

### NOFFZ TECHNOLOGIES

## YOUR TEST & AUTOMATION EXPERTS

ENGINEERING SOLUTIONS FOR TOMORROW





### NOFFZ TECHNOLOGIES GMBH

NOFFZ Technologies develops and produces industry-leading test systems and automation solutions for the entire product develop-ment process, from prototyping and validation to series produc-tion. The company's test and measurement systems are established in the automotive and telecommunications sectors as well as consumer electronics, smart home, and medical use cases.

Over years, NOFFZ has developed inhouse modular systems and solutions based on the Universal Tester Platform – UTP which balance flexibility and standardization. With long-term support and extensive RF knowledge, NOFFZ is one of the top system integrators for complex RF and wireless applications combined with mixed-signal tests – from parameter/monitoring tests in validation department down to flashers, board level and end-of-line tests in production.



The NOFFZ Company is managed by Tobias Noffz & Markus Solbach. Tobias Noffz, the son of the founder Wilfried Noffz, is responsible for Business Administration & Operations. Markus Solbach, who worked with NOFFZ since 1998, concentrates on Sales, Marketing, Business Development & Engineering.

### CORE VALUES AND PEOPLE-CENTRIC APPROACH

At NOFFZ Technologies, our interactions are guided by clear values developed over our 30-year history. As a **family** company, we prioritize **respect** and treat each other with consideration. **Sustainability** is a crucial aspect of our company culture, and we strive to integrate it across all areas. Above all, we value the **passion** we bring to our work, as it drives the **innovative** solutions we deliver.





### TEST & AUTOMATION SYSTEMS AND MORE FOR INDUSTRIAL SECTORS WORLDWIDE

At NOFFZ Technologies, our cutting-edge testing and automation systems are successfully utilized in many industrial sectors worldwide. Our team of experts is ready to design a tailored test and automation concept that meets your unique requirements. Our systems ensure defect-free and safe products while increasing the production volume. Whether it's validation or end-of-line production, we have you covered.

Due to the capabilities in HW & SW development, including embedded and PCB design, as well as mechanical design and overall production – NOFFZ is open and further interested in any kind of prototyping and product development request for custom specific products or machines.

### A BASEMENT BEGINNING

In 1989, Wilfried Noffz, a communications technology engineer, founded the company. Starting as a freelancer, he developed measuring systems, software, and hardware in the small basement of his home. Notable companies like Philips, Grundig, and Nokia recognized his expertise, propelling the company forward. The company constantly optimizes their development & manufacturing process to achieve constant growth and invest into R&D and new products/systems & markets to ensure continuous global success.

In each phase of the company history, NOFFZ has always been open and flexible towards new developments or changes in the market and adapted to them quickly. For that very reason, today NOFFZ belongs to the 100 most innovative mid-sized companies in Germany and is internationally established with nine locations on three continents. Frost & Sullivan recognizes NOFFZ with the European Company of the Year Award in the automotive radar test market.

### **ONE SOURCE FOR HIGH QUALITY**

### TAILORED TEST SOLUTIONS FOR YOUR UNIQUE REQUIREMENTS

At NOFFZ Technologies, we leverage our wealth of experience and expertise to provide tailored test solutions that meet your specific requirements. We work closely with you to develop the best solution. Our range of testers includes compact solutions for simple assemblies and complex test systems for multi-layered end products, all designed to streamline your testing needs.

### **OUR SERVICES AT A GLANCE**



#### CONSULTING

Development of innovative test & automation solutions



#### **DESIGN & DEVELOPMENT**

Mechanical & electrical designs/
HW & SW development/
Fast prototyping



#### MANUFACTURING

Batch & series production



### SERVICE & SUPPORT

Long-term service with engineers & test experts

#### **EXPERT GUIDANCE AND SUPPORT**

Whether you have inquiries, challenges, or need advice, our experts are at your disposal every step of the way. We believe that good solutions come from exchanging information and working collaboratively with our clients.



#### CONSULTING

We'll design the optional testing and automation solutions for your needs.
Reliable and safe.

consulting@noffz.com



### **CUSTOMER SOLUTION CENTER**

We'll put our knowledge and experience to work for you. From the first inquiry to the finished application

sales@noffz.com



#### **SERVICE & SUPPORT**

We'll support you and be available to you. Worldwide with our technical service and individual solutions.

service@noffz.com

### **TECHNOLOGY SOLUTIONS**



### **CUSTOM-FIT CONCEPTS**

We understand that different products in development and in production require customized test and automation solutions. Our experts develop custom-fit concepts that are fully tailored to your individual requirements. While the design of our testers can vary depending on your specific needs, our Universal Tester Platform (UTP) ensures a high level of standardization.



