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# ICS 105 set

## IC Scanner 4-Axis Positioning System

The ICS 105 IC scanner allows for measurements of high-frequency near fields above ICs. Depending on the used ICR near-field microprobe magnetic or electric fields can be measured with a measuring resolution of 50 to 100 µm. The probe can also be automatically rotated to determine the magnetic field's direction.

Optionally the ICS 105 scanner can be used for measurements above small assemblies in combination with UH-DUT universal holder and SH 01 probe holder. The IC scanner can be set up for ESD or EFT immunity tests on ICs in a few simple steps.


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The FLS 106 scanner is a 4-axes positioning system that allows for the movement of ICR near-field probes along three linear axes and the rotation of the ICR near-field probes on one axis above an IC in its electronic assembly.

The ICR near-field probes allow for the measurement of high-frequency magnetic or E-fields up to 6 GHz with a high measuring resolution of 50 to 100 µm.

The IC scanner can be set up for surface scans and ESD or EFT immunity tests in a few simple steps.

# FLS 106 set

## IC Scanner 4-Axis Positioning System

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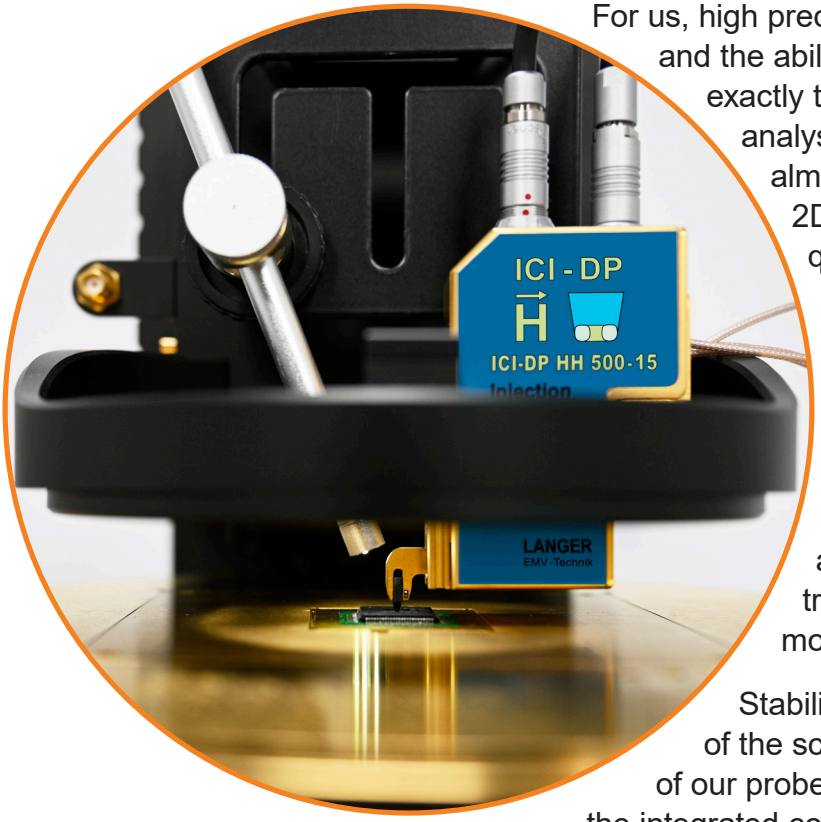
# ICS 105 set / FLS 106 set

## for precise near-field analysis of ICs and PCBs




For us, high precision means detailed measurement and the ability to quickly and reproducibly capture exactly the information that is relevant for analysis. The measurement speed depends almost entirely on the specific use case: a 2D surface scan can be carried out very quickly, while a 3D scan with a large number of measurement points and additional measurements per point naturally takes more time.

While many solutions provide only two-dimensional data or represent a “third dimension” merely as an amplitude value, our systems enable true 3D rotations with full spatial movement.

Stability is reflected not only in the mechanics of the scanner itself, but also in the robustness of our probes. A particularly noteworthy feature is the integrated collision detection, which reliably prevents damage to sensitive devices under test.

