



**Electronics manufacturer specialising in radio**

Premium partner for customised test solutions in the sectors  
**mobile communications, automotive and defence technology**

- Development - Production - Service -

# // Competence Quality Reliability



Your partner company for  
customised solutions -

"Development, Production &  
Service" all from one source.

// High-frequency technology

// EMC technology

// CNC milling technology



# // **The Company**

*Development and manufacture of customised products*

## **Telecommunications / mobile communications sector**

An important sector is the telecommunications industry for which we manufacture shielding boxes, relay switch panels, coupling fields and air interface adapters (air interface emulation) 2G/4G/5G/IoT/WiFi/TETRA. We offer software solutions for the control of our devices and systems and integrate desired programme sequences.

## **High frequency and measurement technology**

Our high frequency components include e.g. programmable attenuators, semiconductor switches, hybrid couplers, power dividers, RF filters, coaxial relays, etc.

For EMC measurement technology we sell relay switching units and other accessories.

## **CNC milling technology**

We produce high-precision milled parts in our modern CNC production centres. From prototypes to series production, especially according to customer specifications. Our mechanical product range also includes standard aluminium enclosures such as profile enclosures, milling cassettes and 19" racks.

# // The Company

*The company history at a glance*

Foundation of MTS Mikrotechnik  
as a developing and producing  
company in the field of EW

1980

1995

2005

2020

Relocation of the company  
into a new company building  
in Mertingen

Change of the company name  
MTS Mikrotechnik to  
MTS Systemtechnik with  
new shareholders

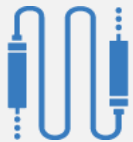
25 years of MTS Systemtechnik



# // *Main products*



Systems for the distribution of LF, video and RF signals in the fields of tele- and satellite communication as well as radio surveillance.



Development and production of active and passive components for high-frequency technology



Manufacture of mechanical components for the aerospace, high-frequency and optical industries

# // *Company facts*

## **Company**

Administration, sales and production - all under one roof. Worldwide representatives for the marketing of MTS products.

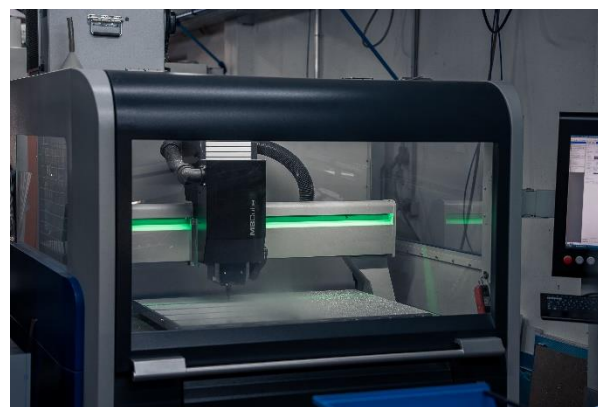
## **Employees**

50 employees in full and part time, consisting of engineers, technicians, skilled workers and trainees

## **Training**

- Electronics technician (m/f/d) for devices and systems
- CNC cutting machine operator (m/f/d)
- Industrial clerk (m/f/d)

