

Measurement Systems



- Reduced Test Time
- Increased Test Quality
- Test Tracking & Reports
- Low NREs
- Low Capital Cost
- Self Documenting
- Turnkey Systems Available
- Self Calibration & Verification

Professional quality PC-based functional test system ... *complete and ready to use*

The **Circuit-Traq PRO** test system is a modular and extensible hardware system coupled with an integrated suite of software tools to design, configure, program, and execute comprehensive functional testing of electronic circuit boards, assemblies, and finished electronics products.

This industrial strength test system replaces manual testing methods and custom-built, one-of-a-kind, test equipment with a standard PC-based functional test platform, complete with Windows™ test programming tools, plug-in TestModules (supporting up to 1,200 test points), and interchangeable, ready-to-wire TestFixture kits.

Programmable, flexible, easy to use, and affordable, the Circuit-Traq Pro test system enables electronics manufacturing firms to significantly reduce NRE's, production lead time, and the capital cost of functional test equipment.

TestStation 1000

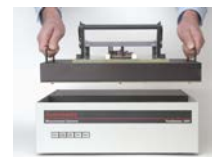
The TestStation 1000 (shown below) is the benchtop control unit of the Circuit-Traq PRO test system. The TestWare test program running on the host PC sends test instructions to the TestStation over a USB link.

The TestStation holds up to 20 TestModule boards that generate test signals to stimulate the inputs of the Unit Under Test (UUT), measure the response of the UUT, and determine if it is working properly under all of its operating conditions.



TestFixture Kits

Inexpensive TestFixture Kits (shown above) are easily configured by end-users to make test connections between the TestStation and the input/output pins on the UUTs.



TestFixtures plug into the top of the TestStation, where they are pulled down by a self-contained vacuum system to make

contact with test signal pins.

TestFixtures are interchangeable to allow any number of UUTs to be tested on a single Circuit-Traq PRO test system.

Electrical connections to the UUT can be made with plug-in connectors or with the Versi-Traq Bed-of-Nails fixture (see below).

Measurement Systems

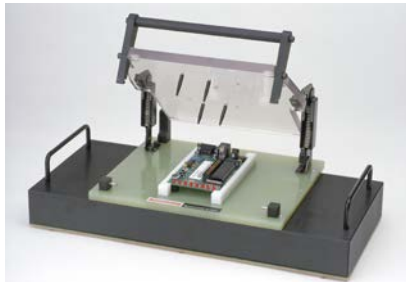
Each TestFixture is assigned a unique ID code that is read by system software to insure that the correct test program is used in production.

TestFixtures also accommodate five plug-in Adaptor Boards that allow users to easily add custom test signals and circuits.

The internal wiring may be done with ribbon cable and IDC connectors or by wire-wrap

Versi-Traq Fixtures

Inexpensive Versi-Traq Clamshell Bed-of-Nails fixtures (shown below) are optional add-ons that mount on top of the TestFixture Kit, providing reliable pogo-pin connections to the UUT for high volume production testing.



TestModules

TestModules are circuit boards that plug into the TestStation and provide the interface between the TestWare test control software running on the PC and the individual signals to and from the UUT.

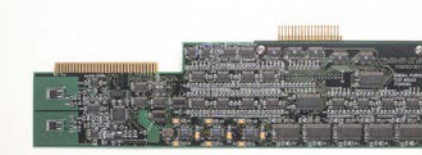
The Circuit-Traq PRO test system owes much of its flexibility to the ability to add various TestModules to the TestStation as needed. Up to twenty TestModules may be installed in the TestStation.

System Control TestModule

The System Control TestModule always occupies the first slot in the TestStation. It receives test commands sent over the USB link by software running on the host PC, transfers test instructions to other TestModules on an internal bus, and sends measured UUT response data back to the PC for processing.

The System Control TestModule also provides the following test signals:

- Power supplies, +5V and $\pm 12V$ @ 500 mA
- A stable voltage reference, +10.00V
- A serial port, RS-232/422/485
- A precision DAC, 16 bits $\pm 12.8V$
- A precision ADC, 16 bits $\pm 12.8V$



General Purpose TestModule

The General Purpose TestModule, which is the primary source of test and measurement signals for the Automatiq Test System, has the following features:

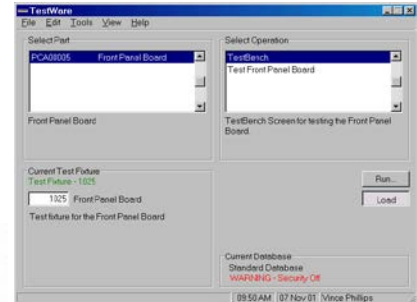
- Outputs: 16 independent DAC voltage output channels (used to stimulate the inputs of the UUT) $\pm 12.8V$, 12 bits
- Inputs: 16 independent ADC voltage input channels (used to measure the outputs of the UUT) $\pm 12.8V$, 12 bits
- Any input or output signal may be set in software to be either a digital logic signal or an analog signal
- A positive programmable power supply, 0 to +12.8V, 250 mA, 11 bits
- A negative programmable power supply, 0 to -12.8V, 250 mA, 11 bits
- All test signals in the system can be calibrated automatically

Additional TestModules

Additional TestModules are available (see individual datasheets for specifications).

TestWare

TestWare is a suite of Windows™ software tools used by design engineers, test engineers, and production personnel to design, program, debug, and run functional tests on the Circuit-Traq PRO test system. TestWare also has tools to serialize, print barcodes and test reports, and store test records in a secure database.



TestWare is a BASIC like programming language, with extensions to enable the rapid development of test code, including:

- Test code development software designed for test engineers
- Test design and code development software for product design engineers
- Routines to print PCB labels, barcodes serial numbers, and test reports
- Support for bar code readers
- Automatiq self-verification and self-calibration.
- A built-in database to store and retrieve test results information

Circuit-Traq PRO

The Circuit-Traq PRO comes as a complete ready-to-use test system that includes:

- TestStation 1000
- System Control TestModule (1)
- General Purpose TestModules (2)
- TestFixture Kit (1)
- USB and power cables
- TestWare software
- Reference Manual and Documentation

Turnkey Systems

Fixed price turnkey systems are available. Contact Automatiq Measurement Systems for pricing

Prices

TestSystem \$10,995

TestFixture Kit \$295

Bed-of-Nails fixture from \$350