In addition, our holders allow the use of almost all Langer probes, providing maximum flexibility in practical applications. The scanner is also optionally available without software – it is not strictly required but offers crucial advantages for analysis and visualization, such as 3D representations, sectional views, and comparison options.

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## High precision as standard

Our scanners offer a minimum step size of 10 µm (ICS105) and 20 µm (FLS106). This makes it possible to capture electromagnetic interference fields with high detail and reproducibly document them. Engineers benefit from clear, reliable measurement results – a prerequisite for analyses in the IC environment.

## From 2-dimensional to 3-dimensional scanning

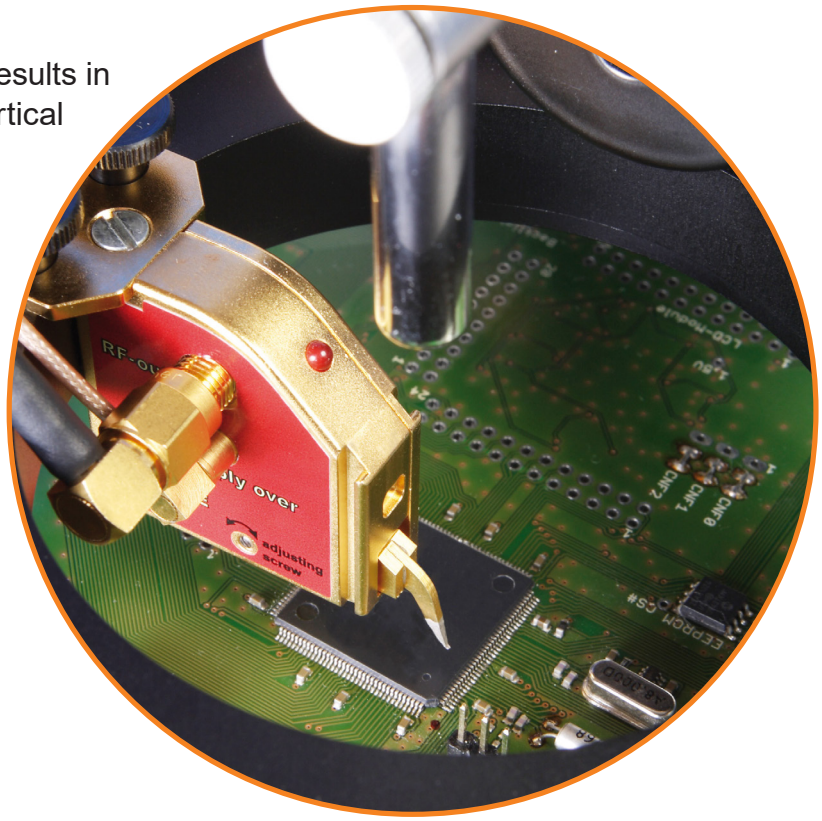
Both systems operate with a true 3D measurement method: movements along the x, y, and z axes plus a rotational axis (α). By combining three-dimensional spatial motion with the probe's rotation capability, measurement data can be captured from different perspectives. This makes it possible to visualize complex interference structures from all angles.

## Stability and safety in operation

The integrated collision protection prevents damage to the system and the device under test. A robust mechanical design reduces vibrations and ensures that results remain stable and comparable even during repeated measurements.

## Software support for evaluation

The software presents measurement results in 3D views and allows horizontal and vertical sectional images. In addition, various spectrum analyzers are supported, making it easy to integrate the system flexibly into existing laboratory environments.

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### ICS 105 – Compact and high-resolution

- Working area: 50 × 50 × 50 mm, α-rotation ±180°
- Minimum step size: 10 × 10 × 10 µm; α 1°
- Travel speed: 10 × 10 × 5 mm/s; α 90°/s
- Weight / dimensions: 23 kg / 350 × 400 × 420 mm
- Scan methods: surface scan, 3D scan, rotation
- Suitable for high-precision IC measurements and detailed near-field analyses where micrometer accuracy is crucial.

