

Consulting inquiries, further information

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EMC Consulting and Electronics Interference Troubleshooting

Langer EMV-Technik GmbH is your point of contact when your electronics do not pass compliance testing or when they are to be developed with EMC optimization from the very beginning.

The engineers at Langer EMV-Technik GmbH work with you to analyze your assembly and, using appropriate measurement technology, quickly identify the root cause

of the EMC issue. They drill down to the smallest parts of the circuitry and can pinpoint critical traces in the layout or sensitive IC inputs.

Ideally, Langer EMV-Technik GmbH's EMC expertise is incorporated into your first prototype during the development process. This helps you save development time through optimal starting conditions.

EMC Seminar with Practical Experiments by Langer EMV-Technik GmbH

The seminars with practical experiments offered by Langer EMV-Technik GmbH are conducted by engineers with extensive experience in EMC troubleshooting and EMC consulting. Building on the fundamentals of electrical engineering, we teach the EMC mechanisms that affect electronic assemblies. At your own experiment station, you work independently and use near-field probes, interference

generators, and other EMC measurement equipment yourself. This allows you to apply the theory directly and develop strategies for mitigating interference on assemblies. Back at your workplace, the practical application of the seminar content helps you save time and resources when developing assemblies and devices.



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EMC Consulting
Analysis, Design Optimization,
and Troubleshooting



EMC Consulting & Troubleshooting

Langer EMV-Technik GmbH supports you when your electronics do not pass compliance testing or, if you want to consider EMC from the very beginning of a development process. Together, we analyze your assembly and its environment, narrow down the relevant frequency ranges, and pinpoint the root cause of EMC issues – down to critical traces in the layout or sensitive IC pins.

Early involvement in the development process is ideal: this allows the experience of our consulting engineers to be involved into the very first prototype, helping you save development time through optimal starting conditions.

How we help

Immunity issues:

ESD, radiated RF interference (RI), EFT/Burst, surge, conducted RF coupling (CI)

Emission issues:

Antenna measurements (RE) and conducted emissions (CE)

System levels:

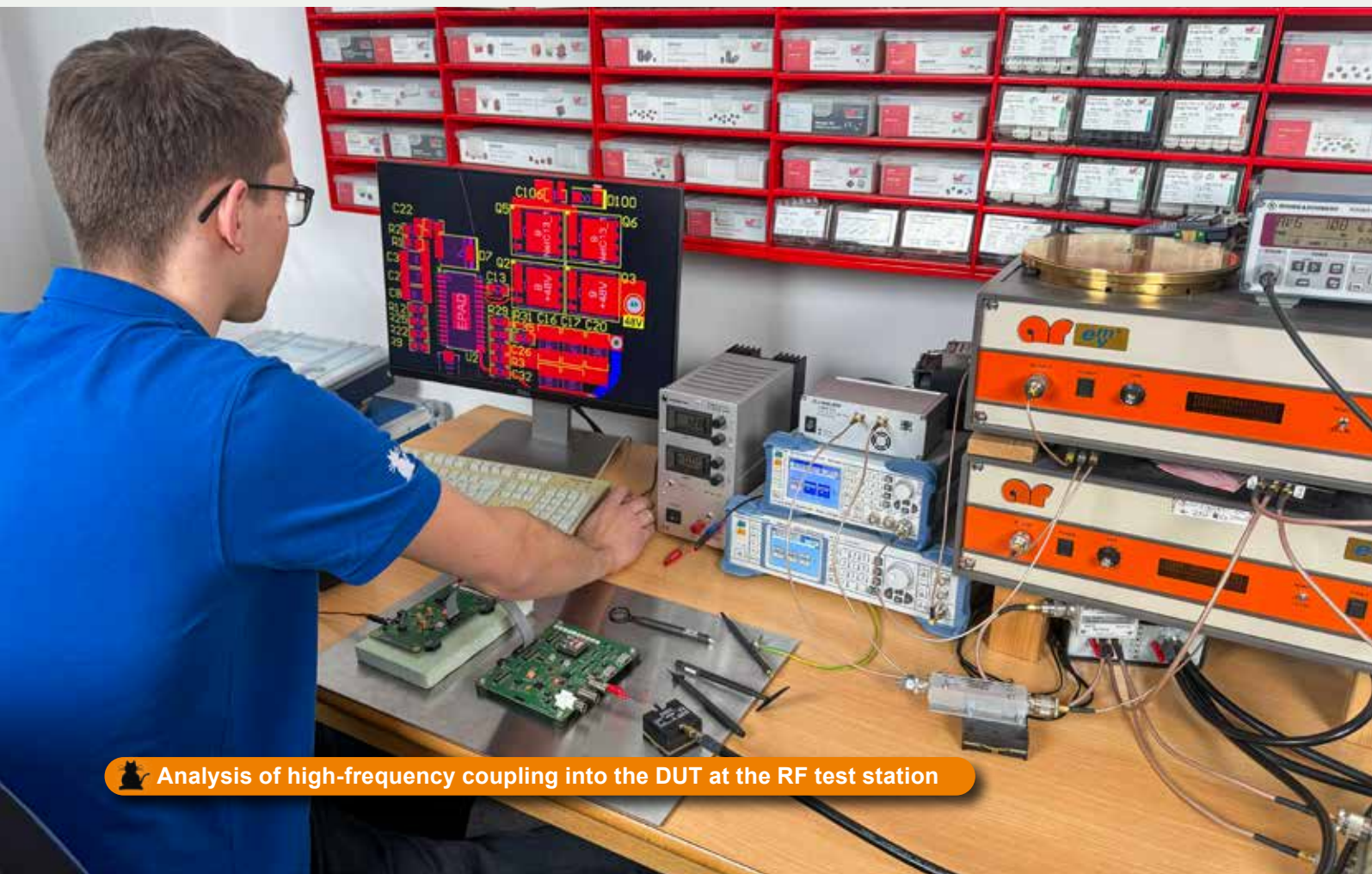
ICs, PCBs, modules, device level, systems

