

baumann

radar | box

END-OF-LINE-TEST FOR SERIES PRODUCTION

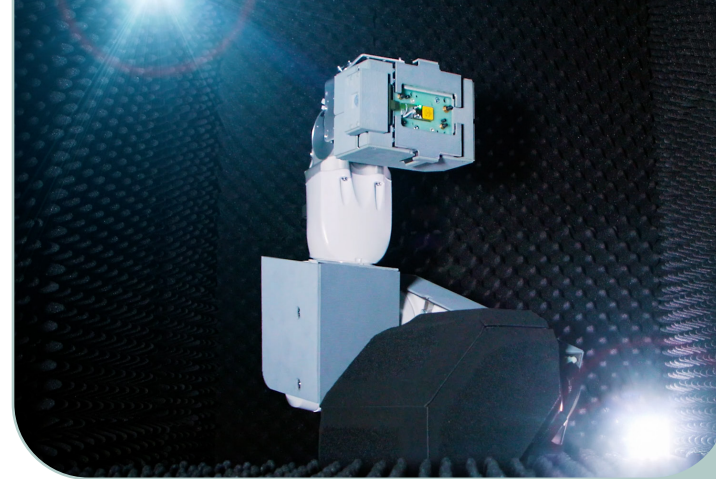
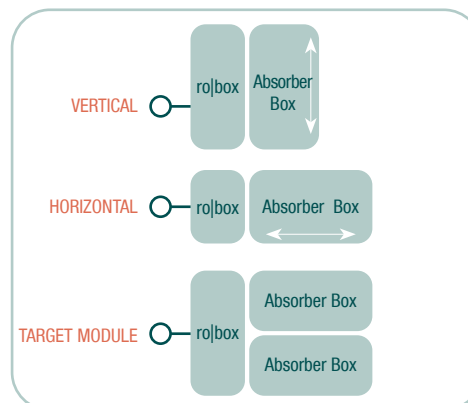
With our end-of-line (EOL) radar test solution, including a Field of View (FoV) calibration station and an Antenna Calibration Process (ACP), we deliver maximum precision and efficiency to the automated series production of radar sensors. The robot-guided radar chamber is designed for high-volume throughput and is ideally suited for large-scale automotive production.

Thanks to modular system architecture, intelligent software integration and flexible adapter interfaces, a wide variety of radar sensor types can be tested reliably on a single platform – regardless of housing shape, dimensions or connector variant. The robot movement with six highly dynamic degrees of freedom enables precise antenna alignment and application-specific movement profiles. Testing takes place directly at the end of the production line – fully automated, scalable and highly accurate.

A key component of the system is the soundproof, electromagnetically shielded and fully enclosed absorber test chamber, which eliminates external influences. Since 2012, we have continuously

optimised the absorber configuration, material design and mechanical enclosure to ensure the highest levels of test accuracy, repeatability and long-term stability – independent of environmental conditions. The enclosure of the robotic components has also been decoupled so that it has no impact on the measurement results.

Our system is suitable for a wide range of applications, including automotive, air traffic control, satellite and ground-based radar, rail technology, GPR, medical technology and process monitoring.



MODULAR SYSTEM

Platform:

- rolbox – automated handling and simulation of the test object via a 2D rotary unit or a 3D robot
(elevation $\pm 30^\circ$, azimuth $\pm 110^\circ$)
- Robot-guided, high-precision motion profiles

Adapter:

- Custom-designed grippers equipped with absorbers to achieve perfect electromagnetic enclosure.

Absorber Box:

- Vertical absorber box
– compact design, small footprint
- Horizontal absorber box
– flexible length
- Stacked absorber box
– reduced cycle time
- Target module
– flexibly configurable

System Integration:

- High system availability and stable process integration
- MES connectivity and remote maintenance available as options
- Robust architecture for 24/7 operation in series production

Customisation:

- Test systems tailored to customer specifications
- Flexible user interfaces and functions developed by experienced engineering teams
- Continuous further development in close collaboration with our customers



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