### FLS 106 – Large-area and robust

- Working area: 400 × 600 × 120 mm, α-rotation ±180° (FLS 106 IC)
- Minimum step size: 20 × 20 × 20 µm
- Travel speed: 20 × 25 × 10 mm/s
- Weight / dimensions: 75 kg / 1030 × 775 × 900 mm
- Scan methods: surface scan, 3D scan, rotation
- Designed for larger assemblies and complex setups. Provides sufficient precision for EMC measurements in the macro range, where area and speed are the key focus.

## Scanners Without Software

Our scanners are now also available without software support through the Chip-Scan Scanner and can be directly integrated into customer-specific measurement and analysis software. For this purpose, a program library with a defined API is provided, enabling access to the scanner control. This interface is available for both Windows (DLL) and Linux (SO).

The responsibility for implementation, integration into existing test environments, and visualization lies with the user. By eliminating the standard software, the purchase price of the scanner can be significantly reduced without compromising hardware quality.

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# EMC Europe 2025

## in Paris – France


From September 1 to 5, Langer EMV-Technik GmbH, together with our distributor EMC Partner, exhibited at EMC Europe in Paris. The event offered us numerous valuable technical discussions and intensive exchanges with experts from research and industry. The focus was particularly on practical application examples of our EMC development systems, which clearly demonstrated how Langer products can save time and costs in development processes. Overall, we look back on a successful trade fair week with great interest in our solutions.

# CHES 2025

## in Kuala Lumpur – Malaysia

From September 14 to 18, Langer EMV-Technik GmbH participated in the Conference on Cryptographic Hardware and Embedded Systems (CHES) in Kuala Lumpur. Our live demonstrations on EM Fault Injection and Side-Channel Analysis attracted great interest and sparked engaging discussions on current approaches in security research. Particularly valuable was the direct feedback from the community, which opened up new perspectives on the use of our measurement technology. Overall, we look back on a successful participation at the world's leading conference in this field.


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# RF Back to Basics Keysight

## in Dresden – Germany

On September 17, one of our engineers gave a guest lecture at the RF Back to Basics Seminar in Dresden on the topic of EMC emissions using near-field probes. Practical examples demonstrated how emission sources can be localized and coupling paths traced. The combination of near-field probes, the ESA1 measurement system, and ChipScan-ESA software proved to be a valuable tool for making emissions visible and developing targeted countermeasures.

# EMC Symposium 2025

## in Seibersdorf – Austria

On September 24 and 25, Langer EMV-Technik GmbH, together with our distributor X-Test, participated in the 22nd EMC Symposium in Seibersdorf. In the exhibition area, we presented practical demo setups of our development tools, including the E1 Set, various near-field probes, and the DB 20 Set. A particular highlight was our technical presentation on “Shield Penetration in the Near Field,” which attracted great interest.


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# Upcoming Events

## EMC/China 2025 in Shanghai

From October 20 to 22, we will be present at EMC/China 2025 in Shanghai. A sales representative and an engineer will attend the exhibition to support our distributors and be available for direct technical discussions.

## Keysight „RF Back to Basics Seminar“ in Hamburg

On October 29, 2025, we will be joining Dr. Min Zhang – Mach One Design at the Keysight “RF Back to Basics Seminar” in Hamburg. In addition to the guest lecture “Optimal PCB Design for Good EMC” with live demos, we will also present our measurement technology for practical applications. Seats are still available – register here!

## Power of Electronics Workshop in Würzburg

On October 29–30, 2025, we will be present at the Power of Electronics event at the Vogel Convention Center in Würzburg. On the first day, we will hold the workshop “EMC in Practice – Understanding and Improving Immunity and Emissions at PCB Level.” We look forward to meeting you in Würzburg!

## 22nd Magdeburg EMC Industry Seminar

On November 4, 2025, we will be present at the EMC Industry Seminar in Magdeburg. At the Festung Mark, we will showcase our measurement technology and be available for direct exchange. We look forward to meeting the participants in Magdeburg!

## 14th Mittweida EMC Day

On November 6, 2025, we will be present at the 14th Mittweida EMC Day at Mittweida University of Applied Sciences. At 11:30 a.m., one of our engineers will give the presentation “Mastering Invisible Challenges – Fundamentals and Strategies for Solving Immunity Problems.”
We look forward to engaging discussions in Mittweida!

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