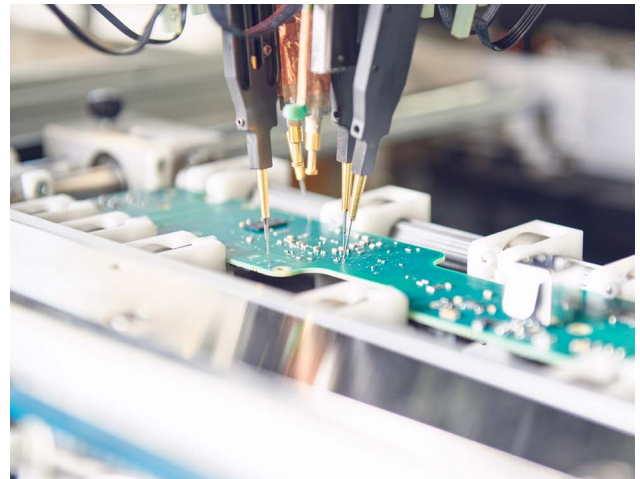
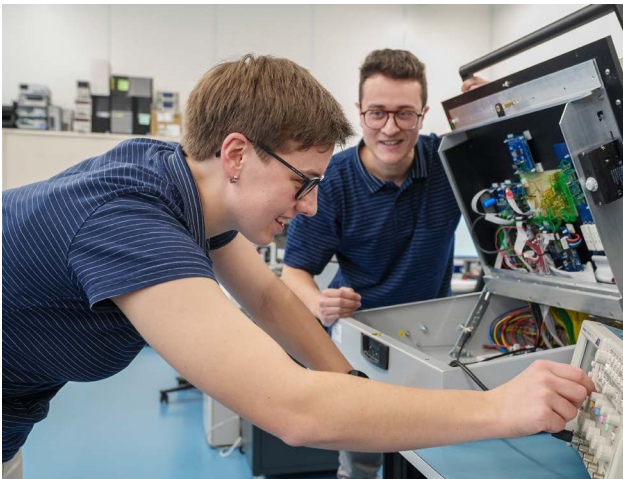


## Engineering Services

Test engineering, product development, process engineering

At the Cicor, more than 200 well-trained engineers work on customer projects and make the engineering department a unique selling point of the company thanks to their interdisciplinary competencies. Using efficient methods and tools, they support Cicor customers in the areas of

hardware and software engineering, PCB layout and component selection, test engineering, tool design, printed electronics, and process and quality management throughout the entire product life cycle.



## Portfolio

### Hardware development

- Low-power applications
- Process and control technology
- Analog and digital signal processing
- Analog and digital measurements
- Distributed systems
- Functional safety systems
- Microcontrollers
- Bus systems/interfaces: profibus, profinet, ethernet IP, CAN, CANOpen, USB, SPI, I2C, RS485, WiFi, bluetooth, LTE
- User interfaces
  - Keyboard membranes and glass panels
  - Customized displays
  - Touchscreens
- Simulations
- Safety and design FMEA
- EMC
- Product safety: IEC 60601 und IEC 61010

### PCB layout

- Altium designer
- Mentor expedition
- Electronic circuit plans
- 3D modeling of modules
- High-density integration
- Import filters for current formats
- Certified interconnect designer (IPC)
- Flex, semi-flex, rigid-flex circuit board
- Design-for-manufacturing
- Design-for-testing/-traceability

### Mechanics

- Animation/rendering
- Mechanical construction: Plastic injection molding, sheet metal, aluminum die casting/extrusion pressing, composite materials
- Housing and device construction
- Miniaturization
- Assembly drawings/instructions

### Software development

- ModelDriven design
  - UML modeling
  - Target code generation
- Firmware development in C and C++
- IBM rational rhapsody
- Keil uVision/RTX
- Bootloader
- GUIs with QT, HTML5
- Distributed systems
- Functionally safe systems
- Embedded linux
- IEC 62304 (Class A-C)

### Project management

- Project planning/controlling
- Design-to-cost
- Development documentation with Polarion ALM
- Life cycle management
- Feasibility studies and concepts
- Change management
- Risik management

### Test engineering

- Development of test concepts (AOI/flying probe test/in-circuit/X-ray/functional tests/boundary and frame scan)
- Design and programming of test systems
- Integration of test systems into the production environment
- Quality data management with traceability over the entire product life cycle

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### Markets



Medical Technology



Industrial



Wearables



Building Technologies

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### Contact



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cicor.com/engineering

The Cicor Group is a globally active provider of full-cycle electronic solutions from research and development to manufacturing and supply chain management. Cicor's approximately 2,650 employees at 16 locations worldwide are serving leaders from the medical, industrial and aerospace & defence industries. Cicor creates value to its customers through the combination of customer-specific development solutions, high-tech components, as well as electronic device manufacturing.

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