

silver atena
A MEMBER OF ASSYSTEM

TESTHOUSE WITH DEVELOPMENT EXPERTISE
**YOUR QUALIFIED PARTNER
FOR COMPREHENSIVE
ENVIRONMENTAL TESTING**

THE ENTIRE QUALIFICATION FROM A SINGLE SOURCE



For more than 15 years, Silver Atena has been developing electronic systems for safety-critical applications in various industries. Environmental tests and device qualifications are an important part of the development process.

Silver Atena is your qualified partner for comprehensive environmental testing and the qualification of electronic control units – from individual tests through to complete product qualifications.

We arrange the entire qualification for our customers – from test planning, implementation and troubleshooting right through to the certification. You benefit from our extensive experience with all relevant standards.

In addition, we offer you advisory services during development by deriving the environmental requirements for your device from the qualification standards and by supporting specification, architecture and design.

We use our own infrastructure for timely, optimised, economical processing.

DEVELOPMENT AND QUALIFICATION – FROM PLANNING TO ACCEPTANCE

Silver Atena offers complete product qualifications or single tests.

PLANNING AND DEVELOPMENT OF TEST CONCEPTS

CONCEPTION, SETUP AND PROVISION OF TEST SYSTEMS
(HiL, LOAD UNITS, TEST BENCHES)

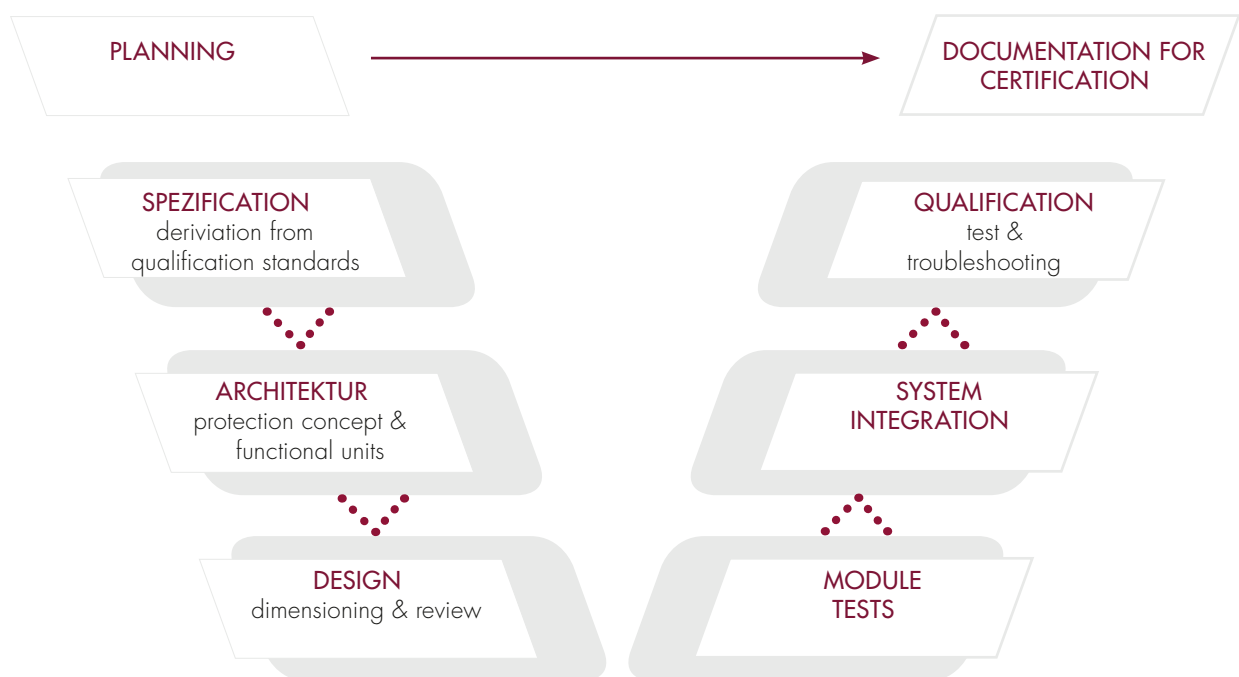
TEST IMPLEMENTATION AND ANALYSIS

TROUBLESHOOTING

QUALIFICATION AND DOCUMENTATION

COORDINATION WITH REGULATORY AUTHORITIES

As a specialised development company for production-ready products, we advise and support throughout the entire development process:



