Cut the cost of test with the fastest and most accurate

FLYING PROBE TESTERS

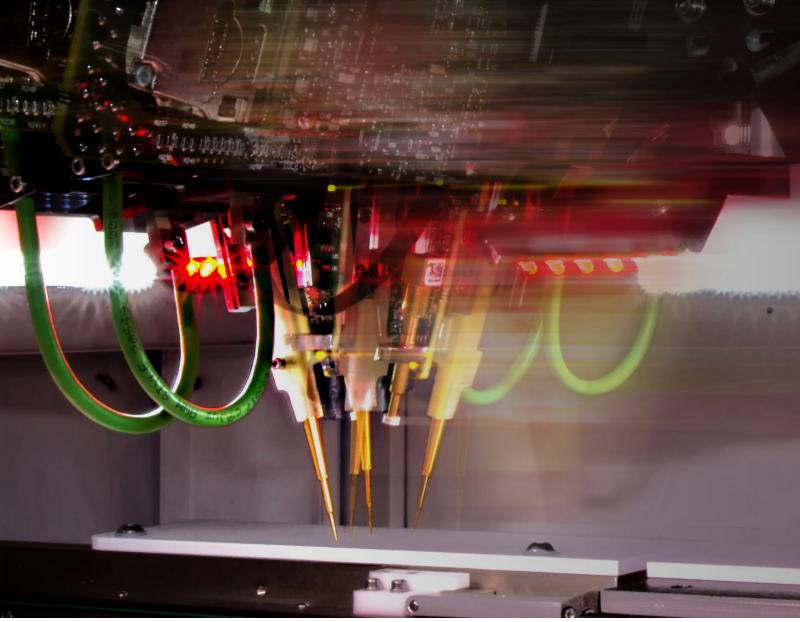
A COMPLETE RANGE **FROM NPI&PROTOTYPES TO HIGH-VOLUME PRODUCTION TESTING** ...& MORE

SPEA Flying Probe Series is designed to cover the widest range of test requirements for electronic boards. High **mechanical speed**, single or **dual-sided probing**, extreme **accuracy**, automatic **board loading**, overall configurability and fast set-up changes: SPEA flying probe performances and flexibility give you all you need to adaptably answer your production needs.

Extreme **mechanical accuracy** enables the flying probes to directly contact the smallest pins of micro-SMD packages. Mechanical performance is then supported by on-axis, high-resolution **measurement electronics** which allows ultra-precise measurements, while reducing measurement acquisition time to a few microseconds.

An innovative **multi-process platform** manages the concurrent execution of multiple test techniques, optimizing the test program, that combines in-circuit test (powered-up or not), short circuit test, optical inspection, boundary scan test, functional test, and more. All of these functions are complemented by a friendly yet powerful **software environment**.

- Fastest test speed
- Accurate Micro-SMD contacting
- Highest measurement accuracy
- No cost of fixturing
- Zero errors at functional test
- Field returns are practically eliminated



Fastest probe speed

High-Force Linear Motors provide throughput and durability that no other motion technology could guarantee. This is why all the most advanced production equipment (e.g. latest-technology pick&place) are based on this state-of-the-art technology. SPEA Flying Probers as well.

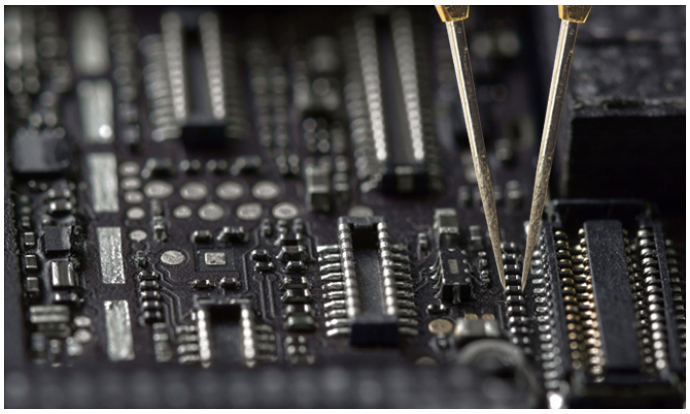
- Top-performance linear motors on XYZ axis
- Highest speed of movement
- Optimized probe routing
- Maintenance-free: no tear and wear can affect accuracy
- Mechanical stability over time

