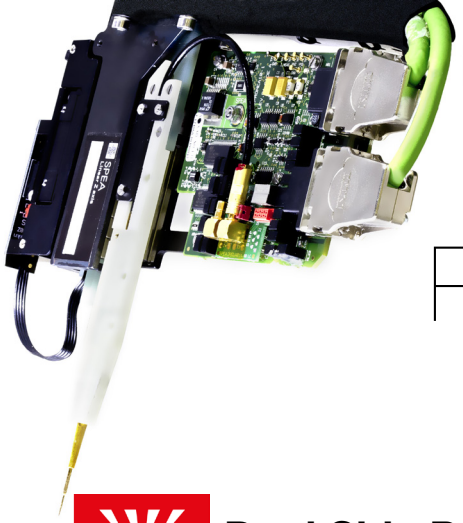
SPEA

Dual side probing. High throughput. Test with no limits

4060

MULTI-CORE DUAL SIDE FLYING PROBE TESTER

- Dual side probing: full accessibility & parallel test
- Maximum productivity. Replace the bed-of-nails
- Large test area: 658 x 610 mm
- In Line / Automatic / Manual loading
- Multi-function. Full coverage with 1 equipment



4060

Productivity without limits

Dual Side Probing

The parallel test of components on both sides of the board **increases the productivity**, reducing the number of movements required.
Benefits of **4060** Dual Side Probing are huge:

- Reduced **test time**
- Increased **test coverage**
- **Single test program** for the 2 sides of the board

4x Multi Core Architecture

The **4060** **Multi Core Architecture** provides **True Parallel Test** by 4 cores working in parallel. **Save 75%** test cost, get **4x throughput**.

Instruments on the Probe Technology

A real **forcing and measurement board** has been connected to **every probe**. It enhances **accuracy and measurement speed** and guarantees **signal integrity** avoiding **crosstalk**. The probe can in this way measure small electrical quantities, such as **0.1 pF**, with **absolute accuracy** and reliability, and the acquisition time is almost **instantaneous**.

In-Line-Ready Horizontal Architecture

Horizontal Architecture guarantees **full compatibility** with **standard production line** or **automatic loader**, which means: no time wasted to flip the board, no additional equipment or handling operation required, reduced footprint. Moreover it guarantees **balanced movements** of the heads. Since there is no need to face gravity, the probes reach **higher accelerations** while keeping **unparalleled precision**, even after hundreds millions of movements.

Multifunction Probe

Each flying probe can be used for: ICT, Power On, Sink/Source analog, Digital D/S, OBP, Boundary Scan, Prescaler.

4x Ultra high speed X-Y-Z Axis

Each X-Y-Z axis is equipped with **High Torque Linear Motors** and **Linear Optical encoders**. These **state-of-art motion technologies** mix 10g accelerations with accurate braking and positioning.

2x Multi-Jig Bottom Flying Platform

The 2 bottom **Multi-Jig Flying Platforms** of **4060** are able to move at very high speed hi-res cameras, support rods, power probes, multi-probes and electro scan probes, covering the most comprehensive test needs.

Large Test Area

4060 can test large PCBs, backplanes and backboards up to **1000x610mm** (40x24").

Multiple board loading: Manual + In Line

4060 combines automatic, in-line and manual board loading in a single equipment, providing a comprehensive solution for PCB testing.

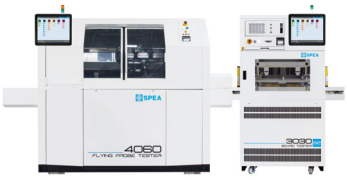
- **Pass-through** or **pass-back** operation
- **Easy & quick** loading setup
- **Direct integration** into production line
- Highly **ergonomic**
- **Automatic line setup** at product change
- Compatible with standard **automatic loader/unloader**
- Best solution for **non-clampable PCBs** with irregular shapes or components on the edge

Tall Components Test

Test PCBs with transformers, heat sinks, connectors, front panels, polarized capacitors and other **tall components up to 110mm**. Programmability of **no-fly zones**, flying zones, contacting quote.

Do you want more information? We have detailed documentation on this key feature. Please visit www.spea.com/docs

Multi-Core Flexible Test Cell



Combine the probing capabilities of **4060** & the productivity of **3030 S2 In Line** bed-of-nails tester. Eliminate the cost of test with the **Multi-Core Flexible Test Cell**.

Soft Touch Technology

With the **"S" Motion Profile** the probe lands on the board with near-zero-energy. This allows testing **sticky boards** and flex circuits, or **micro SMDs** such as 01005, 0201, RQFP, leaving no visible mark or damage on the test point.

2x High Resolution Color Camera

The new **High-Resolution Color Camera**, combined with new lighting system, provides fast, accurate and reliable Optical Test: OCR, OCV, 2D code reading, component presence, device orientation and much more.

Fast and reliable micro SMD testing

SPEA's **4060** systems can fast and reliably test **01005** packages (0.4 x 0.2 mm) and other micro SMDs. This is made possible by **High-Precision Linear Optical Encoders**, the only technology that guarantees a direct, real-time, accurate positioning of the probes at any moment, providing **real positioning feedback** and **direct drive** of the probes. That's why SPEA placed them on each **X-Y-Z** axis.

