

30 years MTS
Systemtechnik

Electronics manufacturer specialising in radio

Premium partner for customised test solutions in the fields of
mobile communications, automotive and defence technology

– Development – Production – Service –

// Competence Quality Reliability



“Your partner company for bespoke solutions - development, production, and service all from a single source.”

- // High-frequency technology
- // EMC technology
- // CNC milling technology



// *The Company*

Development and manufacture of customised products

Telecommunications and Mobile Communications Sector

The telecommunications industry is an important sector for us. We manufacture shielding boxes, relay switch panels, coupling fields, and air interface adapters (air interface emulation) for 2G, 4G, 5G, IoT, WiFi, and TETRA. We also provide software solutions for controlling our devices and systems, integrating customised programme sequences as required.

High-frequency and Measurement Technology

Our high-frequency components include programmable attenuators, semiconductor switches, hybrid couplers, power dividers, RF filters, coaxial relays, and more.

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

CNC Milling Technology

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

// The Company

The company's history at a glance

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

1980

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

1995

Relocation of the company
into a new company building
in Mertingen

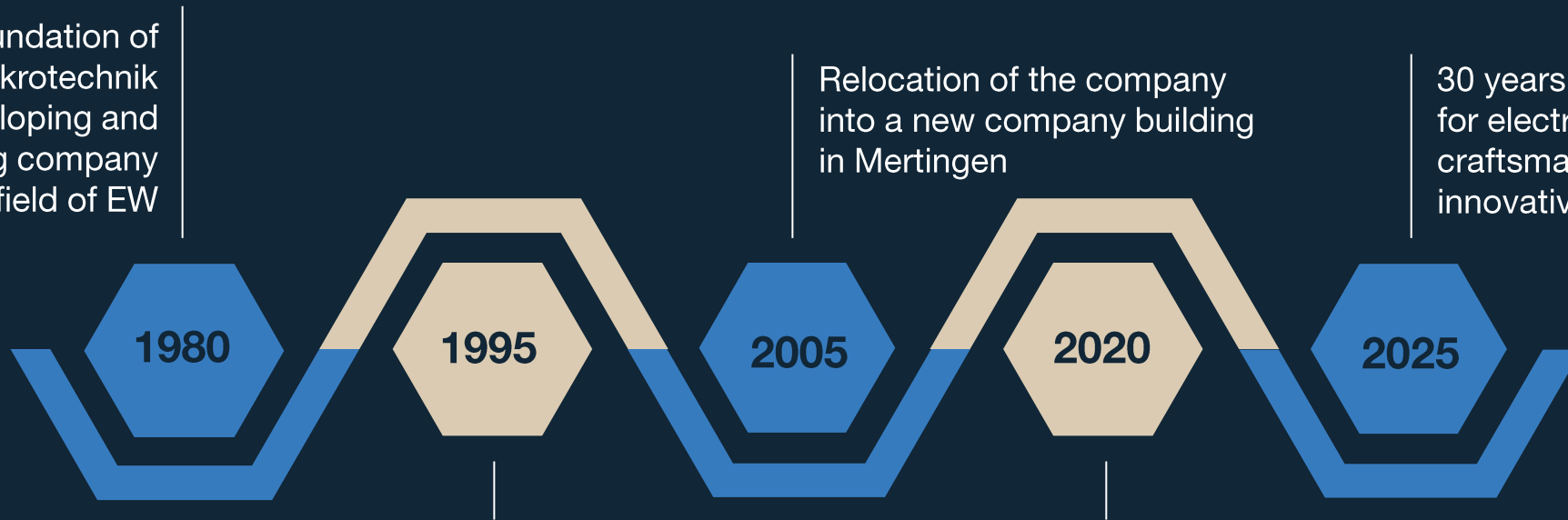
2005

25 years of MTS Systemtechnik

2020

30 years of passion
for electronics, precise
craftsmanship, and
innovative solutions.

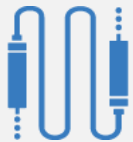
2025



// *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.