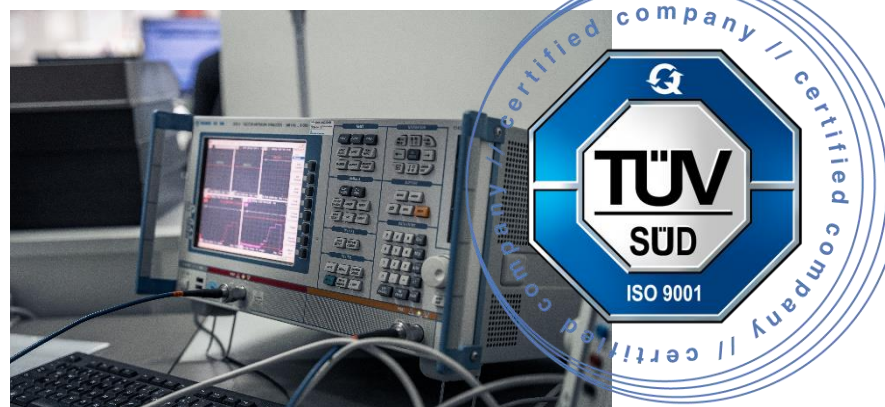
# // *Company facts*

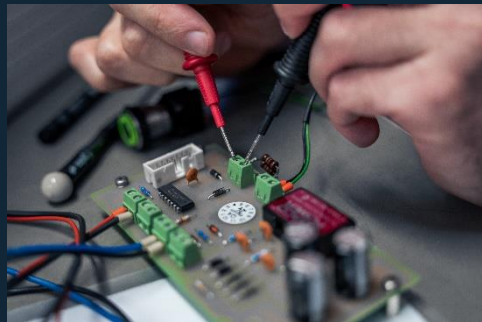
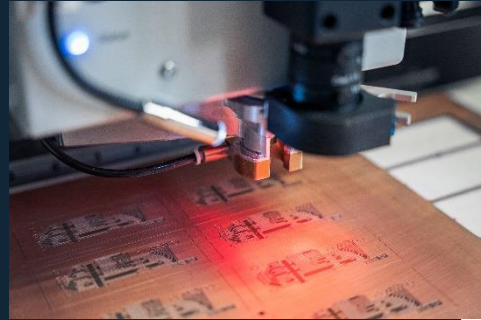
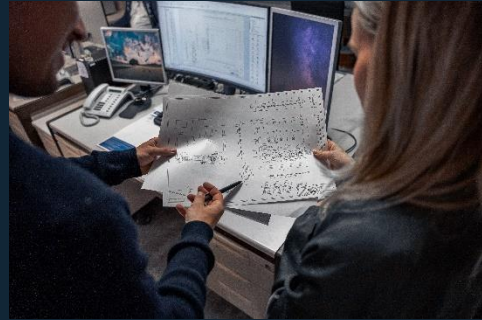


DIN EN ISO 9001:2015 certified

(Development, production, distribution)

Modern measuring devices and machines





## // **Competences**

- // In-house development, simulation and production of high-frequency components and systems
- // Software and hardware laboratory
- // System integration
- // EMC absorber chamber
- // CAD services
- // CNC machining centre
- // Modern production processes
- // Quality standard DIN EN ISO 9001





# // *Our markets*



Our customers are developers and manufacturers of highly sensitive equipment in the mobile communications, telecommunications, aerospace, defence, medical, automotive and electronics markets. MTS Systemtechnik stands for cutting-edge technology, absolute reliability, discretion, transparent processes and certified quality.

# // *Development and construction*

- // Own development department (hard- and software) with development engineers (high-frequency technology, electrical engineering, software)
- // Development and design of own products, complex devices and systems up to individual components
- // Development of operating and control software, firmware etc.
- // Circuit board plotter for development evaluation in circuit board design in the shortest possible time
- // 3D CAD designs in a modern software environment for complex devices and systems, components and mechanics
- // 3D printer for initial samples
- // Product test in our own EMC absorber chamber

# // *Electronic manufacturing*

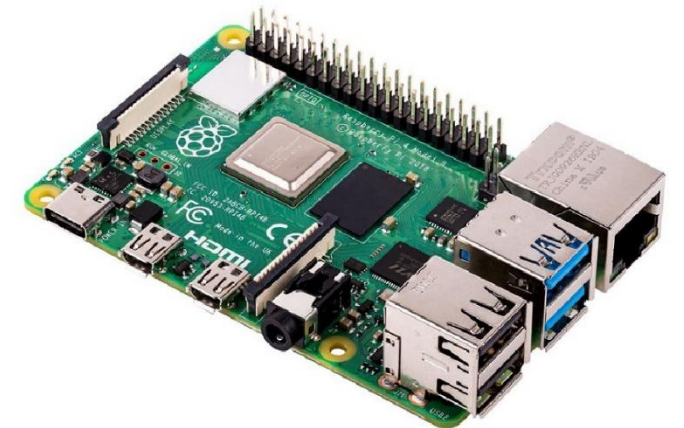
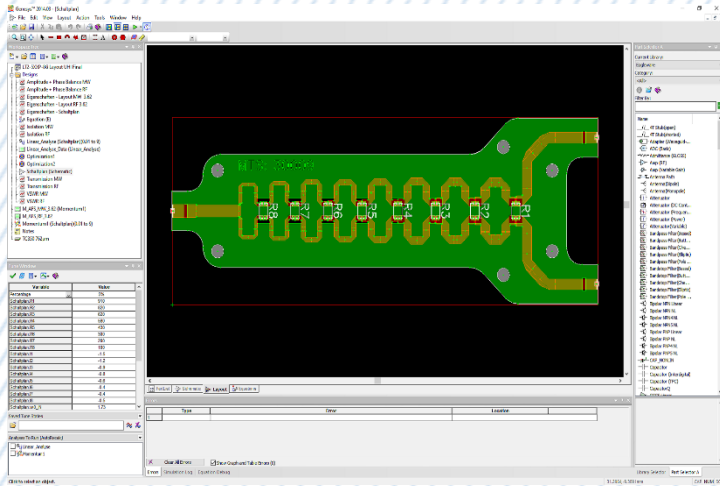
- // Production of individual printed circuit boards
- // Assembly of the units and systems
- // Cable assembly (coaxial cable)
- // Production and assembly of components
- // Examinations and tests of the individual products
- // Electronic measurement
- // Creation of test protocols
- // Extended workbench as a service

