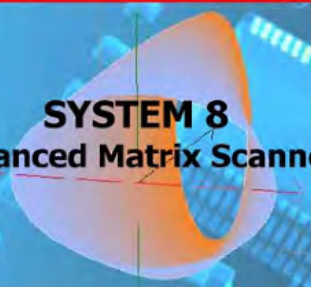
Test and measurement equipment for the maintenance and repair of electronics

- Speed up processes with interactive test sequences
- Reduce operator errors with automatic instrument setup
- Detect fault conditions not visible with other instruments
- Increase test coverage with innovative test techniques
- Diagnose programmable components with JTAG
- Generate your own schematics from sample PCBs
- Protect your business against counterfeit components

NEW PRODUCT



SYSTEM 8
Advanced Matrix Scanner

ABI Electronics

ABI Electronics is a UK-based company that designs, manufactures and distributes test, measurement and fault diagnostics equipment for the electronics industry.

ABI has developed and implemented a range of unique test techniques to support today's requirements for testing, measuring, maintaining and repairing PCBs.

The product range is designed to reduce time to test and repair, to simplify operation and to help organise and centralise information. It also offers access to unique techniques that are not available with other instruments.

COSINUS® MESSTECHNIK GMBH

Cosinus Messtechnik GmbH
Rotwandweg 4
D-82024 Taufkirchen
Tel 089-665594-0
Fax 089-665594-30
e-Mail: office@cosinus.de
Internet: www.cosinus.de

Universal diagnostic system



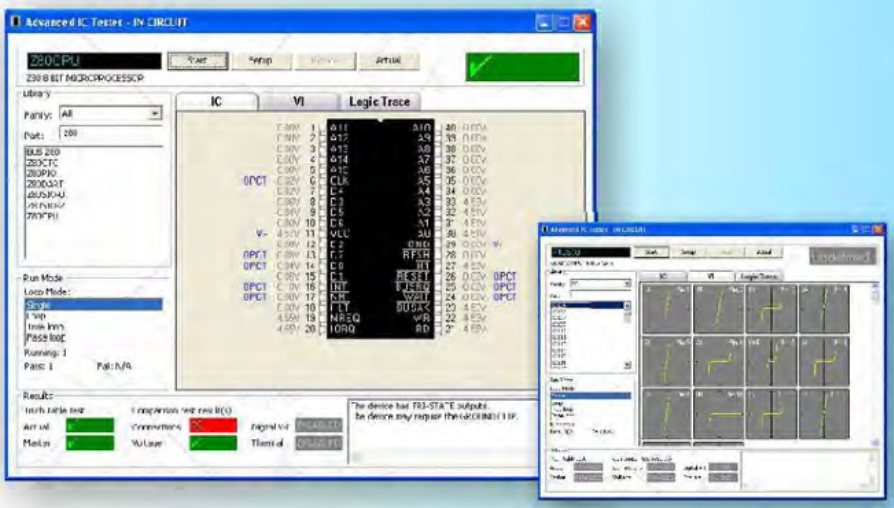
SYSTEM 8 BoardMaster 8000 PLUS

This is a uniquely versatile and self-contained solution offering a comprehensive set of test instruments for the maintenance and repair of digital and analogue PCBs.

- ✓ Reduce fault-finding time with automated test features
- ✓ Become self-dependent for all your maintenance needs
- ✓ Lower capital expenditure with one solution for all applications

Test capabilities

- In and out-of-circuit functional tests for digital ICs
- In-circuit functional tests for analogue ICs and discrete components
- Board level functional tests (with test fixtures)
- Multi-channel connection and voltage tests
- Power-off V-I signature tests



