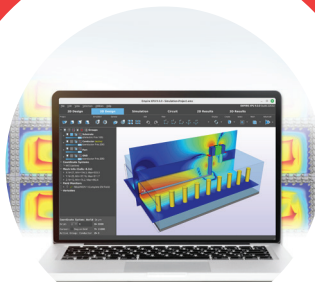


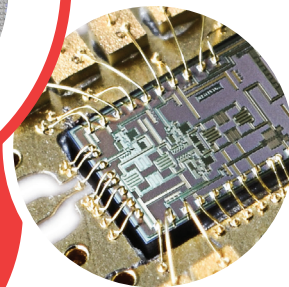


IMST GMBH

SHAPING THE FUTURE



IDEAS



SINCE 1992



RESEARCH PARTICIPATIONS

In addition to the products and services business IMST is also very active in field of national and European research work. The aim – always looking forward to extending research to further challenging topics.

With designs ranging from high-end Si-/SiGe-chips for localization and navigation to highly specialized satellite components like innovative high-frequency power dividers for the earth observation satellite TerraSAR-X, IMST has carved out an important niche in technologically demanding applications.

Satcom terminals are another field of research and development: Together with its partner, IMST builds antennas for mobile satellite communications that can be steered electronically. Offering the possibility of smart integration into the outer skin of vehicles, ships and aircrafts, these antennas are very agile in redirecting their beam, permitting people to communicate via satellite while traveling in the air, on land or on the sea.

→ IMST

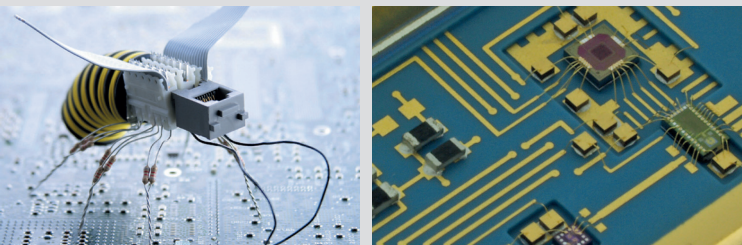


IMST is a leading design house and development centre for wireless modules, communication systems, chip design, antennas, EDA software, and regulatory certification using an in-house accredited/certified regulatory test centre. IMST offers both standard products such as radio modules with hardware/software as well as complete system and product design. Individualized support during every phase of product development including wireless technologies, from initial consulting to series production is the unique selling proposition of IMST.

→ PRODUCTS AND SOLUTIONS

→ ANTENNA DESIGN

The antenna portfolio of IMST covers a broad selection of standard designs as well as customized, highly complex solutions. The customer profits from more than two decades of state-of-the-art antenna design. We offer complete solutions from MHz to mm-wave covering the whole R&D chain, starting with design and prototyping up to measurements and qualification. Our extensive know-how covers mobile and wireless devices, automotive radar, ultra-wideband antennas and satcom-on-the-move frontends. Solutions can be provided at component as well as at system level: single antenna radiators, arrays and complete antenna frontends are our business.



Designing complex antennas, RF-circuits or complete RF-frontends in no time becomes finally reality when using EMPIRE XPU. This tool is one of the most powerful 3D electro-magnetic field solvers on the market. If speed is of essence, then EMPIRE is the tool to use. EMPIRE's one-of-a-kind XPU technology enables the fastest simulation engine, known today. This software utilizes a CPU based workflow, which outperforms GPU hardware acceleration in both speed and memory usage. With this highly optimized kernel, full-wave EM-simulations reach simulation speeds of over 20 GCells/sec on a modern workstation. The tool is based on the powerful Finite-Difference Time-Domain method (FDTD), which has become an industrial standard for RF component and antenna design.



→ CIRCUIT DESIGN

Our extensive know-how covers integrated circuits based on different material systems (GaAs, SiGe, GaN), hybrid circuits on different substrate materials, or in-house LTCC (Low Temperature Co-fired Ceramics) production. Our application support starts at single device characterization/modeling and includes design of complex systems such as T/R-modules. In parallel, IMST can perform all required measurements in order to make a design successful. Our service includes prototyping as well as product transfer.

