# FLYING PROBE V8
PILOT NEXT

The PILOT V8 NEXT> **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 V8 NEXT> 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), 2 Thermal Scan sensors, 2 Laser sensors, 2 LED Sensors, for a total of 20 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. Available in the **Manual** and **Automatic** version.
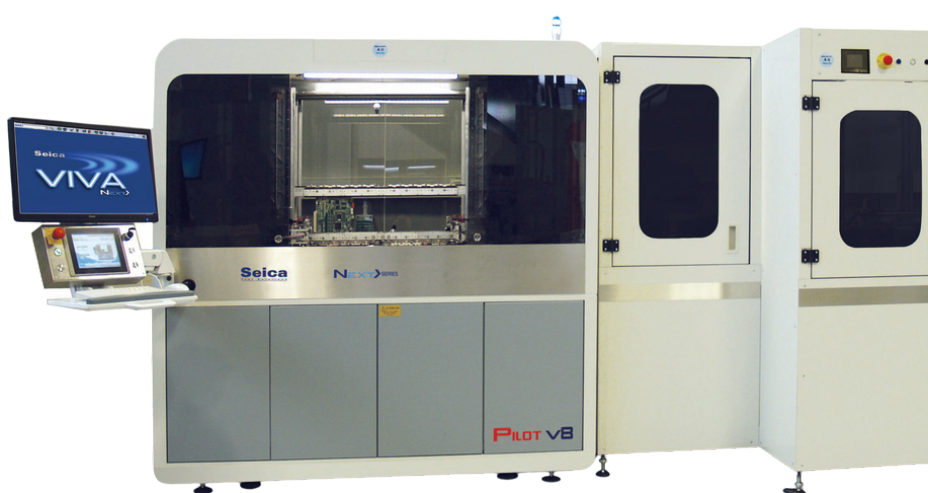
All of these measurement capabilities and techniques can be combined in a single test program. Important innovations, such as the net-oriented, FNODE and PWMON measurement techniques, provide high fault coverage with significant savings in terms of programming and test time. In addition, with its full complement of test resources, the PILOT V8 NEXT>SERIES 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).

THE TEST TOOLS AND TECHNIQUES INCLUDE:

- FNODE signature analysis on the nets of the UUT
- Standard analog and digital in-circuit test
- Vectorless tests (AUTIC and OPENFIX), to test ICs for opens and shorts
- PWMON digital net analysis
- 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
- ALI: Automatic Laser Inspection for presence/absence and warpage compensation
- LED Sensor for light intensity and colour recognition

VIVA> NEXT> SOFTWARE AND MES INTEGRATION OPTION

Like any other Seica solution, the PILOT V8 NEXT> test system, uses the VIVA>NEXT> platform, which provides 2 authentication methods managed through the Seica proprietary graphic editor MY VIEW: the standard Windows authentication and the new 'VIVA User Authentication' through which the customer can select the user with different privileges. Since the customer manages the production and material flow through the MES software, the Seica PILOT V8 NEXT> can be connected to the customer MES (Manufacturing Execution System). Through its proprietary Adapter, Seica can integrate all customer MES platforms.

PROBES AND CAMERAS

Probes Position - Test Side	Front/Rear
Maximum Number of Resources	20
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 Colour 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	(610 x 538) mm (24" x 21.18") Manual (610 x 518) mm (24" x 20.39") Automatic
Board Size	(610 x 540) mm (24" x 21.25") Manual (610 x 520) mm (24" x 20.47") Automatic
Minimum Board Size (*)	(20 x 20) mm (0.78" x 0.78")
Minimum Board Thickness	5 mm (0.19") Manual /3mm (0.18") Automatic
Minimum Board Thickness	0.3 mm (0.00118") Manual /1mm (0.00393") Automatic
Maximum Component Height	37 mm (1.456") Automatic
Board Loading	Vertical
UUT Fly Height Clearance 4 X 4	Front (mm) Back (mm) 40 90
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 Automatic

PITCH

Minimum Pad Pitch	150 µm (6 mil)
Minimum Pad Size	50 µm (2 mil)

PROBE FEATURES

Z-axis Travel	-3.0 mm to 40 mm programmable
Contact Force	5 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 2 DC/AC (DRB)	±25 mV to ±100 V (±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) - ±100 Vmax
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 50 MHz
Digital Embedded Channel	±12 V - 500 mA - 10 MHz
Resistance Measurement	1 mΩ to 100 MΩ
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

Temperature Range	25°C ± 10°C	
Humidity	30 - 80 %	
	System	**Loader**
Power	220 V/50 Hz 12 A, 110 V/60 Hz 24 A	220 V/50 Hz 2 A
Power Consumption	3.5 kW max	1.0 kW max
Air Flow	0.35 CFM - 10l/min.	0.3 CFM - 6l/min.
Weight	1350 kg (2976 lbs)	200 kg (441 lbs)
Length	175 cm (68.9")	206 cm (81.10")
Width	123 cm (48.4")	155 cm (61,02")
Height	174 cm (68.50")	174 cm (68.50") (214 cm with light-tower)

SOFTWARE FEATURES

PC/Operating System	Windows 10
Software Architecture	VIP Platform - VIVA NEXT
Automatic Test Generation	Yes
Autodebug	Yes
Data Input Format	CAD Data/Manual
Parallel Test Capabilities	Yes