Accurate micro-SMD probing

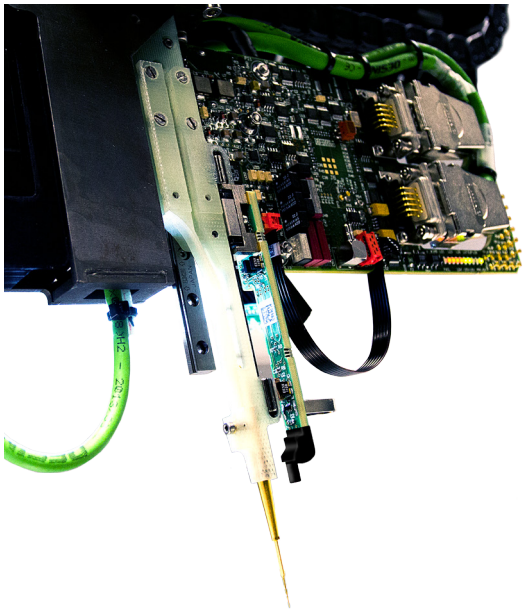
Miniaturization won't stop and SPEA's Flying Probe systems are ready for the future.

Their accurate positioning is made possible by High-Precision Linear Optical Encoders on each X-Y-Z axis, the only technology able to provide real positioning feedback of the probes.

- Top-performance linear optical encoders on XYZ axis
- Micro-SMD (008004) pad accurate contacting
- Reliable test of flexible/thin printed circuits, Sticky Boards
- Positioning measurement stability over long time
- Ultra-Fast Soft-Touch technology: no touch damage, no stress on PCB and Micro-SMD



SPEA flying prober contacting 01005 device



Best Measurement Accuracy

The shorter the distance between probe and instruments, the faster and more accurate is the measurement. According to this simple rule, SPEA designed the concept of Flying Tester Technology.

Force & measurement instruments are placed directly on each flying head, delivering unsurpassed measurement speed and performance.

- Highest measurement performance & accuracy (0.1pF)
- Signal integrity
- No measurement degradation or interference
- Immediate signal acquisition
- Better repeatability

ICT — In-Circuit Test

SHORT FREE — 100% Short Circuit Test

NZT — Nodal Impedance Test

Open Pin Scan

Power On Test

FCT — Functional Test

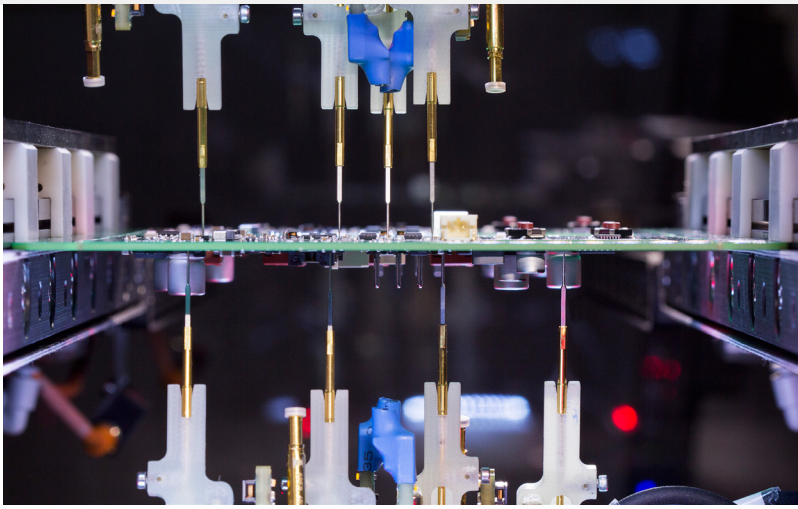
Color Optical Test

3 machines.
From NPI to high volumes

You can choose the flying probe tester that better meets your production, according to your throughput requirements, the need to contact the board from single or dual side simultaneously, the type of product and test you need (PCBA production test, backplane and large board test, need to integrate additional test fixtures and special jigs, prototype and NPI test, etc.).

4080 provides **highest throughput and probing accuracy.** Its mechanical speed - up to 180 touches/sec - makes it able to replace bed-of-nails systems for production test, especially when accessibility is not complete.

- 8 multi-function dual-side flying heads (4 top + 4 bottom)
- Lowest cost of test
- 3x productivity compared to standard flying probe testers
- Min. pad size: 50 µm
- Natural granite chassis: no vibrations at high speed probing
- Small footprint: 2.2 m² for inline model



4080: Top/bottom simultaneous probing with 8+8 flying probes

4060 S2 is a 6-axis dual-side flying probe tester, delivering high productivity, dual-side flying probing, extra-large test area and full flexibility of use.

- 6 multi-function dual-side flying heads (4 top + 2 bottom)
- Extra-large test area: max. board size 1524 x 610 mm
- Extended input conveyor: comfortably loading of large and heavy boards inside the test area
- Multi-jig flying head: it is possible to equip each flying head with a wide range of test tools, such as Light Meter, Laser, Multiprobe Unit, Support Rod, Color Camera.

