

## **Mobile Communications at IMST**

IMST GmbH provides development, consulting, and test resources for wireless, telecommunication, and information technology industries. Customers include the major European wireless and telecommunication companies, as well as companies in America and Asia. Our key competence includes both system and hardware aspects of communication and information networks with a special focus on mobile wireless technology, both terrestrial and satellite-based.

The development and consulting activities include:

- System and component level PCB RF design
- RF ASICs, MMICs
- Wave propagation
- Antenna design
- Base band design (DSP and microcontroller applications, digital ASICs)
- System development
- Training courses (UMTS, Bluetooth, LTCC, RF Courses)

In addition, the IMST test center offers accredited measurement services to our customers. The services include RF, EMC, antenna and dosimetric measurements.

Offices and laboratories comprise a total of 4,500 sqm, including special laboratories and equipment for Microwave Measurements, Hybrid Technology, Antenna Measurements, and EMC-Measurements. Additionally, IMST has state of the art CAD tools and prototyping facilities at its disposal. More than 100 highly motivated engineers are working for the success of our customers.

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## **Services @IMST**

### **Complete system development includes**

- System design  
→ member of SIG, early adopters
- Prototyping, small quantity production of modules  
→ in-house clean-room
- Software development for multi-chip solutions  
→ pre-qualified professional Bluetooth stack
- Software development for single-chip solutions  
→ CSR development partnership
- Measurement facilities  
→ shielded cabin and anechoic chamber
- Qualification support  
→ accredited EMC laboratory

*ask for our Bluetooth seminar*  
+49-2842-981-160  
<http://www.imst.de>

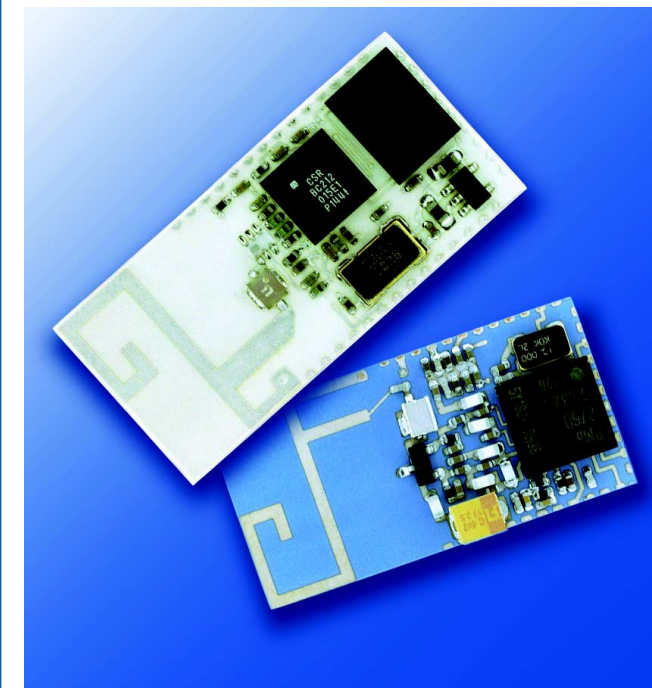
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# **BLUETOOTH™ @IMST**



## Bluetooth for Industrial Applications



ISO 9001

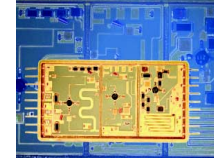


## COMMUNICATION SYSTEMS



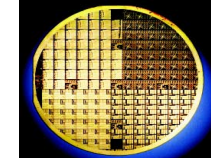
Design, integration, implementation, and test of communication systems, consulting, studies on communication technologies – system design and simulation are essential to modern telecommunication systems and networks.

## RF CIRCUITS



Microsystems like RF-modules are of high importance for a variety of commercial applications. The ongoing process of miniaturization and advanced packaging concepts are key features in more and more competitive markets of future telecommunication systems.

## ASICs & MMICs



Integrated circuits based on silicon and III-V basis are designed and measured by IMST engineers to meet customers' requirements. These low-cost system-on-chip solutions meet all competitive market needs.

## ANTENNAS & EMC



Antenna design driven elements in communication devices are of growing importance to achieve the necessary system efficiency. EMC and product quality assurance are an important milestone in product development. IMST runs an EMC Test Center under ISO 9001.

## BLUETOOTH FOR INDUSTRIAL APPLICATIONS

### Why BLUETOOTH?

- Standardized technology: world-wide applicable
- Interoperability
- Availability of OEM products and components
- Encryption and authentication
- Network-compatible: flexible network topology (piconet, scatternet)
- Coverage: 10-100 m
- Robust and reliable: Use of Fast Frequency Hopping (FFH/AFH), Automatic Repeat Request (ARQ) and Forward Error Correction (FEC)
- Bidirectional packet-switched data channel with configurable data rate (108 to 723 kbit/s)
- Small footprint

### OPERATION FIELD

- Infrastructure to supply wireless connectivity
- Diagnostics
- Monitoring
- Configuration
- Installation
- Controlling

