ATS-AutoPoint Desktop (APDT)

Next-gen, automated circuit board diagnostics and probing system

Desktop Flying Probe

The ATS-AutoPoint Desktop (APDT) system is a small, desktop, flying probe system that provides automatic probing of an electronic circuit. Powered by TestVue software for ease-of-use and an intuitive graphical programming interface, the AutoPoint DT rapidly probes required networks on a circuit to determine good and suspect parts.

By measuring analog signatures on each network and comparing them with previously learned and stored signatures, the AutoPoint DT can identify causes of failure in a circuit on a single pass.

Featuring an intuitive user interface and clear, on-screen instructions, the system is simple to program and quick to analyze a network. The AutoPoint DT can be applied to any circuit removing the physical restraints of test fixtures and enabling error-free probing of analog components such as resistors, capacitors, diodes etc. for complete and accurate diagnosis of fault causes.

Programming the AutoPoint DT

The AutoPoint DT is powered by TestVue Software and therefore, will be immediately familiar to any existing PinPoint user.

The programming process starts by identifying two fiducials (reference points) on the circuit board. These fiducials are used to give the AutoPoint DT a physical X-Y datum (reference point) and to remove any skew on the placement of the board in the system. Using the built-in camera mounted on the AutoPoint DT probe assembly, the user directs the probe to the exact points used for the references.

KEY BENEFITS

- Automatic diagnostics and probing

- Supports power-off and power-on test techniques

- Expandable to 2 (two) probes

- No knowledge of board required - usable on all circuits

- Error-free probing for accurate and fast diagnostics

- Powerful and intuitive TestVue software for ease-of-use

- Standalone or Integrated implementation for scaleable levels of test

- Desktop or integrated cabinet for maximum space utility

- Rapid introduction for fast returns on investment

Having programmed the fiducials, the next step is to train the system to probe each required device. The camera is used to locate and identify the first pin of a device. The system software will then determine the position of all the intermediate pins.

Once the device pins are known, the AutoPoint DT can start to automatically learn the signatures from a good board and store these in a test program. The system is now ready to start testing boards.

Configurations

The AutoPoint DT can be implemented in a number of ways:

- **Connected to a standalone PC for an automatic flying probe tester: PC+FFVIP+AutoPoint.**
  - » This provides a low cost and very effective test and diagnostic system for any type of circuit. This system uses the analog signature analysis technique to identify causes of failures.

- **Integrated with a PinPoint system. PinPoint (including VTC and or MAC)**
  - » Integrating the AutoPoint DT with a PinPoint system removes the need to manually probe networks, high pin, fine pitch components, or thousands of miniature discrete components. It also provides a controlled process for powering the UUT and performing power-on testing. The powerful test and diagnostic facilities of the PinPoint system can also be applied to the circuit to provide a thorough and comprehensive test of the circuit,

including power-on dynamic tests of digital, analog and mixed-signal components.

- **Integration of 3rd Party instrumentation**
  - » This adds another layer of test and analysis to the AutoPoint's capability. The system's 8 x 1 RF multiplexer provides routing to the probe of multiple instruments.

- **Expandable from one to two probes**
  - » The AutoPoint DT can be upgraded to a two-probe system which increases the test coverage and application capability while protecting your initial investment.

Get Started Today

For additional details, please contact Astronics Test Systems.

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SPECIFICATIONS

Description	Specification	Comments
Max board probing area	20.5" x 17.4" 52cm x 44 cm	Area of the board that the probe(s) can reach.
Max board under test size	26.3" x 20.5" 66.8 cm x 52cm	Maximum size of board you can fit inside the prober.
Max Z Travel	4.33" (11 cm)	Maximum allowable up/down movement of probe
Number of Probes	One	Upgradeable to a two-probe system
XY Minimum resolution	0.0003937" 10 microns	Minimum allowable movement in the X or Y direction
XY Movement Accuracy	0.0003937" 10 microns	Over a travel distance of 10" (25.4 cm)
XY Linear Encoder Resolution	0.0003937" 10 microns	
Z Rotary Encoder Resolution	0.000295" 7.5 microns	
Physical Dimensions - Prober only	34" W x 35" D x 13.60 H 86.50 cm x 89.12 cm x 34.65cm	
Physical Dimensions – including optional base	34" W x 35" D x 36" H (with cabinet) 86.50 cm x 89.12 cm x 34.65cm	With Optional base cabinet for mounting additional instrumentation
Weight	136 lbs. / 62 kg – Prober only 350 lbs. / 159 Kg – With base (estimate)	Weight of equipment - uncrated