SPECIFICATION:

- Derivation of the environmental requirements for the device from the qualification standards

ARCHITECTURE:

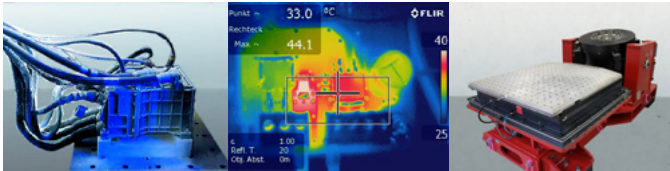
- Planning of the functional units (block wiring diagrams) and electrical protection concept
- Definition of concepts for: grounding and EMC, mechanics and assembly, temperature and humidity

DESIGN:

- Review of circuit diagrams and layout
- Layout and dimensioning of filters and lightning protection
- Construction of housings and mounting points
- Calculation of thermal and climate management

OUR RANGE OF SERVICES FOR A COMPLETE QUALIFICATION:

- EMC (Application of interferences and measurement of emissions)
- Power input, wiring systems, lightning
- Test benches (HIL, E-mechanics)
- Development of individual test piece software
- Environmental simulation (temperature, air humidity, air pressure, corrosive media)
- Vibration and shock
- Mechanical analyses (vibration, modal analysis, mass properties)
- Magnetic field studies
- Acoustics
- Service life



YOUR ADVANTAGES

ONE CONTACT PERSON for the entire qualification. You can concentrate on your core activities.

SHORT LEAD TIMES: in-house qualification infrastructure for environmental testing.

COST-CONSCIOUS AND EFFICIENT: optimised test implementation, concepts for effective and economical service life testing.

You benefit from our experience gained from numerous own developments and customer projects. We assist you in avoiding problems in advance.