# // *Mechanical manufacturing*

- // CNC milling centre with seven different milling machines
- // Milling of single pieces up to series production possible
- // Milling of high-precision components and parts
- // 3D coordinate measurement
- // Milling of different materials (e.g. aluminium, steel and polymer (POM))
- // Surface treatment
- // Extended workbench as a service



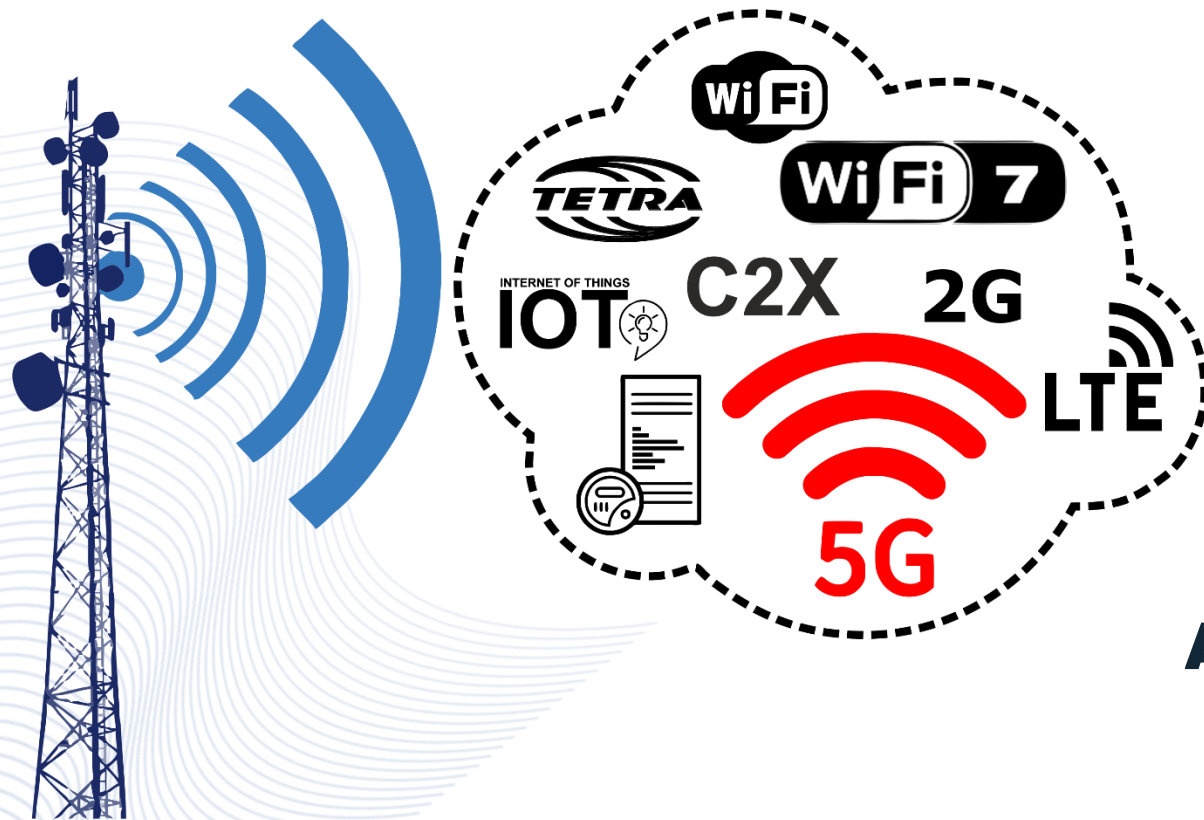
# // Modern resources



- // Modern software environment with Keysight Genesys, Pulsonix circuit board design, Visual Studio etc.
- // Circuit board plotter for rapid development evaluation in circuit board design (LPKF S103)
- // Development boards for contemporary hardware and software programming (Raspberry Pi 4 Model B and Cora 7: Zynq-7000)