Advanced test features

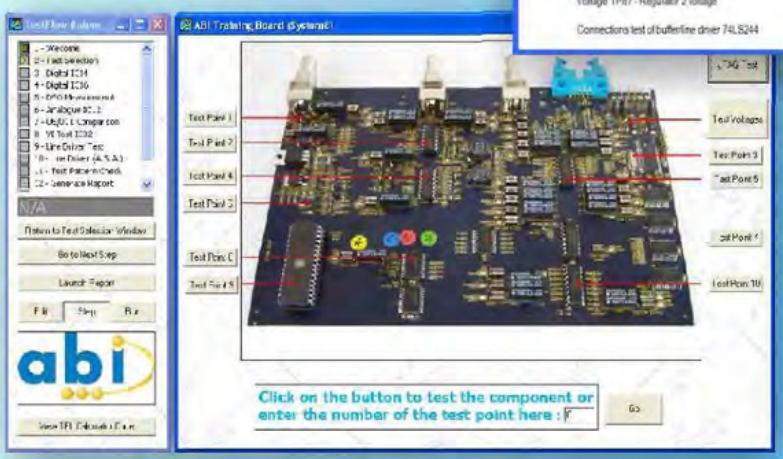
- Custom logic tests with graphical generator
- Functional test program generator
- Integration with third party applications
- IC identification for unknown components
- Dynamic tests for gate-activated devices
- Custom traditional instruments
- Data logging to file or database

A **TestFlow** is a step by step sequence of tests that guides operators during the fault-finding process. Along with the instruments required for the tests, instructions, photos, videos and other documents can be included.

- ✓ Speed up test operations with the automatic instrument setup
- ✓ Reduce the risk of inaccurate measurements by saving the test parameters
- ✓ Remove data interpretation by using the automatic results comparison
- ✓ Free up engineers time by allowing semi-skilled operators to run TestFlows
- ✓ Improve traceability by generating test reports

Integrate in your TestFlows:

- PDF documents/datasheets
- Videos and flash animations
- Microsoft® Office documents
- Internet pages and websites
- Images, photos, schematics
- Links to external applications



V-I signature tester with frequency sweep

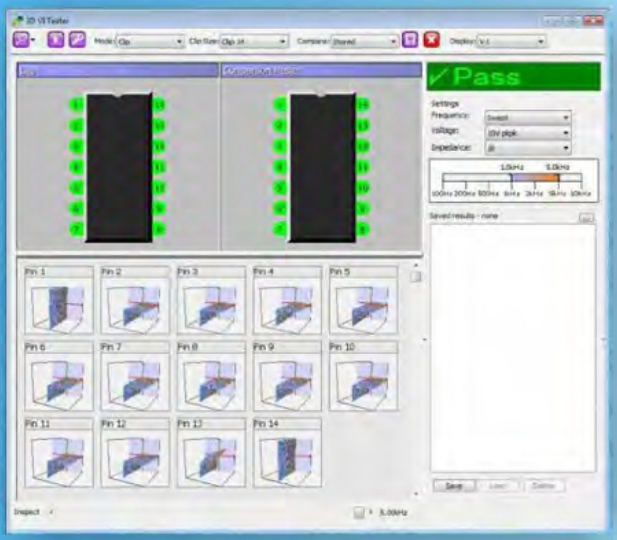
NEW

Advanced Matrix Scanner (SYSTEM 8 AMS)
The latest addition to the SYSTEM 8 range, the AMS module offers multichannel V-I testing with frequency sweep and pulse outputs for the diagnostics of ICs and components under power off conditions.

- ✓ Increase test coverage with automatic frequency sweep
- ✓ Diagnose PCBs that cannot be powered up
- ✓ Speed up measurements using the multichannel connector
- ✓ Increase throughput with automated test sequences

Test capabilities

- V-I signature tests with sweeping frequency
- V-I signature tests (static frequency)
- Dynamic tests with pulse outputs
- Multi-reference V-I signature tests (Matrix V-I)

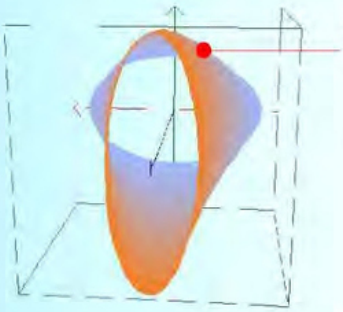


What is V-I signature testing ?

A V-I signature is obtained by applying an AC voltage to the device under test, measuring the current at each point and plotting the response on a voltage/current graph. The SYSTEM 8 AMS adds an automatic frequency sweep to increase the level of test coverage. Analysing and comparing signatures can lead to finding faults such as:

- ✓ Leaky components
- ✓ Incorrect value components
- ✓ Internally damaged components
- ✓ Inconsistent devices over frequency range
- ✓ Short and open circuits

V-I signature



V-I signature with frequency sweep

No power = safe test !