### **UTP - UNIVERSAL TESTER PLATFORM FOR ALL INDUSTRIES**

Built on our own Universal Tester Platform (UTP), our customer-specific systems can be utilized for development and validation, end-of-line production testing, or as mobile test stations in various industrial sectors.

### **ALL INDUSTRIES**



### **INFOTAINMENT & TELEMATICS**



# TEST SOLUTIONS FOR NETWORKED VEHICLE COMPONENTS/CONNECTED CAR

We specialize in developing automatic test systems for the automotive industry, meeting the industry's rapid technological advancements and time-to-market requirements. As vehicles become more connected, with multimedia devices serving both entertainment and crucial vehicle information, we offer test solutions for infotainment, telematics, and the Human Machine Interface (HMI). Our systems ensure proper functionality and seamless communication between these networked components, utilizing wireless technologies such as A<sup>2</sup>B, BLE, C-V2X, Wi-Fi 6, and 5G or 6G.



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### **ADAS & RADAR**

## ENSURING THE HIGHEST QUALITY STANDARDS FOR VEHICLE SAFETY TECHNOLOGIES

As camera and sensor technologies become standard in vehicles, their proper functioning is vital for safety. We specialize in developing test solutions for these advanced technologies, including highly sensitive cameras, LiDAR, and radar sensors. Our systems simulate vehicle components or emulate the vehicle environment, guaranteeing the highest quality and functionality of your cuttingedge developments.



### ADAS - SAFEGUARDING CHALLENGING APPLICATIONS

Advanced driver-assistance systems (ADAS) play a crucial role in ensuring the safety of drivers, vehicles, and their surroundings. As these systems take on more functions, precise and reliable sensors become paramount.

#### We offer:

- Integrated radar target simulator (RTS)
- High precision dual axis motion of the radar sensor in azimuth and elevation
- Front or rear operation to allow manual or automated external DUT handling
- Maximum reflection suppression in the anechoic chamber
- Small footprint due to compact vertical design
- NOFFZ UTP Suite control software

## TEST SOLUTIONS FOR FUTURE VEHICLE SYSTEMS

The increasing complexity of future vehicle systems necessitates comprehensive testing. As individual electronic control units (ECUs) give way to domain-specific control units (DCUs) and high-performance computers (HPCs) with a high amount of interfaces and sensors, we excel in developing complex and innovative test systems. Our efficient tests ensure the reliability and high quality of your sensitive automotive components.



Radar Test System UTP 5065 for validation and end-of-line tests

### **E-MOBILITY**



## TEST AND INSPECTION SYSTEMS FOR ELECTROMOBILITY

As the transportation industry undergoes a transformative shift towards electric vehicles, we are at the forefront of developing customer-specific test and inspection systems for it. Our scalable systems cover a wide range of testing needs, from individual control modules to the complete set up of the drivetrain.

## TEST SYSTEMS FOR BATTERY MODULES WITH BATTERY MANAGEMENT SYSTEM

Besides others we offer an innovative test concept that simulates charge cycles and load cycles for battery modules. By utilizing DC supply for charging and electronic DC load for simulating output loads, we can effectively test battery systems and their management systems. Our testing covers a range of parameters, including charge status, input and output current, voltage of individual cells, and battery temperature.





UTP 7042 end-of-line tester for powertrain components

### TEST SYSTEMS FOR DC/AC INVERTERS

The powertrain is the heart of an electric vehicle, encompassing the battery, electric motor, and inverter components. Inverters play a crucial role in converting the battery's direct current into usable alternating current for the electric motor. We provide complex test solutions for inverters, offering validation in endurance or functional tests, as well as production testing in the end-of-line area.

### **SMART HOME**

## ADVANCED TEST SOLUTIONS FOR SMART, ECO FRIENDLY HOUSEHOLD APPLIANCES

The rise of automation and connectivity in the private sphere has increased the requirements for the household industry. As devices become more technologically advanced, there is a growing focus on minimizing ecological footprint and reducing energy consumption. Whether intelligent washing machine, coffee machine, heating systems, our solutions ensure the seamless operation and energy efficiency of household appliances. We support end consumers' high-quality demands and enable remote support and diagnostics through cloud-based data transmission.