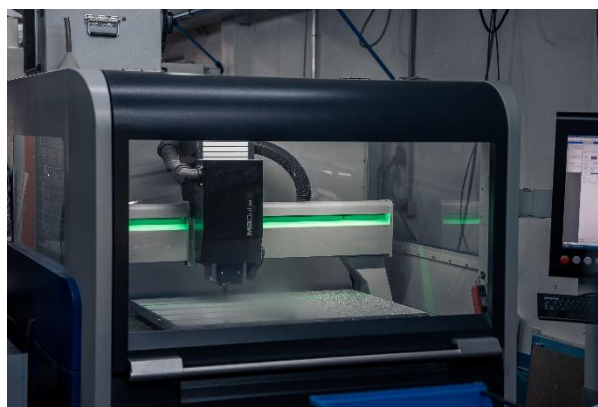
Employees

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)

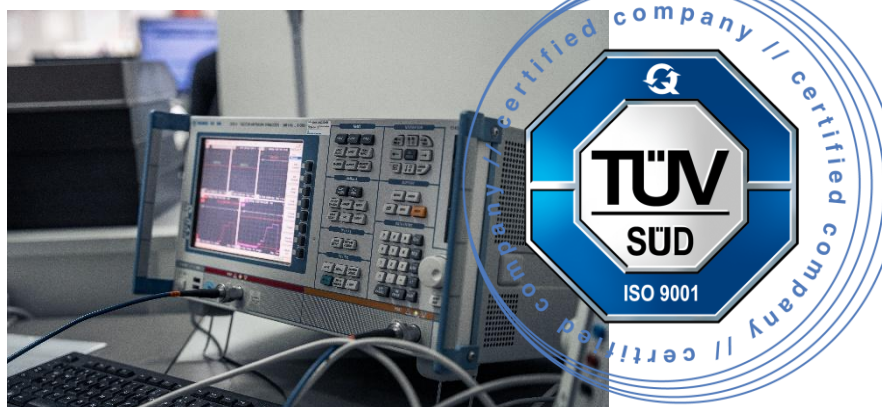
// *Company facts*

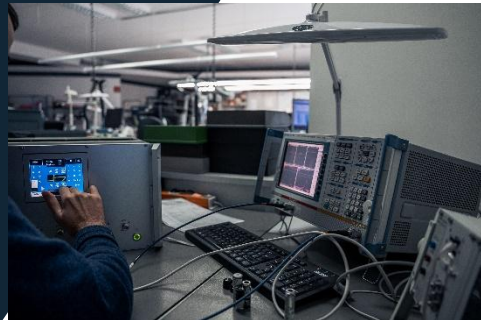
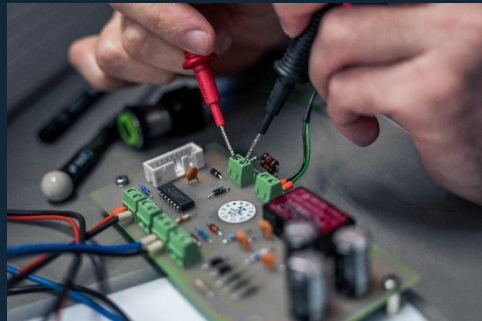
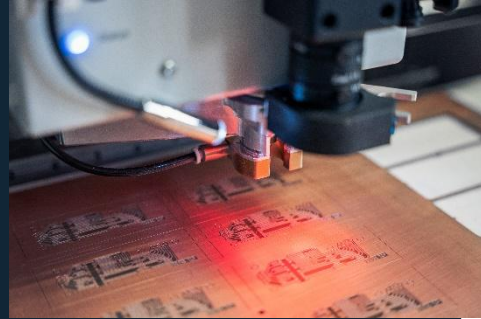


DIN EN ISO 9001:2015 certified

(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 include developers and manufacturers of highly sensitive equipment in the mobile communications, telecommunications, aerospace, defence, medical, automotive, and electronics sectors. MTS Systemtechnik is synonymous with cutting-edge technology, absolute reliability, discretion, transparent processes, and certified quality.



