



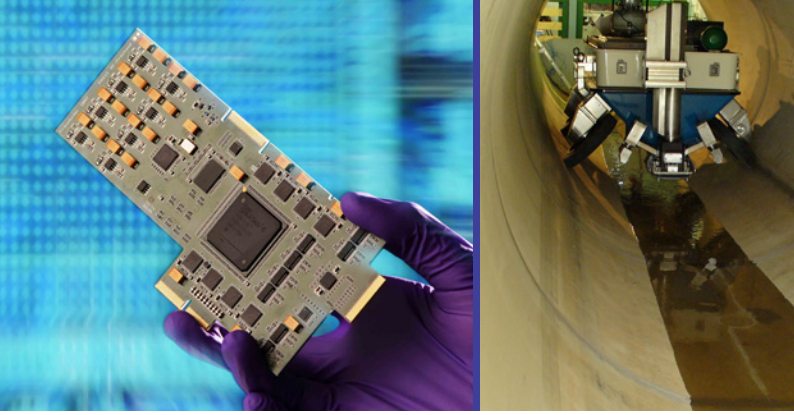
Fraunhofer

IBMT

**FRAUNHOFER-INSTITUTE FOR
BIOMEDICAL ENGINEERING IBMT**

TECHNICAL ULTRASOUND

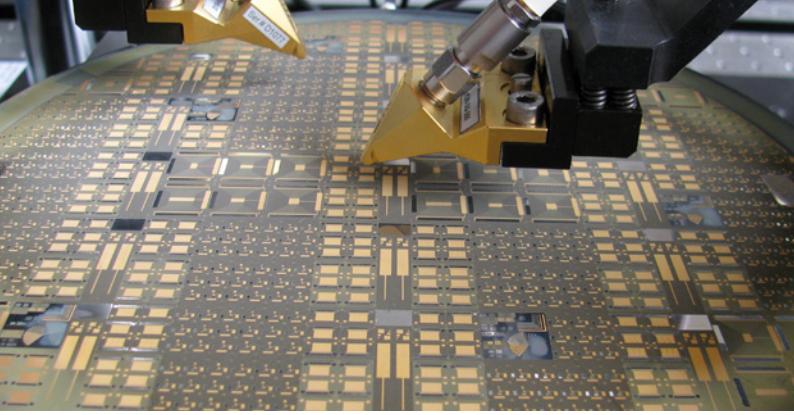




Ultrasonic systems can be found in the whole range of industrial sectors. They are classically distinguished by properties such as non-destructiveness, low system costs and the absence of moving parts. Ultrasound can be used, on the one hand, to analyze material properties, measure flow speeds or determine distances. On the other hand, it can also be used to join materials by welding, or for cleaning or homogenizing. In contrast to medical applications, the objects for analysis in technical applications show much greater variation in terms of size, shape and material. This is why technical ultrasound systems are similarly diverse and always optimized for a specific application. Ultrasound specialist or novice: Fraunhofer IBMT is your partner for a risk minimized entry into new fields of technical ultrasonic applications.

Fields of application

- Level and distance measurement
- Flow in gas and liquids
- Airborne ultrasonics
- Process and quality control
- Non-destructive testing
- Environmental sensing
- Welding, cleaning and homogenization



Products and services

- Tailored ultrasonic transducers for process control and sensing
- High frequency lenses for acoustic microscopy
- Pilot and small series manufacturing of piezocomposites, acoustic blocks and piezoelectric (array) transducers
- Application oriented development of single- and multi-channel electronics
- Transducers and systems for harsh environments
- Simulation and optimisation of transducer performance
- Consulting, theoretical and practical feasibility studies for industrial ultrasonic applications

Competences

- Simulation and advance development
- Software development and system integration
- Electronics engineering
- Transducer engineering
- Manufacturing technology (ISO 9001)

**FRAUNHOFER IBMT: YOUR PARTNER FOR
NEW FIELDS IN TECHNICAL ULTRASOUND**

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