### Why with Helbling

We give you immediate access to a highly qualified and multidisciplinary team that supports your product development.

You reap the benefit of our extensive expertise in developing medical products. You can depend on a unique partner capable of managing all technical aspects of medical product development with the highest efficiency.

We ensure that your product is developed and documented in line with the latest medical standards. We transfer full control and ownership of the design and intellectual property developed during the collaboration.

Helbling – your exclusive, independent contract engineering partner for medical devices development.





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#### Innovation is our driving force

Founded in 1963, Helbling Technik currently has more than 390 employees in Switzerland, Germany, USA and China.

Helbling Technik is part of the Helbling Group and operates as a long-term partner in its customers innovation network, under the motto "Innovation, together we do it". The company's engineers, IT experts and physicists use high-performance engineering tools, the latest infrastructure including laboratories, as well as high-quality professional approaches to generate new ideas, implement state-of-the-art technologies and develop successful new products.

#### Contact

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# Medical Embedded Software

Are you planning to develop a medical internet of things (IoT) device with secured communication and data storage?

If you require the support of a highly qualified embedded software engineer or physiological data scientist, then contact us today. Helbling has the answer!

### **Helbling Technik**

Innovation, together we do it

## A broad spectrum of competencies and expertises

#### **Development of medical embedded software**

Operating in a highly interdisciplinary environment, our team of embedded software engineers and physiological data scientists create and design connected, mobile and secured innovative medical products.

#### Our fields of expertise include:

- System engineering
- Embedded software and mobile applications
- Device to device connectivity
- Cyber security for embedded devices
- Physiological data processing
- Advanced signal processing, e.g. machine learning, neutral networks, deep learning

#### Our development activities include:

- Innovative technology development for monitoring and diagnostic medical devices
- Technical product development compliant to medical regulations, including project, quality and risk management
- Transfer of technologies from research to commercial products, including design transfer to manufacturers
- Technical support during industrialization and market acceptance or clinical studies









## A team combining creativity, technology and experience

We have the ability to set up a dedicated R&D team at Helbling and manage international competence networks for your development or strengthen your network by our expertise and knowledge.

## Some reference projects for mobile, low power devices:

- Portable tinnitus therapy device
- Non-invasive optical blood pressure measurement
- Portable auto-refractometer
- Wearable camera for glasses

## Some reference projects for advanced signal processing and algorithm design:

- Bar code reader in harsh environment
- Physiological algorithms for pulse wave analysis
- Image processing for injection pens in harsh environment
- Detection of accommodation trigger by optical means
- Physiological algorithm for eye diagnostics







Tinitus therapy device

## A professional infrastructure and laboratories







## Comprehensive set of engineering and scientific software packages for:

- Mechanical / Micro-mechanical design
- Electronics design
- Fluidics design
- Numerical and multiphysics simulations
- Embedded software design, integration and verification

#### Fully equipped laboratories for:

- Mechanical, electrical, optical and acoustic testing
- Metrology
- Modeling / prototype adjustment







Smart phone application