**MTS radio field
emulations for testing
military communication**



**Enables
field tests
on side**

// Radio Field Emulation AIAD

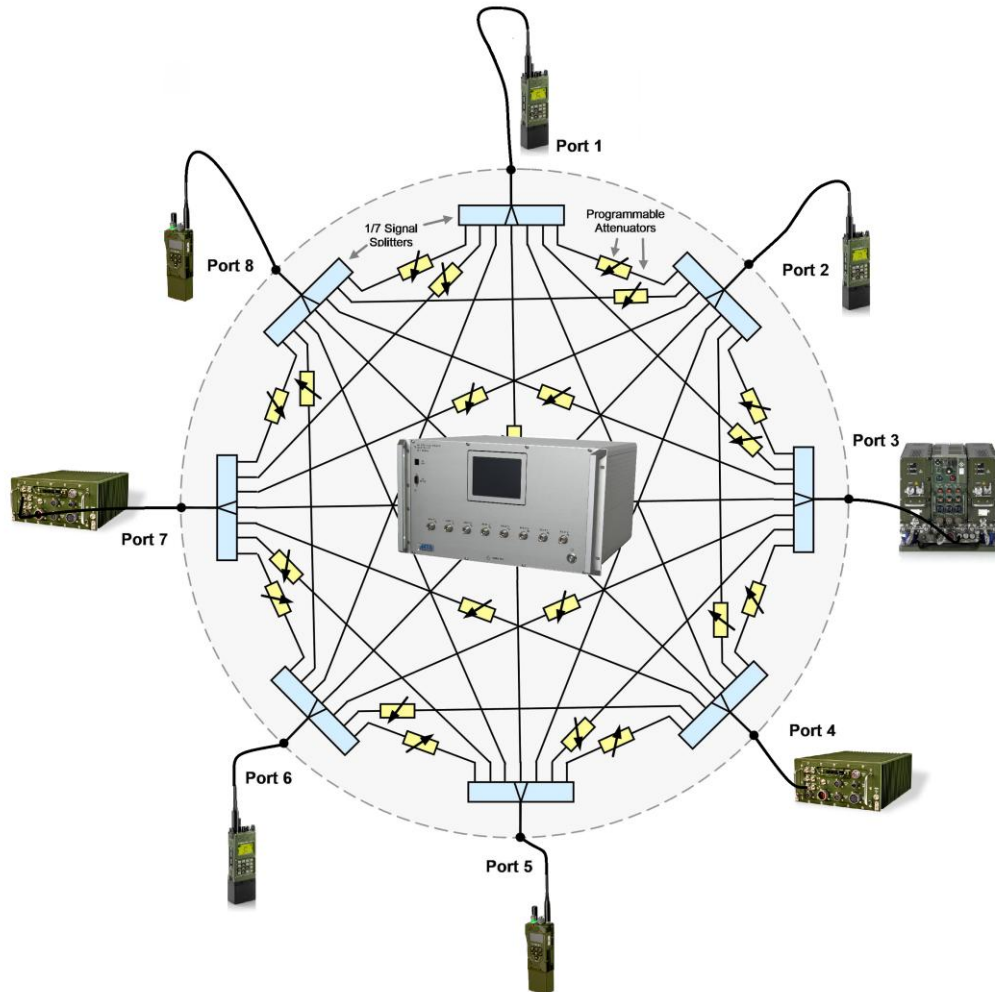


Development or integration of tactical communication systems

Current approach OTA (Over-the-Air-Testing):

The initial development and functional testing are carried out by the manufacturer in accordance with the relevant specifications or standards. Integration and operational functionality are assessed during OTA field tests. Only in these conditions can range tests, cell handovers, interoperability, dynamic movements, and multi-user operations be evaluated under real-world circumstances. This approach incurs significant costs due to the need for equipment, personnel, and space. The time required for these tests is also considerable.

// Radio Field Emulation AIAD



Development or integration of tactical communication systems

Procedure with MTS AIAD series:

With our AIAD systems, any transmission scenarios, conditions, or problem cases encountered during field tests can be simulated in advance. This is achievable because we do not transmit 'over the air' but solely via cable. The transmission characteristics of a radio link are emulated using a network of RF components. From a radio technology perspective, all objects appear as though they are in an open field. This brings real-world conditions into the test laboratory.

// *Radio Field Emulation AIAD*

Development or integration of tactical communication systems

- // Any application, situation, or problem case can be simulated in the laboratory.
- // Scalable number of participants (ports) and configurable setups available.
- // Field tests are minimised.
- // Even systems with extreme transmission powers of 10 W or more can be directly connected to the AIAD+ solution.
- // Vendor-independent and reproducible results.
- // Extremely broad frequency range enabling the simultaneous use of all radio technologies.

