



Fraunhofer
IBMT

FRAUNHOFER-INSTITUTE FOR
BIOMEDICAL ENGINEERING IBMT

BIOMEDICAL ULTRASOUND

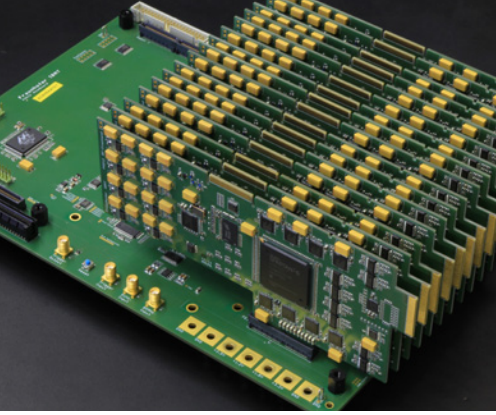




Ultrasound is the most widespread imaging modality in medical diagnosis. The fields of applications cover all areas of medicine from obstetrics to cardiology. Furthermore, ultrasound is currently being established in therapy (HIFU) and therapy control. Ultrasound allows retrieving morphological information regarding the anatomy but is as well suited for functional imaging (e.g. blood flow parameters, cardiac function) or even molecular information when it is combined with contrast agents. While standard applications are widely covered by the commercially available systems and solutions, Fraunhofer IBMT offers targeted solutions for niche applications of all kinds within the field of medical ultrasound. With a full range of ultrasound competencies available in-house, Fraunhofer IBMT can answer the needs from customers and propose tailored solutions from individual components up to integrated systems ready for clinical use.

Fields of application

- Diagnostic ultrasound
- Hybrid imaging: MR-combined ultrasound / Optoacoustics
- Mobile ultrasound
- Ultrasound therapy control and therapy
- Preclinical small animal imaging
- Ultrasound in biotechnology, cell imaging



Products and services

- Tailored ultrasonic transducers for all kind of frequencies, resolutions and applications
- Ultrasound probes in all geometries (1D, 2D, curved, linear, phased)
- Multichannel electronic systems in different frequency ranges from low frequency therapy systems up to microscopy
- Miniaturized ultrasound systems for mobile applications
- Ultrasound signal processing (reconstruction algorithms, filters, parameter extraction)
- Consulting and feasibility studies
- Development and certification of hard- and software in compliance with MDD 93/42/EEC for performing clinical studies

Competences

- Simulation and advance development
- Software development and system integration
- Electronics engineering
- Transducer engineering
- Manufacturing technology (ISO 13485)

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

CONTACT

Dr. Marc Fournelle

Head of Business Area Biomedical Ultrasound

Phone: +49 6897 9071-310

marc.fournelle@ibmt.fraunhofer.de

Fraunhofer-Institute for Biomedical Engineering IBMT

Main Department Ultrasound

Ensheimer Str. 48

66386 St. Ingbert

Germany

Dipl.-Ing. Steffen H. Tretbar

Head of Main Department Ultrasound

Phone: +49 6897 9071-300

steffen.tretbar@ibmt.fraunhofer.de

For more information visit

<http://ultrasound.fraunhofer.de>