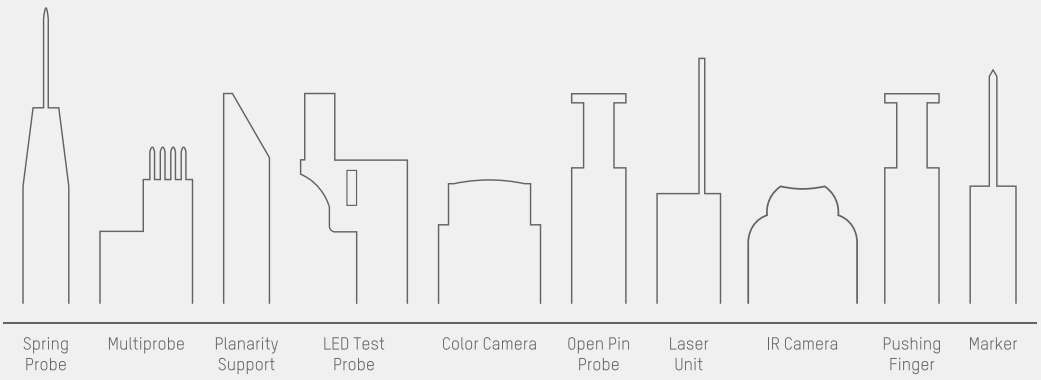
4050 S2 is a 4-axis tester designed for medium to high-volume production test, NPI and prototypes. It delivers high productivity, high accuracy and a bottom moving platform to extend the probing capabilities.

- 4 top multi-function flying heads
- Very high probing speed
- Automatic + manual board loading
- Multi-jig bottom moving platform
- Multi-jig flying head: it is possible to equip each flying head with a wide range of test tools, such as Light Meter, Laser, Multiprobe Unit, Support Rod, Color Camera.

Multi-Jig Technology: Much more than simple probes

SPEA flying probe testers can be equipped with a wide range of top & bottom jigs, enabling the simultaneous performance of different test techniques with 100% reliability.

Discover how the exclusive SPEA's Multi-Jig technology expands probing flexibility, test capability and overall productivity, with either single-side or dual-side flying probe models.



LED Light Test

3D Laser Test

On Board Programming

Boundary Scan

Thermal Test

Waveform Capture

Built-In Self-Test

Flying Probe Product Line

4080

4060 S2

4050 S2

	4080	4060 S2	4050 S2
MAIN			
Throughput	Top throughput for mass production	Very high throughput	High Throughput
Chassis	Natural granite	Cast iron	Cast iron
Linear Motors on X-Y-Z axis	√	√	√
Linear Measuring Encoders on X-Y-Z axis	√	√	√
Instrument on the Head Technology	√	√	√
UUT probing	Dual Side	Dual + Single Side combined	Single Side
Z-Axis Angle	≤3.5° (probe 2, 3, 6, 7) ≤13° (probe 1, 4, 5, 8)	≤5° (probe 2, 3, 6, 7) ≤16° (probe 1, 4)	≤5° (probe 2, 3, 6, 7) ≤16° (probe 1, 4)
Tester Interface	Yes, up to 384 channels	Yes, up to 576 channels	Yes, up to 576 channels
Operating System	Leonardo 4, App Library	Leonardo OS2	Leonardo OS2
Footprint (LxW)	1700 x 1300mm (2.2m²)	1750 x 1272mm (2.2m²)	1360 x 1220mm (1.7m²)
BOARD LOADING			
In-Line	Programmable LtoR/RtoL Pass-Through or Pass-Back	Programmable LtoR/RtoL Pass-Through or Pass-Back	Programmable LtoR/RtoL Pass-Through or Pass-Back
Automatic Loading/Unloading from Magazine	Programmable Pass-Through or Pass-Back	Programmable Pass-Through or Pass-Back	Programmable Pass-Through or Pass-Back
Manual	Front loading	Front & Side loading	Front loading
TEST AREA SPECS			
Max. Test Area (L x W)	510 x 460mm (20 x 18")	686 x 610mm (27 x 24")	500 x 400mm (19.6 x 16")
Max. Board Size (L x W)	1524 x 460mm (60 x 18")	Manual: 686 x 610mm (27 x 24") In-Line: 1524 x 610mm (60 x 24")	Manual: 500 x 400mm (19.6 x 16") In-Line: 1524 x 400mm (60 x 16")
Max. Component Height	55mm standard 110mm optional	55mm standard 110mm optional	55mm standard 110mm optional
Board Edge Clearance	3mm	3mm	3mm
Max Board Thickness	10mm	Manual: 4.8mm In-Line: 14mm	4.8mm

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CE equipment certified

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