// Radio Field Emulation AIAD

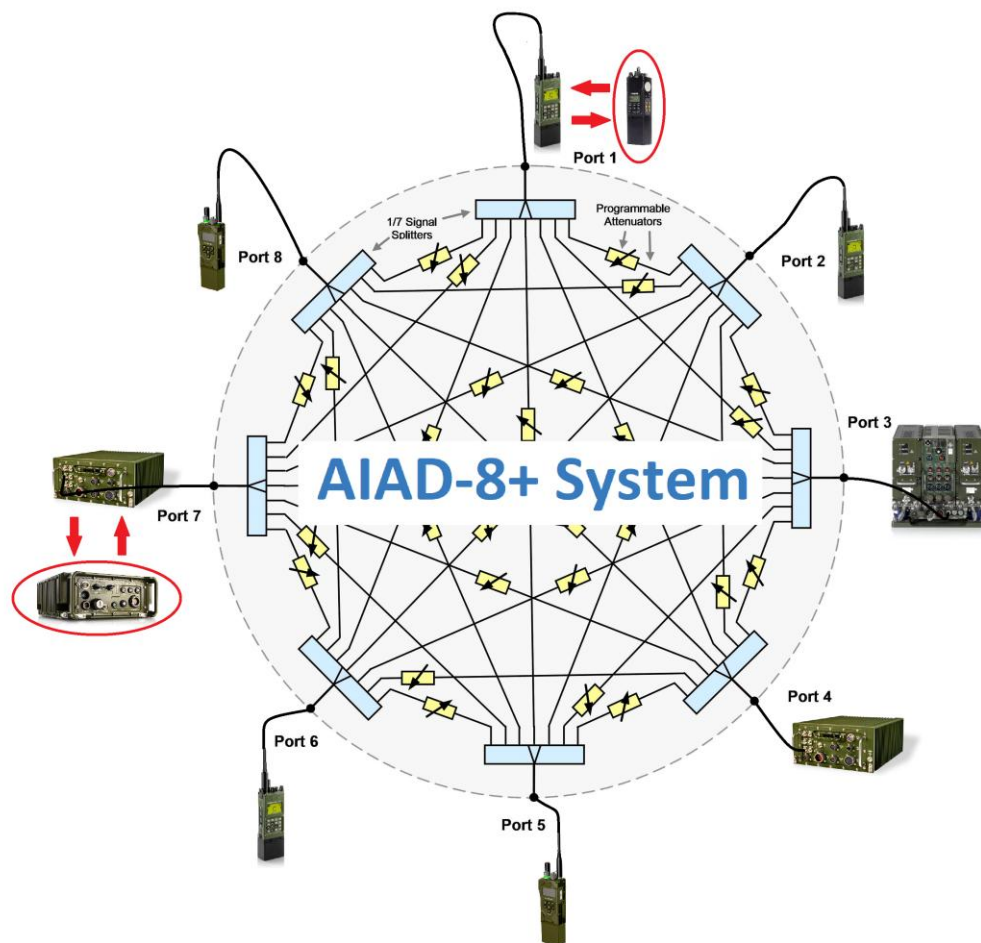


Replace obsolete systems or certify new ones

Current approach (Over-the-Air-Testing):

Functional tests are conducted on a demonstrator or scaled-down test environments, which are typically customised or cover only a limited range of functions. Tests under real conditions with the existing technology are generally not performed or can only be achieved with significant personnel and material expenditure. This issue is similar to challenges encountered during development or integration.

// Radio Field Emulation AIAD



Replace obsolete systems or certify new ones

Procedure with MTS AIAD series:

The MTS radio field simulations can be used to reproduce any situation, condition, or problem in the laboratory. New developments or obsolete systems are connected to the network via RF cables. The quick exchange of different brands or types is straightforward. Independent measurement of devices and systems specifications is also possible.

// *Radio Field Emulation AIAD*

Replace obsolete systems or certify new ones

- // Any situation or known critical case can be easily reproduced.
- // The performance of the new systems can be comprehensively tested in conjunction with real equipment.
- // Manufacturer-independent testing.
- // Field tests are only required for mechanical loads.
- // Shortened validation process.
- // Faster operational readiness.