Backplane & backboards

4060 can **test backplanes** and **backboards** mounting **any type of connector**. The system can execute, **simultaneously on both sides** of the board, complete test of continuity, insulation, presence and orientation of connectors and components, correct assembly and mechanical check of the contact pins.

Designed to last

State-of-art mechanics. 16-bit instrumentation. 8-wire measurements. Everything has been designed to guarantee a reliable test, even after **years of intensive use**, with an always **up-to-date equipment**. An example: the test program is resident in the tester CPU and runs **independently from PC timing**. You can change/update the PC at any moment, without having to re-debug the test program.

One tester. Any test

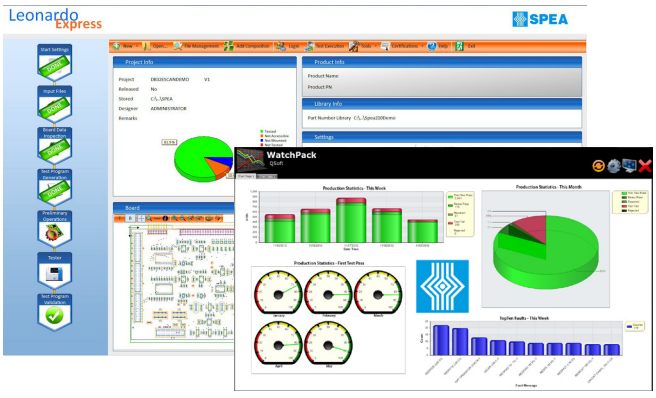
Optimize test & resources. Avoid redundancy.
A single equipment to get full coverage

Smart In-Circuit Test
Short Test
Nodal Impedance Test
Open Pin Scan
Power On & Functional Test
Optical Test
Parallel On Board Programming
Boundary Scan
Built in Self Test (BIST)

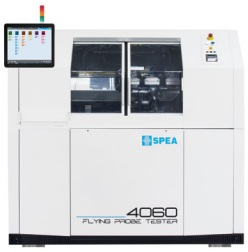
Leonardo OS.
Easy to use software

Leonardo OS, the operating system for SPEA **4060**, has been designed to allow **non-expert users** to **quickly generate** a multi-function test program.

- Automatic **Test Program generation**
- Automatic **CAD** recognition & import
- **Automatic Debug & Tuning** of the test program
- Automatic Pick & Place **X-Y file import**
- **User-friendly** menus, customizable toolbars and on-line help
- **Control software** to **monitor**, **analyze & optimize** the production process

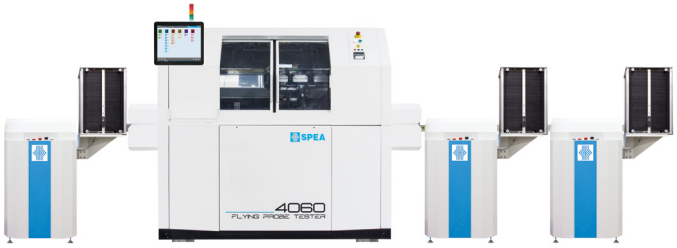


4060 - Models



4060 M
Manual loading

4060 IL
Automatic in-line loading



4060 TC
Operatorless Test Cell

4060 BP
Back Plane

4060 SL
Shuttle Loader

MAIN CHARACTERISTICS

Probing capability

Minimum probing package	01005 (0.4x0.2 mm)
Minimum system pitch	0 µm
Minimum probe pitch	Depending on probe
Single probe repeatability	10 µm
Flying Probes	4 top + 2 bottom
On Probe Instruments	4 top + 2 bottom
Multi-function Probes *(Scan, Digital, BScan, Sink/Source, OBP, Prescaler)*	4 top + 2 bottom
Probe impact force	Programmable
Warpage compensation	Optional

Board Testable Specification

Test area X-Y	685x610 mm
Max Board Thickness	Up to 14 mm

Environment Requirements

Environmental temperature range	15°C ÷ 32°C
Humidity	≥20% ÷ ≤70%

Electrical Requirements

Input voltage range - single phase	230 Vac ±10%
Input voltage range - three phase	208÷400 Vac ±10%
Input frequency range	50 ÷ 60Hz

System Controller

Monitor	22" (Touch optional)
Software	SPEA Leonardo

System Specification

Body main dimensions (L x W x H)	1750x1272x1724 mm (manual system)
Weight	1600 kg

MEASURE CAPABILITY

Resistance

Range	1mΩ ÷ 1GΩ

Inductance

Range	1µH ÷ 1H

Capacitance

Range	0.5pF ÷ 1F

TEST TYPE

Electrical test

ICT - In Circuit Test	Yes
Nodal Impedance Test	Optional
Open Pin Scan	Optional
Power On Test	Optional
Functional Test	Optional
On Board Programming	Optional
Boundary Scan	Optional

Other test

Optical test	Optional
2D Code Reading	Optional
Optical Character Verify	Optional
Optical Character Recognition	Optional

CERMET SISTEMA DI GESTIONE CERTIFICATO
ISO 9001:2008
ISO 14001:2004

ISO 17025 ASSESSMENT

semi

SILICON SAXONY MY FAVORITE PLACE

SPEA

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