**Ready for the future –  
Ready for new technologies**

**5G**



**MTS Systemtechnik -  
Automated test solutions with  
MTS system components**



# // Components

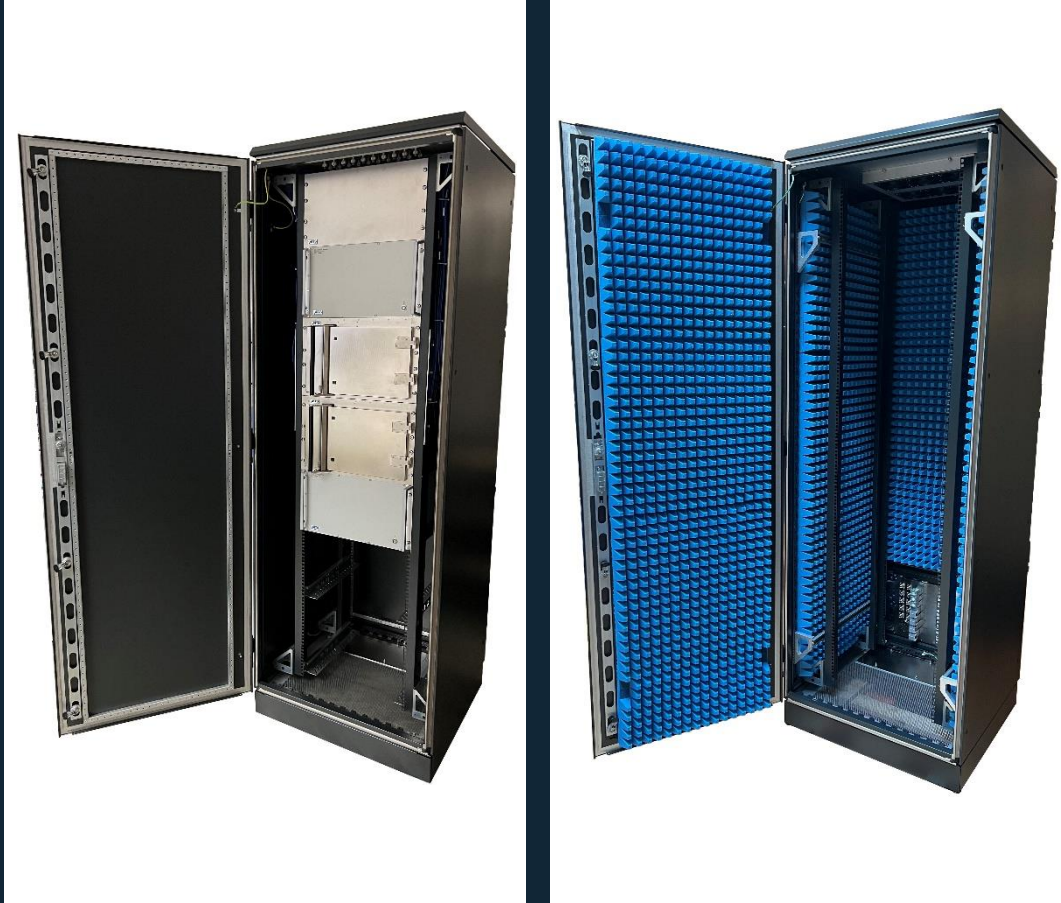
- // In-house development, simulation and production of high-frequency and microwave components
- // Power divider - Wilkinson and Resistive
- // Semiconductor attenuators - 95 dB / 122 dB attenuation
- // Semiconductor switch - 2s, 4s & 8s with  $\geq 100$  dB isolation
- // Coupler - Directional coupler & 3 dB Hybrid
- // Level detectors - 5 to -65 dBm dynamic range
- // Passive filter modules - USB 3.2 (20 Gbit/s) & Gigabit-Ethernet
- // etc.





## // *Devices and systems*

- // Over 90% of MTS devices and systems consist of the company's own component developments
- // Power divider units           - DC to 13 GHz
- // Attenuator units               - 1 MHz to 13 GHz
- // Air Interface emulations       - 1 MHz to 13 GHz
- // Coupling units                 - 380 MHz to 6 GHz
- // Switching matrices            - 1 MHz to 13 GHz
- // Shielding boxes               - 10 kHz to 13 GHz
- // etc.



## // *System solutions*

The sensitivity of mobile devices has increased dramatically in the last year. 4G or 5G devices can detect up to -130 dBm, NB IoT applications even up to -145 dBm. Very high RF shielding is required to test these technologies under defined conditions. MTS rack systems are a solution that offers about 120-140 dB. The main features are a shell-type enclosure, filtered interfaces, adapted RF cabling and complete installation in and on the facility.