// Radio Field Emulation AIAD

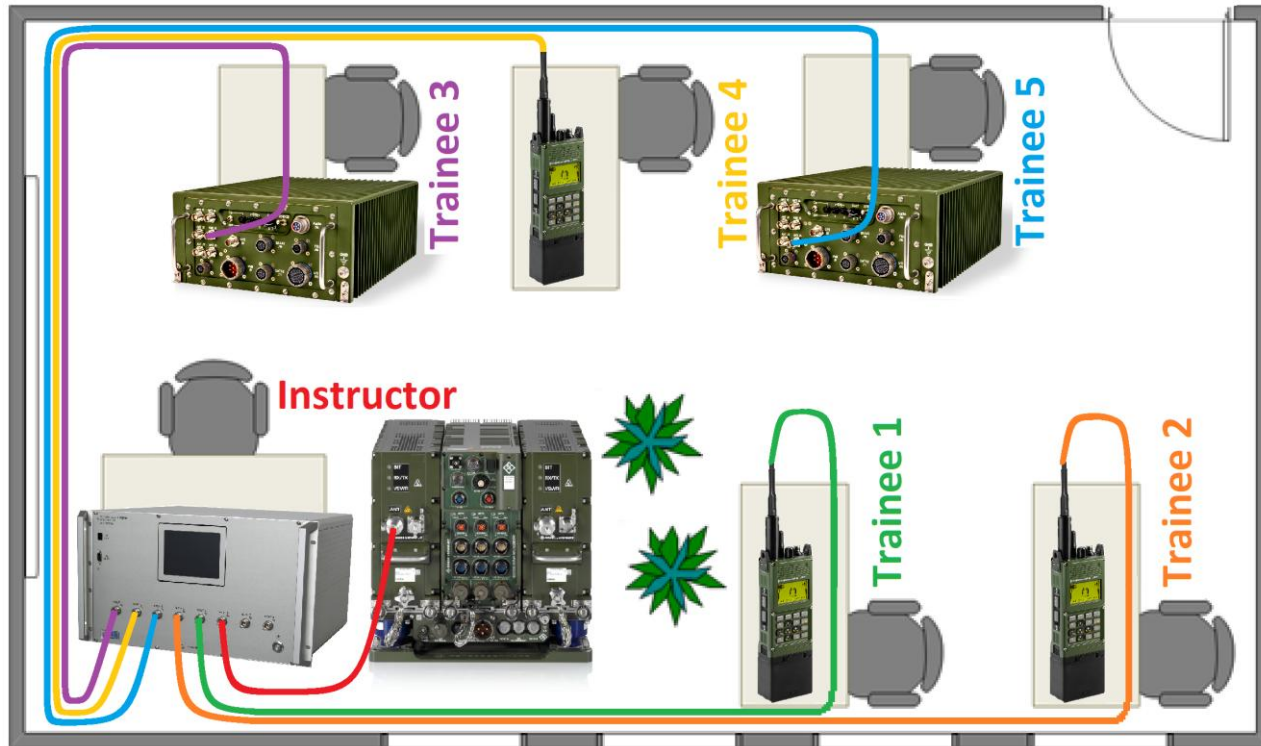


Education and training

Teaching methodology:

Basic theoretical and practical content is traditionally taught through courses or practical models. However, skills are only consolidated and automatised in the long term when they are consistently applied and repeated. Extreme situations or rare events are difficult to train for, as there is no real-life operation. Routine is only developed through real exercises involving all units.

// Radio Field Emulation AIAD



Education and training

Procedure with MTS AIAD series:

The AIAD can be used to simulate any situation, condition, or extreme case in the training room. As mentioned several times, the basic structure is the same as with previous applications. All trainees are connected via the AIAD network, and the trainer can dynamically create any possible constellation. This enables knowledge assessments, learning checks, and combat simulations — all without leaving the building.

// *Radio Field Emulation AIAD*

Education and training

- // Any real-life situation can be easily reproduced by an instructor.
- // Training objectives are achieved in the shortest possible time, as scenarios can be reproduced and repeated as often as necessary.
- // Quick and varied assessment of learning success.
- // Field tests are almost no longer required.
- // Easy for the trainer to manage.
- // Saves resources and time.
- // New scenarios or problems can be added with ease.

// *Radio Field Emulation AIAD*

Summary

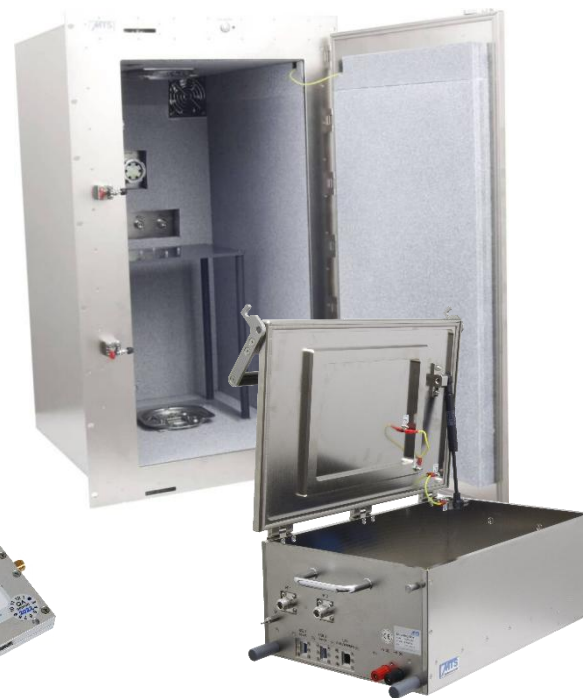
With AIAD system solutions, any state of a radio link can be modelled dynamically. This enables realistic testing of the performance of radio systems or components during live operation — reliable, reproducible, and on-site.



**We bring the wireless environment to
your home**

// Accessory

- // RF components
- // Shielding boxes series MSB
- // Shielded racks series SRK
- // Installation service
- // RF cable assembly
- // Mechanics



Other configuration possible on request!



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