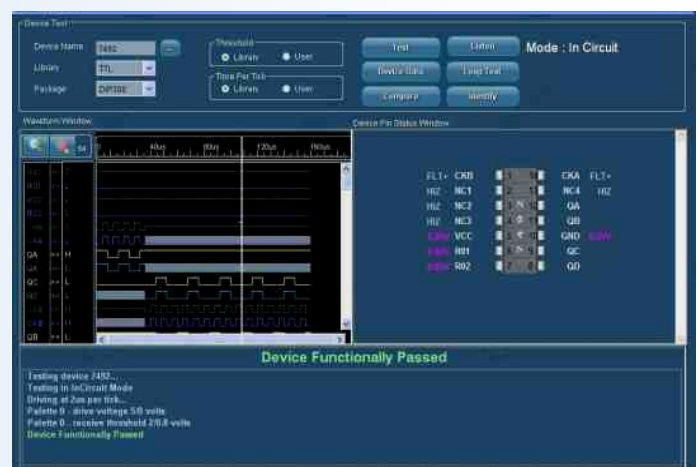
A2500 Interface

Utilizing VPC's variety of high performance contacts with a standard modular format allows the A2500 Inter-Connect modules to be applied to a host of various size Inter-Connect devices and instrumentation.

Each test interface can be configured or designed specifically for every application in order to provide effective testing according to industry standards.

AES Engineers design and implement inter-connect solutions for LRU and SRU testing with the A2500 for Aviation, Transit and Maritime Industries
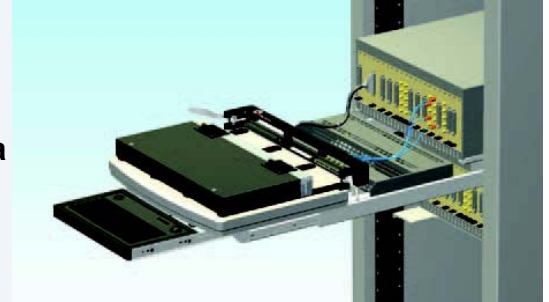
A2500 Maintenance

Self test

The A2500 Self test is designed to provide an effective in depth test of the systems hardware and software functionality. Each self test is unique to every system and is dependent on hardware and software configuration.
Self test execution can be implemented based on company test protocols

Calibration

Calibration time tables statuses are recorded in the A2500 environment in order to ensure instruments are performing optimally. All instruments requiring calibration in the system should be calibrated to national standards. AES can assist and provide a plan of action for support of the calibration process.

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