## RELIABLE SOLUTIONS FOR SMART HOME AND IOT

In the smart home segment, the connectivity of IoT (Internet of Things) devices via wireless technologies is therefore gaining in importance. Wireless switching solutions and motion sensors have long been part of everyday life in home automation. But smart meters and corresponding gateways for recording and controlling electricity consumption are also im-portant building blocks for the energy transition. Wireless modules for gas, water, and heat meters are also already in use. End consumers have particularly high-quality demands in these areas and expect perfectly functioning household appliances that are easy to ope-rate. Talk to our experts for several RF and wireless test solutions in this area.



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### **SEMICONDUCTOR**



### **SOLUTIONS FOR SEMICONDUCTOR TESTING**

As electronic devices become more powerful and complex, the demand for semiconductors just as the complexity of semiconductor testing is rapidly increasing across various industries. We provide comprehensive solutions for semiconductor testing, catering to the needs of semiconductor manufacturers across different stages in development & production.

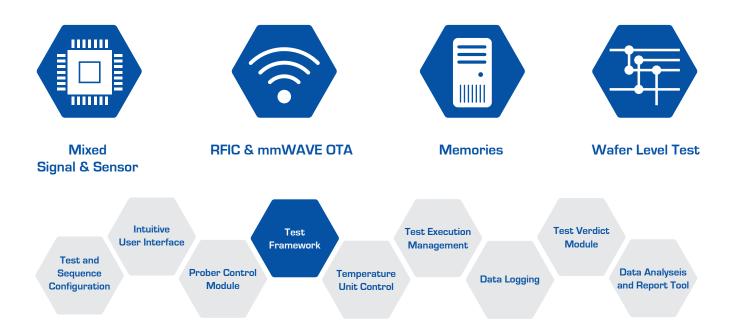
We understand the challenges involved in testing RF and mixedsignal ICs or memories. From chip characterization and conformance

testing to wafer-level and final testing, we offer a wide range of services to support semiconductor companies. Our personalized scalable test concepts ensuring accurate and efficient testing throughout the development & production process.

#### **DEVELOPMENT OF TEST FRAMEWORKS & SOFTWARE TOOLS**

Our expertise lies in developing intelligent test frameworks and software tools for characterization, validation, and production. We integrate different software environments, such as Python, C#, or NI LabVIEW/TestStand, and provide customized software. Our frameworks encompass essential components such as user interface, test execution management, measurement result analysis, control of peripheral devices, data logging, and reporting. We offer ongoing support, software updates, and maintenance to ensure the optimal performance of your test system.

Our own software – UTP Semiconductor Suite is made for Chip & Component Testing and includes Libraries and SW Interfaces done in several SW environment with essential building blocks. We offer individual user interface, management of test execution, test verdict (based on measurement results), control of peripheral devices such as temperature devices and probes, data logging, analysis and reporting also into MES Systems. Of course, we will support you with periodic software updates, new features, and active maintenance of your system.



### **ELECTRONICS AND AEROSPACE & DEFENSE**

### TEST SOLUTIONS FOR INDUSTRIAL AUTOMATION

With the Industrial Internet of Things (IIoT), industrial electronics are undergoing a transformative phase. In Industry 4.0, seamless communication and real-time data processing between machines are crucial. Everything is connected from the sensor level up to HMI – and we test them all. Within our UTP Suite software framework we integrate Interfaces to Wireless Technologies & IIOT, as well as incorporating the OPC UA communication protocol and facilitating connection and development



for PLCs from different manufacturers. We design intuitive applications for smart production, offer remote access to testers and test results, and enable seamless integration with existing databases or MES. Additionally, our preventive maintenance services minimize downtime and optimize the efficiency of your production facility.



## TAILORED RADIO SOLUTIONS FOR AEROSPACE AND DEFENSE APPLICATIONS

At NOFFZ Technologies we specialize in the design and development of advanced, highly customized radio communication systems tailored for the most demanding applications in the Aero/Defense sector. Our expertise in cutting-edge technologies, including Software-Defined Radio (SDR) and FPGA-based signal processing, enables us to deliver unparalleled performance and reliability.

From radar transceivers to drone detection systems and GNSS solutions, we provide mission-critical systems designed to meet the unique challenges of modern aerospace and defense operations. Partner with us to elevate your capabilities with precision-engineered communication solutions.



