

Pilot^{4D} V8

Pilot^{4D} Line



The Pilot^{4D} V8 represents the latest frontier in flying probe test technology; it is the complete solution for those who want maximum performance: the highest test speed, low to medium volume, test coverage and flexibility, for prototyping, manufacturing, or repairing any type of board. Its vertical architecture is the optimum solution for probing both sides of the UUT simultaneously. This increases test throughput and flexibility while guaranteeing fast, precise, reliable and repeatable probing and full availability of all the mobile resources for testing the UUT. This solution represents an important technological innovation in double-sided flying probe test, overcoming the intrinsic limitations of horizontal systems. The Pilot^{4D} V8 is equipped with 8 electrical flying test probes (4 on each side), 2 Openfix flying probes (1 on each side), 2 power flying probes (1 on each side) and 2 CCD cameras (1 on each side), for a total of **14 mobile resources available to test the UUT**. The mobile power probes are another important innovation which enables power up of the UUT without requiring any additional fixed cables, allowing easy implementation of functional test.



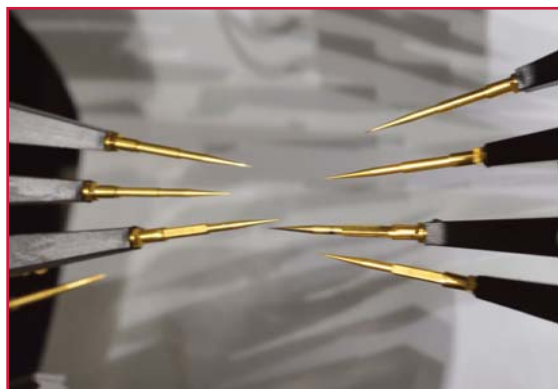
The test tools and techniques of the PILOT^{4D} V8 include:

- 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
- On Board Programming tools for digital devices
- Optional Thermal Scan Resources

All of these measurement capabilities and techniques can be combined in a single test program. Important innovations, such as the net-oriented, FNODE and PWMON measurement techniques, provide high fault coverage with significant savings in terms of programming and test time. In addition, with its full complement of test resources, **the Pilot^{4D} V8 can utilize the test programs developed on any other Seica flying probe system**, since it has the capability to operate in all prober configurations (2 or 4 probes on a single side or on both sides).

VIP PLATFORM

The Pilot^{4D} V8 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 via RS232, USB ports, GPIB and PXI/VXI protocols.



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Seica reserves the right to change the technical specifications without notice

PROBES AND CAMERAS

Probes Position - Test Side	Front/Rear
Maximum Number of Resources	16
Number of Electrical Probes	8 (4 front, 4 rear)
Number of Openfix Probes	2 (1 front, 1 rear)
Number of Power Probes	2 (1 front, 1 rear)
Number of Fixed Probes / Upgrade Up To	0/192
Maximum Digital Embedded Channels	4
Number of CCD Cameras	2 (1 front, 1 rear)
Automatic Marker Recognition	Yes
Automatic UUT Planarity Compensation	Yes
Thermal Scan Module (option)	2 (1 front, 1 rear)

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

Board Clamping System	Manual (Dual Action)
Active Test Area	538 x 610 mm (21.18 X 24") Manual
	518 x 610 mm (20.39 X 24")
	540 x 610 mm (21.25 X 24")
	520 x 610 mm (20.47 X 24") Auto
Board Size	
Minimum Board Size (*)	20 x 20 mm (0.78 x 0.78")
Maximum Board Thickness	5 mm (0.19") manual/3mm(0.18") automatic
Minimum Board Thickness	0.3 mm (0.0018")manual/1mm (0.00393")auto
Maximum Component Height	37 mm (1.456")auto
Board Loading	Vertical
UUT Fly Height Clearance	Front (mm) Back (mm)
4 x 4	40 40
4 x 2	40 90
4 x 0	40 300
2 x 2	90 90
2 x 4	90 40
0 x 4	300 40
UUT Edge Clearance	2 mm manual/6 mm auto

PITCH

Minimum Pad Pitch	200 μ m (8 mil)
Minimum Pad Size	75 μ m (3 mil)

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 ($\pm 0.1\%$)
Voltage Generator 2 DC/AC (DRB)	± 1 mV to ± 10 V ($\pm 0.1\%$)
Voltage Generator 3 DC/AC (DRC)	± 25 mV to ± 100 V ($\pm 0.2\%$)
Current Generator DC/AC	± 1 nA to ± 0.5 A ($\pm 0.1\%$)
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) - ± 100 Vmax
Voltage Measurements DC/AC	± 200 μ V 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 m Ω to 100 M Ω
Capacitance Measurement	1 pF to 1 F
Inductor Measurement	1 μ H to 1 H
Zener Measurement	up to 100 V (200V option)
Automatic Visual Inspection	Yes

GENERAL REQUIREMENTS

Temperature Range	25°C $\pm$ 10°C
Humidity	30 - 80 %
	System
Power	220 V/50 Hz 12 A, 110 V/60 Hz 24 A
	Loader
Power Consumption	220 V/50 Hz 2 A
Air Flow	3.5 kW max 1.0 kW max
Weight	0.35 CFM - 10l/min. 0.3 CFM - 6l/min.
Length	1800 kg (3699 lbs) 200 Kg (441 lbs)
Width	175 cm (68.9") 206 cm (81.10")
Height	123 cm (48.4") 155 cm (61.02")
	174 cm (68.50") (214 cm with light-tower)

SOFTWARE FEATURES

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

*Universal carrier for unique board configurations.