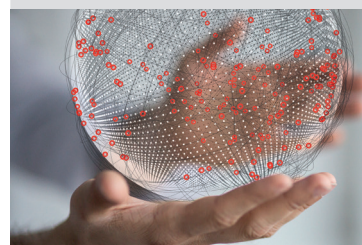


→ WIRELESS DESIGN

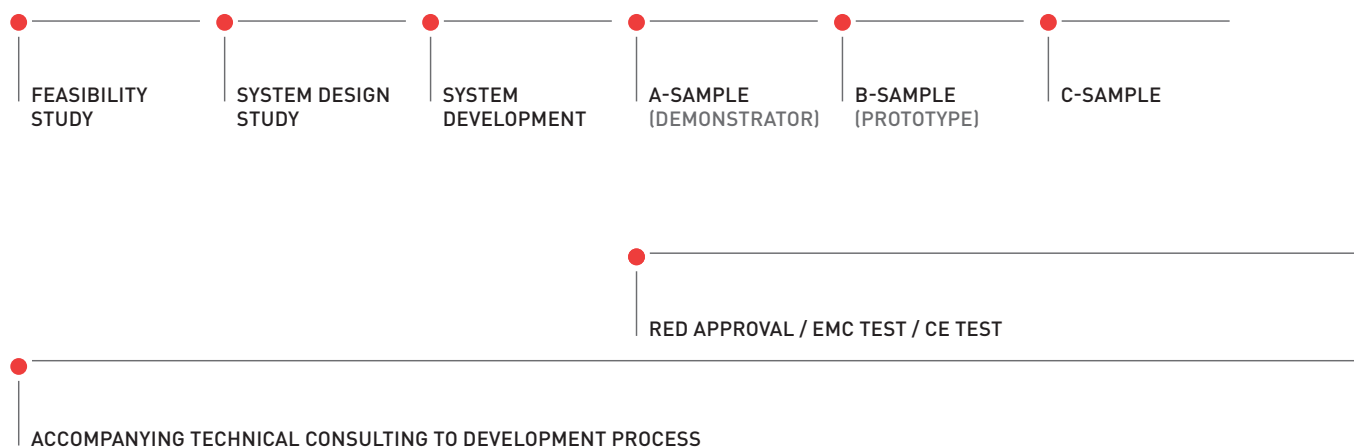
Wireless Design is a core competence of IMST. We offer easy-to-integrate radio modules for licence-free frequency bands 169/433/868/915 MHz and 2.4 GHz as well as comprehensive design services. From system specification to implementation of hard- and software and even CE approval and production, wireless-solutions.de – your first address for wireless products and services.

With LoRa® - the Long Range technology patented by Semtech, IMST offers ultra long range radio modules, which can be used in various applications for Smart Metering, Smart Cities, IoT and M2M.

Start evaluating this new technology with our LoRa products! www.webshop.imst.de



→ ALL SERVICES AT A GLANCE



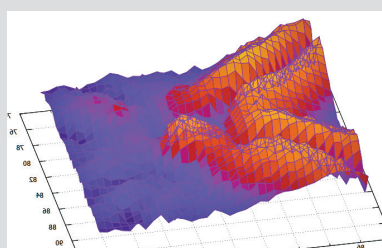
→ TESTING & CERTIFICATION

IMST's accredited testing centre provides many measuring and testing services in accordance with CE, EMC guidelines as well as SAR measurements for radio devices and mobile phones. These tests are carried out according to national, European and international standards as appropriate for your respective requirements.

We also offer professional measuring technology to test the performance capabilities of antennas, RF-Material, circuits, LoRa® technology and even complete systems such as GSM/UMTS/LTE/5G.

In addition to device-related acceptance and approval controls, component characterization and end product tests, we also provide our clients with safety inspection and assessments in electric, magnetic and electromagnetic fields based on more than 20 years of experience.

The test center has been certified and accredited according to the DIN EN ISO 9001:2008 DIN EN ISO/IEC17025, is designated by German Kraftfahrt-Bundesamt and listed by the Federal Communications Commission (FCC).



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