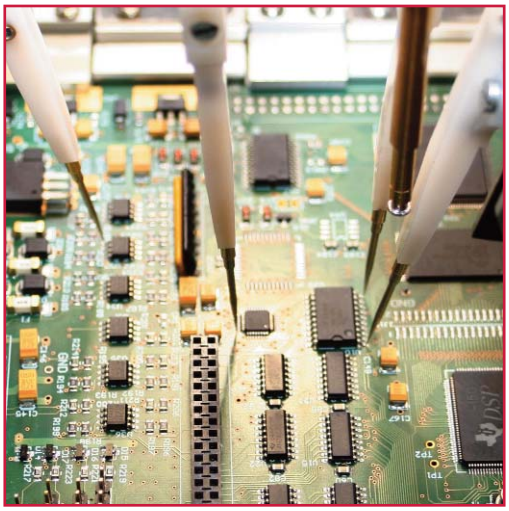
FLYING PROBE SYSTEM

Pilot4D L4

Pilot4D Line

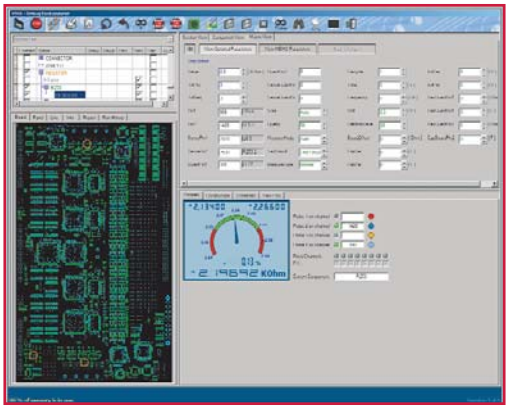
The Pilot4D L4 represents the best solution for those wishing to fully automate the flying probe test process, eliminating the need for continuous operator presence in order to manage the test system. Thanks to its integrated SMEMA conveyor, the Pilot4D L4 can be combined with automatic load/unload magazines or lines, executing in-circuit, functional and visual tests of electronic boards in a completely automated mode. This is the ideal solution for medium and even high volume production test needs. Equipped with 4 mobile electrical probes, 1 mobile openfix probe and 1 color camera, the Pilot4D L4 provides the user with a total of 7 mobile test resources applicable to any point on the UUT. In addition, there are 8 fixed analog channels, 16 openfix sensor channels and power resources available, which can be applied to the UUT via fixed probes positioned on the mobile, bottom-side plate, working together with the board conveyor in a completely autonomous mode. The ATE rack can be expanded with up to 1032 analog channels, connectable to an optional external bed of nails test fixture (TPM).



The test tools and techniques of the Pilot4D L4 include:

- FNODE signature analysis on the nets of the UUT
- Standard analog and digital in-circuit test
- Vectorless tests (JSCAN and OPENFIX) to test ICs for opens and shorts
- PWMON net analysis for power on the boards
- Continuity test to detect open tracks on the PCB
- Visual tests for component presence/absence and rotation
- Optional functional test and boundary scan test capabilities

All of these measurement capabilities and techniques can be combined in a single test program, and the same test program can run using the flying probes or on an external bed of nails fixture, giving the user the maximum flexibility to manage changing production requirements.



VIP PLATFORM

The Pilot4D L4 is based on the Seica VIP platform, which includes the innovative VIVA software. Test program development is organized in 3 simple steps: “Prepare”, “Verify” and “Test”, where the user is guided through a series of automated operations in an intuitive, self-explanatory environment, drastically reducing programming time and minimizing errors and omissions, ensuring the quality of the final test program. For special applications, the extremely open architecture of the VIP platform enables easy integration of external software modules and/or hardware, such as RS232, USB ports, GPIB and PXI/VXI protocols.

TECHNICAL TABLE

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PROBES AND CAMERAS

Probes Position - Test Side	Top
Maximum Number of Probes	5
Number of Electrical Probes	4
Number of Openfix Probes	1
Number of Fixed Probes / Upgrade Up To	8/328
Digital Embedded Channels	4
Number of CCD Cameras	1
Automatic Marker Recognition	Yes
Automatic UUT Planarity Compensation	Yes
Thermal Scan Module (option)	1

BOARD CLAMPING SYSTEM, UUT SIZES AND WORK AREA (*)

Board Clamping System	Man/Auto Clamp
Active Test Area	538 x 610 mm (21.18 X 24")
Maximum Board Size	540 x 1010 mm (21 x 40")
Minimum Board Size*	35 x 35 mm (1.37 x 1.37")
Maximum Board Thickness	7 mm (0.27")
Minimum Board Thickness	0.5 mm (0.0197")
Maximum Component Height	90mm (3.57") Top - 100 mm (3.93") Bottom
Board Loading	Horizontal
Automatic Loader	SMEMA Compliant
UUT Edge Clearance	2 mm

PITCH

Minimum Pad Pitch	200 μm (8 mils)
Minimum Pad Size	75 μm (3 mils)

PROBE FEATURES

Z-axis Travel	-3.0 mm to 40 mm programmable
Contact Force	25 g - 100 g programmable

TESTS AND MEASUREMENTS (INSTRUMENTS DSP)

Voltage Generator 1 DC/AC (DRA)	±1 mV to ±10 V (±0.1 %)
Voltage Generator 2 DC/AC (DRB)	±1 mV to ±10 V (±0.1 %)
Voltage Generator 3 DC/AC (DRC)	±25mV to ±100V (±0.2 %)
Current Generator DC/AC	±1 nA to ±0.5 A (±0.1 %)
Waveform Generator 1 Sin, Tri, Arbitrary (DRA)	1 Hz to 3 MHz (±1 mHz) - ±10 V max
Waveform Generator 2 Sin, Tri, Arbitrary (DRC)	1 Hz to 10 KHz (±10 mHz) - ±100V max
Voltage Measurements DC/AC	±200 μV to ±100 V
Current Measurements DC/AC	±3 nA to ±0.5 A
Frequency Measurement	0.1 Hz to 10 MHz
Digital Embedded Channel	±12 V - 500 mA - 10 MHz
Resistance Measurement	1 mΩ to 100MΩ
Capacitance Measurement	1 pF to 1 F
Inductor Measurement	1 μH to 1 H
Zener Measurement	up to 100 V (200V option)
Automatic Visual Inspection	Yes

GENERAL REQUIREMENTS

Air Flow	0.35 CFM - 10l/min.
Temperature Range	25°C ± 10°C
Humidity	30 - 80 %
System Power	220 V/50 Hz 14 A, 110 V/60 Hz 26 A
Power Consumption	3.0 kW max
Weight	1400 kg (3087 lbs)
Length	133 cm (52.36")
Width	169 cm (66.54")
Height	170 cm (66.92") with monitor

SOFTWARE FEATURES

PC/Operating System	Windows 7
Software	VIVA
Automatic Test Generation	Yes
Autodebug	Yes
Data Input Format	CAD Data/Manual

**Universal carrier for unique board configurations.*

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