V-I signature testing is a proven technique that is safe for components under tests because the signatures are acquired when no power is applied to the device. More importantly, V-I signature testing can be used on a heavily damaged PCBs that cannot be powered up.

SYSTEM 8 software

NEW Software

Features

- New virtual instruments (redesignable)
- New TestFlow report generator (customisable)
- New user interface with customisable toolbar
- New instruments for AMS module
- Live calculator functions and data logging
- User access manager with passwords

SYSTEM 8 Ultimate

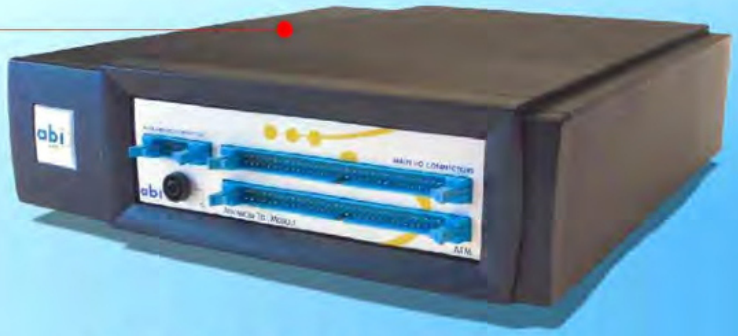
Diagnostic solutions




SYSTEM 8 Modules
Combine modules and their test capabilities to suit your requirements.
The BoardMaster 8000 PLUS is top of the SYSTEM 8 range.

Advanced Test Module (ATM)

- In-circuit functional testing (all logic families)
- Out-of-circuit functional testing
- Board level testing (voltage drive/sense, V-I signature)
- Graphical generator for custom test vectors
- Connections, voltage, thermal and V-I signature tests
- IC identification of unknown parts
- Short locator



Board Fault Locator (BFL)

- In-circuit functional testing (TTL/CMOS)
- Out-of-circuit functional testing
- Graphical generator for TTL/CMOS test vectors
- Connections, voltage, thermal and V-I signature tests
- IC identification of unknown parts
- Short locator

Analogue IC Tester (AICT)

- In-circuit functional testing of analogue ICs
- In-circuit functional testing of discrete components
- Connections and voltage tests
- V-I signature tests
- Matrix V-I tests
- Dynamic tests for gate-activated devices

Multiple Instrument Station (MIS)

- Virtual digital storage oscilloscope
- Virtual floating digital multimeter
- Virtual function generator
- Virtual frequency and event counter
- Programmable analogue and digital I/O
- Integrated calculator with data logging

Variable Power Supply (VPS)

- Adjustable logic supply with over voltage protection
- Adjustable positive supply with current limit
- Adjustable negative supply with current limit
- Virtual instrument

SYSTEM 8 custom solutions

PC Case Solution
(PC included)

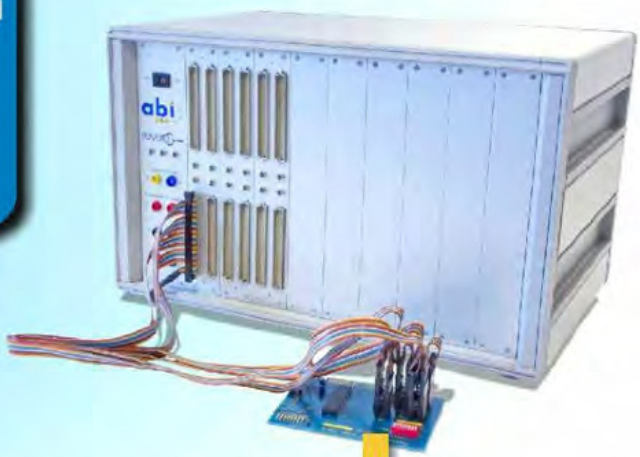
External Case Solution
(USB interface - no PC)

Rack Solution
(PC included)