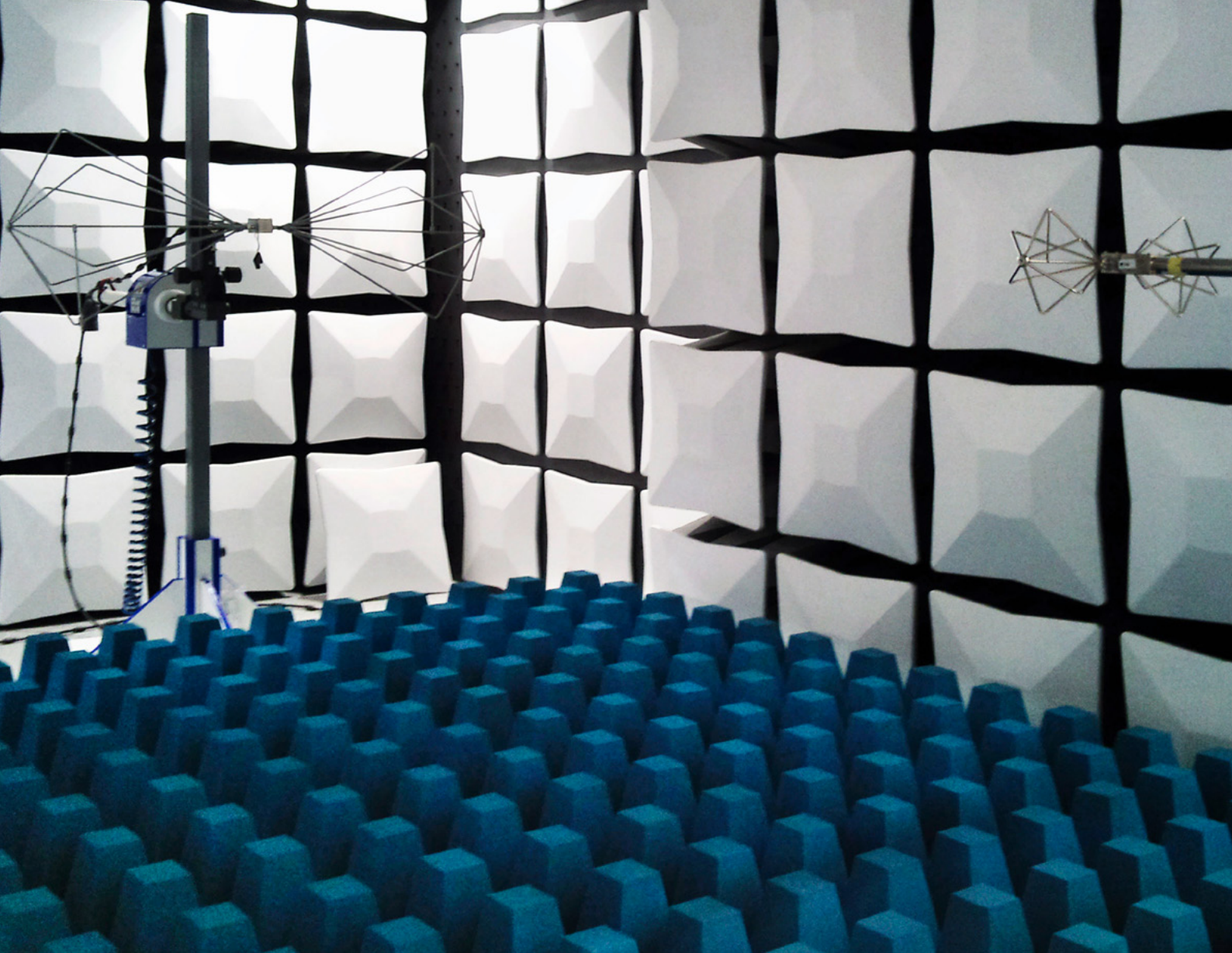
APPLICATIONS

We test in accordance with all common standards, e.g.

- Automotive (ISO-7637-x, ISO 11451 / 11452-x, ...)
- Aviation (DO-160, ABD0100, AMD24, ...)

We also carry out the qualification in accordance with your specific standards.





SERVICE RANGE EMC

- Development & verification of EMC concepts
- Analysis, studies and elimination of EMC problems
- Planning, preparation and implementation of EMC test campaigns in accordance with customer and industry-specific standards
- EMC testing in our own laboratory
 - conducted susceptibility testing
 - conducted emission testing
 - radiated emission testing up to 1 GHz
- Testhouse management for
 - radiated susceptibility testing
 - emission testing > 1 GHz
 - lightning
- EMC-compliant design
- Interference suppression
- Pre-compliance measurement
- Implementation of training / courses

SILVER ATENA

As an independent system supplier Silver Atena develops safety-critical electronics for applications in the growth markets automotive, aerospace, aero engines, rail, transportation and energy. Approximately 250 employees work for the company based at four locations in Germany.

Silver Atena takes charge of individual development stages or assumes overall responsibility for hardware / software projects as well as the development of complete systems and thus offers significant added value for the customer. Own products such as test systems, test benches, simulators and development tools compliment the portfolio.

Pictures with kind permission of Albatross Projects GmbH.

LOCATIONS

SILVER ATENA ELECTRONIC SYSTEMS ENGINEERING GMBH
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STUTTGART

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PORTFOLIO

- **Engineering:**
System, Hardware, Software, HMI, Safety, Security, Test
- **Control Units (Fail Safe / Fail Operative):**
Aircraft Engine Controller, Motor- and Hybrid ECUs, Chassis-ECUs, Power Electronics (Recuperation, Inverter)
- **Test and Simulation:**
HIL Modular Test System, E-Motor / Generator / Power Supply Simulation, Automatic Model DLL, Environmental Tests (EMC, Environmental Simulations, Mechanical Simulations)
- **Development Tools:**
RBE / MBSE, Bus / Sensor Gateways, Network and Routing Software
- **Consultancy:**
Safety Consulting, Systems, Technology and Process Consulting, Training

BREMEN

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