- // MTS 19" rack system
- // Integrated fans in the roof
- // Connection panel in the roof for RF connections
- // Connection panel on the back for feedthroughs

**// Autonomous solution  
for radio measurements  
and monitoring**



# // *Measuring vehicle*

*The autonomous solution for mobile, measuring, monitoring and communication vehicles*

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Universal equipment carrier

5G

All types of radio measurements

Radio optimisation

Benchmarking

Troubleshooting / Debugging

IMSI Catcher

Optional radio direction finder

authorities and organisations with security tasks applications

Self-sufficient power supply, can be used almost anywhere



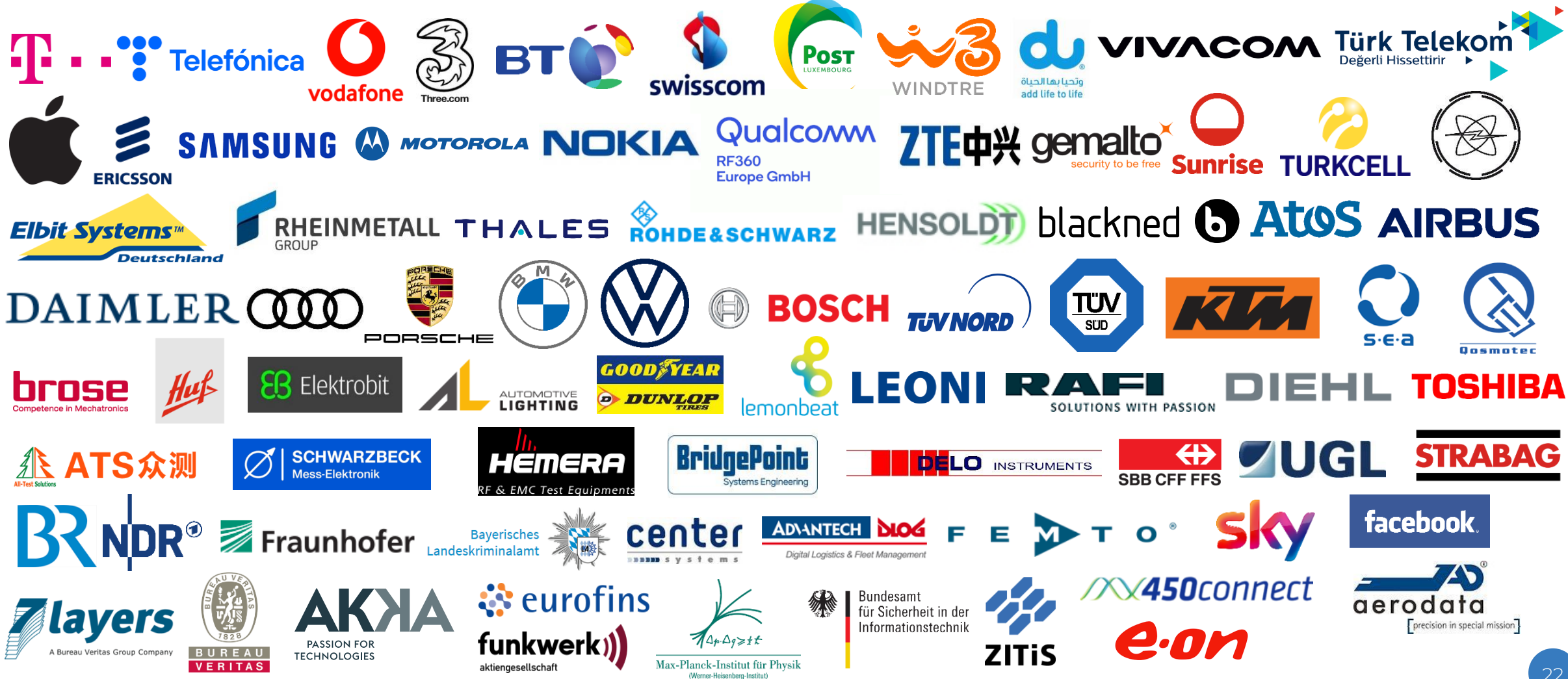
# // **Measuring vehicle**

*Further application possibilities:*

- // Jammer Technology
- // Drone defence
- // Monitoring
- // Wiretaps



# // Main customers



# // Representations







## *// Contact us*

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