Schematic learning system

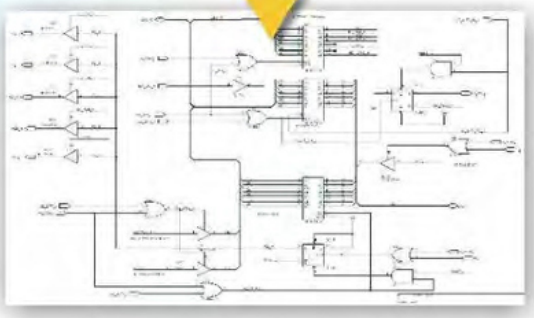
RevEng
A simple to use system designed for the generation of professional schematics from a sample board.

- ✓ Implement a maintenance strategy independent from the OEM
- ✓ Cut down fault finding time by using schematics
- ✓ Replace less components and therefore reduce spares inventory
- ✓ Reduce the number of board write-offs



Key benefits

- Software guidance for clipping and probing
- Learning process can be stopped and restarted at any time
- Independent of the PCB's complexity
- Suitable for functionally faulty PCBs
- Professional software suite for schematics generation



Boundary scan tester & programmer


JTAGMaster

Complete and powerful solution for the testing, fault-finding and in-system programming of complex PCB assemblies with JTAG devices.

- ✓ Increase test coverage by accessing components that cannot be probed
- ✓ Program devices in-system irrespective of the manufacturer
- ✓ Integrate the JTAGMaster easily into your existing setup
- ✓ Implement this solution at all levels, from R&D to production

Test coverage

- Manufacturing defects (eg. open circuit/shorted pins)
- Logic errors (eg. pin failing to toggle/faulty device)
- Programme errors (eg. incorrect/corrupted program)
- Faults in external circuitry (eg. missing or stuck input signal)

Features

- Individual pin monitoring with graphical interface
- Non intrusive testing during normal PCB operation
- Extest mode for the manual control of pins
- Record and compare data on complete JTAG chains
- Generate documented test sequences

Precision active oscilloscope



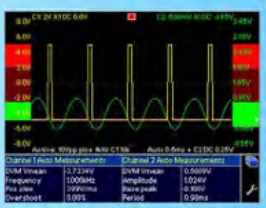
CircuitMaster 4000M

This precision active oscilloscope combines the power of a 100 MHz DSO, 0.1% accurate DC measurement and V-I signature analysis with a unique test technique (active mode) to provide a wealth of circuit diagnostics.

- ✓ Combine your test equipment into one unit
- ✓ Benefit from power on and power off tests
- ✓ Reduce operator errors with automatic setup through software
- ✓ Speed up test processes with automated test sequences

Key features

- Simultaneous DC voltage measurement and AC waveform acquisition
- Simultaneous voltage drive and sense with active mode
- DC and AC function generator
- V-I signature analysis with pulse outputs
- Automatic signal comparison




Active mode testing

- ✓ Distinguish between open circuit, short circuit and output low
- ✓ Check for component reliability under load
- ✓ Check for phase lag with AC signals

V-I signature analysis

- ✓ Test resistors, inductors, capacitors and semiconductors
- ✓ Check for internal damage of component structure
- ✓ Check for leaky and incorrect value components
- ✓ Check for short and open circuits

PC user inteface

The CircuitMaster 4000M can be connected to a PC via USB to save reference waveforms, to set up the unit automatically and to generate test sequences with documentation.

Counterfeit IC detector

SENTRY

A unique solution for the quick detection of counterfeit and non conforming components. SENTRY is an ideal addition to an anti-counterfeiting program for component suppliers and electronics manufacturers.

- ✓ Protect your production/distribution facility against counterfeit parts
- ✓ Reduce delays and costs involved with re-orders and re-works
- ✓ Preserve your image for quality and high standards

Key features

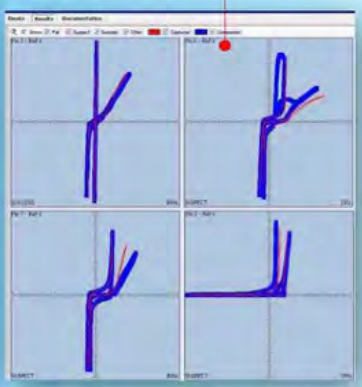
- Suitable for digital and analogue components
- Compatible with all packages using adapters
- Minimal knowledge of electronics required
- Flexible software with report generator

Did you know ?
It is estimated that yearly export of counterfeit ICs accounts for more than 8% of global merchandise trade, equivalent to a financial loss of over $10 billion.