## **NOFFZ AS PRODUCT COMPANY**

### **EXAMPLES OF OUR PRODUCTS**



A<sup>2</sup>B<sup>®</sup> Network Analyzer



Universal Wireless Tester for Non-Signaling Test



ITN 1000 for WLAN and Bluetooth™



Cellular Base Station Emulator from 2G to 5G



**GNSS Signal Simulator** 

#### and much more

### **INTEGRATED IN OUR TEST SYSTEMS**





### **NOFFZ SOFTWARE UTP SUITE**

### YOUR COMPREHENSIVE SOFTWARE SOLUTION FOR TESTING

Collaborate with us to discover the optimal hardware & software configuration for your cutting-edge test systems. Our modular and universal test software platform is widely utilized across various industrial applications, spanning from product validation to production testing. It caters to the needs of developers, test/maintenance engineers, and operators alike.

### Key features:

- A powerful suite of tools for configuration, development, analysis, debugging, and execution
- Robust applications, frameworks, API, and comprehensive documentation
- Standardized solution catering to operators, test engineers, and maintenance personnel
- Built on NI TestStand, NI LabVIEW, and .NET/C# technologies
- Easy customization and expandability
- Modern and intuitive user interface







**UTP Suite for Automated Test** 

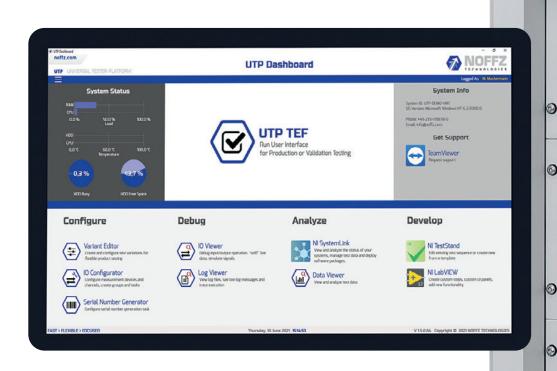
**UTP Product Validation Suite** 

**UTP Semiconductor Suite** 

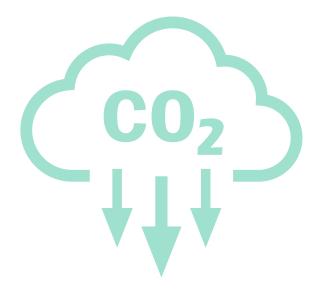
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Experience the efficiency and versatility of our all-in-one software solution, designed to streamline your testing processes and drive optimal results.



### **SUSTAINABILITY**



### SAVING RESOURCES, MINIMIZING EMISSIONS

We, at NOFFZ globally, hold sustainability and environmental protection as integral parts of our company philosophy. We are committed to reducing our ecological footprint and promoting a greener future.

We actively work towards saving resources and minimizing emissions throughout our production processes. From carefully managing our energy consumption to striving for reduced carbon emissions, we prioritize environmental stewardship. As part of our commitment to sustainability, we are transitioning our company fleet to e-mobility, starting with our vehicles and charging station in Germany, as well as immense Photovoltaic System on our new building which is EEG40.

## RECYCLABLE MATERIALS AND WASTE REDUCTION

We prioritize the use of recyclable materials whenever possible, not only in our production processes but also in our transport and packaging materials. For many years, we have collected and reused packaging filling materials, reducing the need for additional materials and minimizing waste.





### **CAREERS**



## EXPLORE THE WORLD OF TECHNOLOGY, KICKSTART YOUR CAREER, AND SHAPE YOUR FUTURE WITH US

As a family-owned company, we value teamwork, open communication, and respect among our more than 250 employees. We offer exciting opportunities to work with cutting-edge technologies and provide a platform for personal and professional growth.

As a tech company, we offer a highly innovative environment with modern, perfectly equipped workplaces for each of our professional fields.

We are looking for open-minded, motivated employees who will go above and beyond with us.

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### **Experience Global Excellence in Testing & Automation**

At NOFFZ Technologies, our dynamic innovation and unwavering commitment to customer service have made us a global leader in testing & automation systems. With a worldwide network of locations in USA, Mexico, Germany, Hungary, Serbia, and China, we provide local expertise and prompt support to industries such as automotive, telecommunication, smart homes, medical technology, and semiconductors. Our market-leading technologies, combined with our international team of experts, ensure the successful implementation and operation of our cutting-edge solutions. Experience global excellence in testing & automation with NOFFZ Technologies today.

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