Additional services:

Development of EMC concepts, schematic and design review, design optimization

Our resources

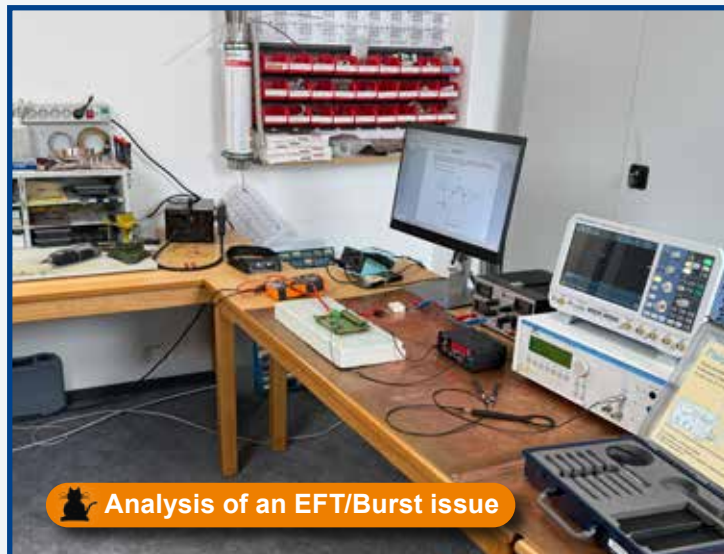
Langer EMV-Technik GmbH provides various facilities with extensive equipment for EMC consulting. This allows investigations to be carried out individually and countermeasures to be targeted directly at the assembly and its system environment. By combining many years of experience with high-end test equipment and our own measurement technology, we can solve a wide range of EMC challenges efficiently. Depending on the customer's requirements, our capacity also allows us to run multiple consultations in parallel.



Analysis of high-frequency coupling into the DUT at the RF test station



 **RI measurement with an antenna**



 **Analysis of an EFT/Burst issue**

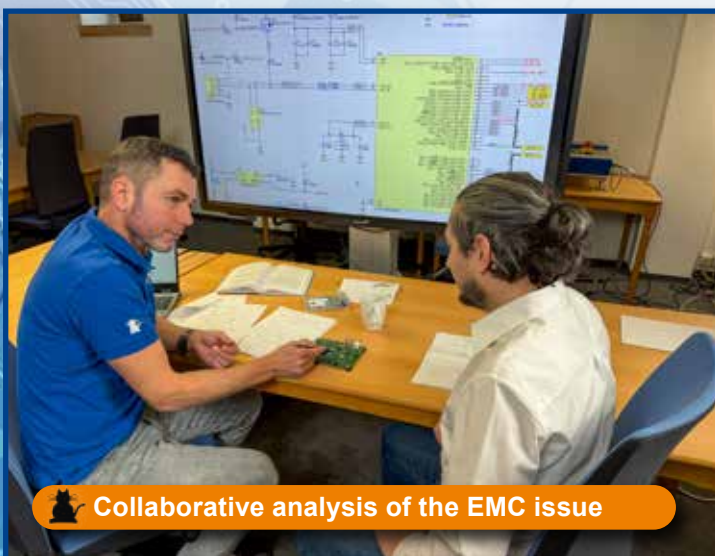
How we support you

EMC issues delay development projects, tie up resources, and often lead to extensive rework shortly before market launch. In the EMC consulting services provided by Langer EMV-Technik GmbH, our engineers support you in systematically analyzing disturbances and weaknesses in your assembly and resolving them in a structured way. The focus is on a traceable root-cause analysis directly on the DUT – with the goal of quickly achieving results.

With more than 35 years of experience in EMC troubleshooting, we take an analytical approach. We consider not only measurement results from individual components, but also the interaction between assemblies and their environment. We also make targeted use of our own product portfolio to analyze coupling mechanisms in greater depth.

Close collaboration with your engineers

A key element of our EMC consulting is close collaboration with the customer's development engineers. This includes, for example, preliminary discussions to plan the consulting process in the best possible way. Measurement results are interpreted together, root causes are discussed, and actions are derived. This direct exchange ensures transparency, speeds up implementation, and makes the development process easier.



 **Collaborative analysis of the EMC issue**

Measurement and analysis methods

- Pre-compliance evaluation in a suitable test environment to make relevant effects visible at an early stage.
- Reproducible analysis directly on the device under test (DUT) to reliably narrow down weak points.
- Investigation of coupling mechanisms to identify and assess critical areas.
- Immunity-related investigations (e.g., impulsive interference events) as part of the consulting process.
- ESD-related investigations to pinpoint sensitive areas.

Consulting where you need it

EMC consulting can take place either at your site or at the facilities of Langer EMV-Technik GmbH—depending on what makes the most sense for your situation.

Request a consulting

Send us a description of your application and its current status to sales@langer-emv.de
We will propose a suitable approach.