Production Automation

Fixture and Test Program Migration Packages:

Fixture and Test Program Migration for other testers
Hard- and Software compatible to the MTS family

Other Hardware Options:

Automatic Vacuum Control for single and dual well fixtures
Automatic Handler or complete in-Line Station
Spare Parts Kit
Selftest Fixture
IEEE-488 Interface and PXI Controller
Barcode Reader

C-LINK DTM including:

Board Testability Report
Automatic fixture design
Drill file and wire list outputs
Fixture plot with automatic label positioning
Generation of repair data (Layout, Schematics)
Schematics Backannotation

Tester-Software

CITE (Computer Integrated Test Environment) including:

Board Description Editor
Analog, Digital and Complex Component Library
Library Manager
Automatic Test Program Generator (APG)
Versions and ECO Handling
Flow Designer and Menu Aided Programming
IEEE-488 Instrument Library
Pattern Executive (PatEx)
Interpreter Mode and Debugging Tools
Test Program Translation
Layout and Schematic Display
On-line Help and User Guide

In-Circuit Test

Analog ICT

- 3 Voltage/Current Sources with programmable current/voltage limitation
- 0-±10V DC-100kHz, 0-±25V DC-100kHz and 0-+100V DC
- Measuring Voltage up to ±25V DC-100kHz, up to +100V DC
- Measuring Current up to ±100mA DC-100kHz
- Resistance 0.1 to 100MOhm
- Capacitance 1pF to 100mF
- Inductance 10µH to 1000H
- Orientation of polarized capacitors
- Opens Detection of IC pins and connector test

Digital ICT

- Programmable High and Low levels for drivers between +/-10V
- Programmable High and Low thresholds for sensors between +/-10V
- Every driver monitored through its own sensor
- Automatic Output Voltage Regulation
- Backdriving Current +/-500mA
- Programmable Inter Strobe Time
- Bus Commands, Count, CRC
- Comprehensive Component Test Library

Functional Test

- Up to 4 prog. Power Supplies 9V/10A, 24V/5A, 45/3.5A
- DC Source DC measurement 0-±2V & 0-±25V
- Frequency and Time Measurement Unit 0.1 - 100MHz
- Resistor Decade 1Ohm – 16MOhm
- Function Generator up to 30MHz
- Boundary Scan Tests

- Bus Communications (CAN,I^{2}C,RS232,RS485, etc.)
- Open Collector Module (32/Module)
- User Test Module
- Memory Test Module
- Digital Multimeter(DMM)
- Wave form Analyzer /FFT

Software

- Microsoft Windows 2000/XP
- Microsoft Visual Basic as a test language
- CITE - Computer Integrated Test Environment
- C-LINK - Link Design to Test
- QMAN - Quality Management Solutions

- Board Layout on screen
- Board Schematics on screen
- Measurement Database and Datalogging
- TCR - Test Coverage Report
- QCAM - Test Stability Report

Digitaltest Offices

Distributors & Service

www.digitaltest.net

Highest Throughput and Highest Quality of Test at reasonable cost

Short time to market through links to CAD, Testability Checks, Automatic Fixture Design, Automatic Program Generation and Auto Debug

Automatic test program generation should not just mean generating the right stimulus and selecting the proper guard points. It should mean utilizing CAD information or even Gerber data, reading your Bill of Material in the same format as it is made available to you, knowing your test strategy and automatically generating your test program. It is not just for generating the in-circuit test program but for generating all parts that can be done automatically such as the boundary scan test programs.

Highest Fault Coverage through flexible Test Strategies: Analog and Digital In-Circuit Test, Analog and Digital Functional Test, Memory Test, Flash Programming and Boundary Scan

Best footprint in the industry

Modular System Structure allows different test strategies and system expansion as your requirements increase