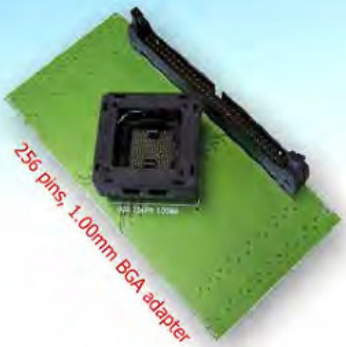
SENTRY operation

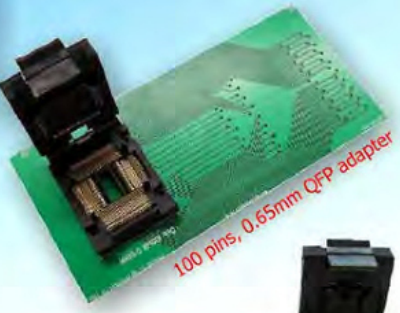
The fundamental principle of SENTRY is to acquire the PinPrints of a reference device, to store this information and to compare these PinPrints with another device under test. The reference device can be the first component of a batch or a device imported to the library.

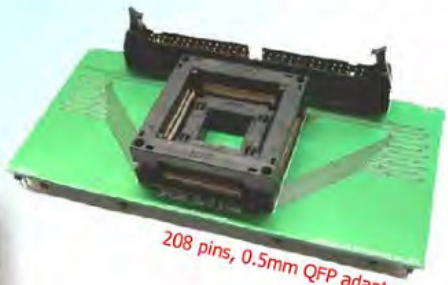
PinPrints = the electrical characteristics of each pin of a device when submitted to a power-off dynamic stimulus. The response from each of the pins is directly related to the nature of the device, its internal structure and the manufacturing processes it was subject to.



- Automatic and configurable test parameters
- Library management with import/export functions
- Design mode for packages and adapters
- Addition of reference documents supported
- Calibration kit available





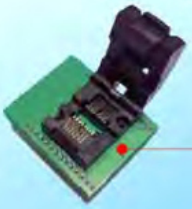


Out-of-circuit functional testers

ChipMaster and LinearMaster Professional
Popular handheld solutions for the functional test of digital and analogue devices out-of-circuit.

Features

- Functional tests from internal library
- Diagnostic information for individual pins
- Conditional loop tests for intermittent faults
- IC identification for unknown components
- Functional test program generator



Suitable for SOIC packages with adapter

Accessories

EZ Prober
16 pin with 5.5mm gauge, 28 pins with 10mm gauge - custom designs available

MultiProbe Range
0.050" pitch 10 pin (SOIC and PLCC) and 0.100" pitch 8 pin (DIL).

PenProbe 4-piece Set
Type 1 (3 pin transistors, SOT23 and similar), type 2 (3 pin transistors, TO72 and similar), type 3 (3 pin transistors, TO220 and similar), type 4 (3 pin transistors, TO92 and similar)

SOIC test clip and cable set
8,14,16 pin narrow and 20, 24, 28 pin wide

PLCC test clip and cable assembly
20, 28, 44, 52, 68 and 84 pin

QFP test clip and cable assembly
100, 144, 160, 208 pin

With ABI, you're in good company!

Telefónica
BBC
National Grid
ASMAR
eTb
Loughborough University
SENAI
AIRBUS
SNCF
ThyssenKrupp
EGYPTAIR
worldskills
RENAULT
台灣高鐵 TAIWAN HIGH SPEED RAIL
ROYAL AIR FORCE
THALES
NASA
SENA
ALCATEL
MBDA MISSILE SYSTEMS
at&t
BAE SYSTEMS
SIEMENS
METRÔ
ALAMYS

Cosinus Messtechnik GmbH
Rotwandweg 4
D-82024 Taufkirchen
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