Network to link Testers, Repair Workstations and Monitoring Stations together
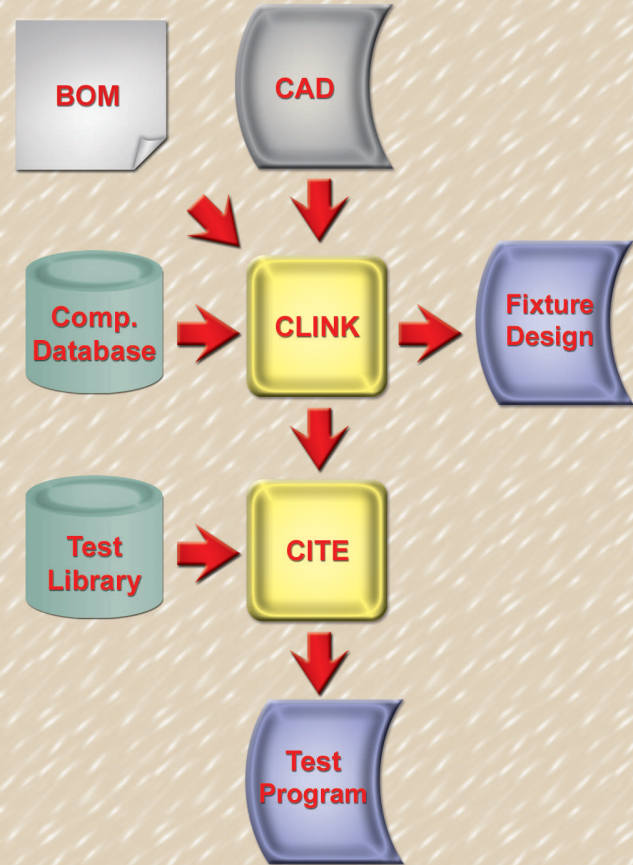

Sigma

MTS 300
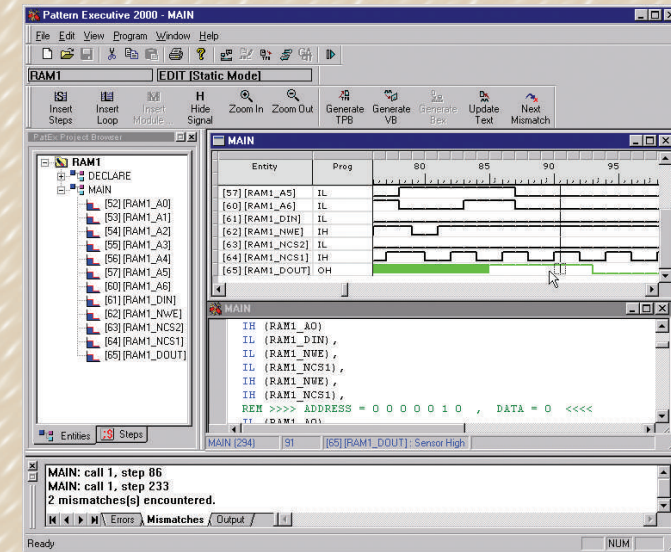
The Sum of All Test Strategies

Sigma MTN 300

Fast Test Program Development

- Links to CAD through C-LINK
- Importing data from over 60 design formats
- Configurable BOM Reader
- Comprehensive Component Database
- Vast test module library
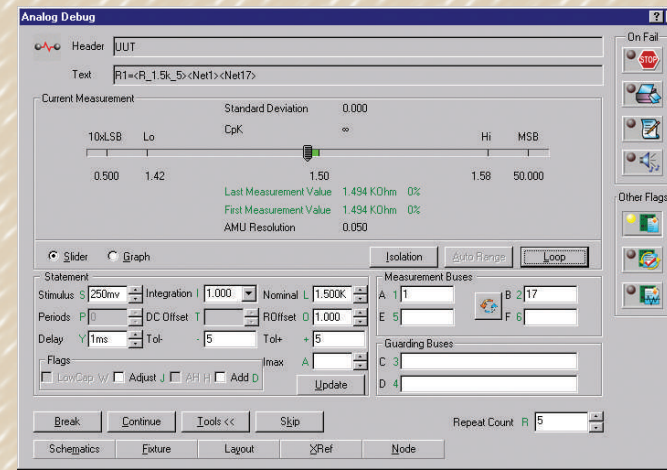- Automatic test program generator

Easy Program Debugging

- Extensive tools for test program debugging
- Auto Debug feature for passive components
- All board information on screen
- All component information including data sheets
- Board Layout
- Intelligent Board Schematics

High Fault Coverage

Through multiple test strategies

- Analog & Digital ICT
- Vectorless Test
- Functional Test
- Memory Test & Flash Programming
- On-Board Programming
- Boundary Scan

High Throughput

- DSP based Analog Measurement Unit allows fast and accurate measurement
- One measurement each 4μsec.
- Up to 1000 measurements per sec.
- Up to 1000 short measurements per sec.
- Up to 500 open-tests per sec.
- Production test programs run in compiled mode

Sending measurement parameters — Closing relays — Measurement start — Measurement end

100μ 500μ 100μ
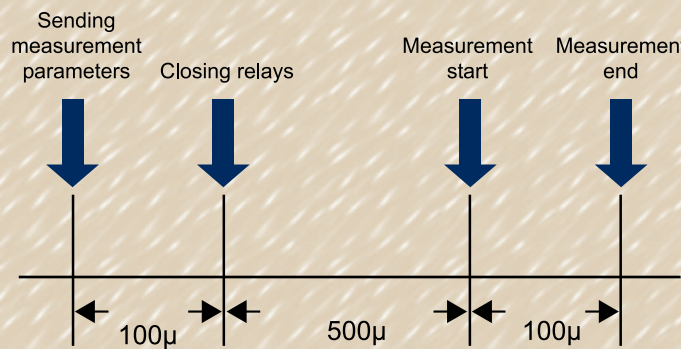
Stable measurement in less than 1 msec. created out of the average of 25 measurements (one measurement each 4μsec.)

Reducing Test Cost
Reducing Time to Test
Improving Test Quality

High Test Quality

Analog

- Reed Relays Switching Matrix (analog) 128 pins per module, up to max. 3456 non-multiplexed pins
- Three stimulus sources ±10V, ± 25V+100V
- Programmable voltage stimulus with current limitation
- Programmable current stimulus with voltage limitation
- DC and AC up to 100kHz
- 2,3,4 and 6 wire measurement
- Measuring real and imaginary impedance simultaneously
- Reed Relays allow up to 100V
- LowCap feature allows measurement of very small capacitances 1pF
- Orientation of polarized capacitors
- Connector test
- Opens detection of digital components

Functional

- Board power up and current consumption
- Time and frequency measurement
- Source and stimulus voltages and currents
- Resistor Decades and Open Collector boards
- Serial data protocols (CAN, I^2C, RS232)
- Menu Aided Programming for functional test development
- Boundary Scan Test

Digital

- Hybrid Pins (analog and digital) 64 pins per module, up to 1600 non-multiplexed pins; any mix of analog and hybrid pins is possible
- Non-multiplexed 1:1 pin architecture
- Each driver monitored through its own sensor
- Programmable High & Low driver levels and sensor thresholds
- Automatic regulation of output voltage to programmed value
- Voltage monitoring and current monitoring for each pin
- Bus Commands, Count commands and CRC commands
- Measure High, Low and Midrange
- Programmable Inter Strobe Time
- Backdriving current ±500mA
- Backdriving protection defines back driving time according to back driving current

On Board Programming

- Testing and programming of memory components
- Flash programming and serial device programming
- Configurable memory structure
- Supports high level programming language
- Allows simple programming and debugging through menus

CITE

Powerful Software Environment

Automatic Test Program Generation

- Test program language: Microsoft Visual Basic

Huge Test Library

- Several thousands of test models for analog components
- Extensive digital test libraries include component information, enable and disable information as well as test sequences, combined with Datasheets
- Library Manager for adding, modifying of library models

Test Program Qualification

- Test Coverage Report (TCR)
- Test Stability Report (QCAM)

Data Logging

- Logging of board test data to a certain board ID for all or user defined measurements
- Logging of board failure data to a certain board ID for board repair and Quality Management

Quality Management Software (QMAN)

- Supports all testers not only MTS testers
- Supports multiple test steps and ensures that the boards will go through all test steps in the right sequence
- Using board failure data and repair information to highlight weaknesses in the production process
- Trend Alarm
- Failure Catalog
- Numerous reports can be generated such as First Yield Report, Top n faults, Top n fault causes ..etc. as well as user defined reports

digitaltest

The Evolution of Test