

BECOM
it's possible.



Imagine the possibilities.

WE MAKE IT POSSIBLE

BECOM has been a reliable electronics engineering, manufacturing and service partner for its clients in industry since 1984. From the first creative concept through the development and validation stages, right up to series production, its clients can obtain everything from a single source. Thanks to international business locations and partners, today's clients around the world benefit from the high-quality solutions, services and know-how provided by our experts.

The time-of-flight specialist BECOM Systems became part of the BECOM Group in 2016. BECOM thereby expanded its business area with innovative sensor solutions and has subsequently been able to offer its clients the decades of experience of this domestic time-of-flight pioneer. BECOM's scope of services and stability thus supplemented the innovative capacity of BECOM Systems, and guaranteed long-term availability and highly-efficient production processes for its clients.

BECOM remains a family-run business to this day. With roots in the Burgenland state of Austria, over the years the corporation has developed world-class solutions and quality. Healthy but consistent growth and an instinct for innovative developments make BECOM the go-to choice for clients working in every sector.



KR Ing. Johann Bock
Owner/Manager



KR Mag. Franz Klein
Owner/Manager



Ing. Mag. Johannes Bock
Owner/Manager



DI Roman Bock, MSc
Owner/Manager



Ing. Manfred Hofer, MSc
Manager



DI Thomas Schendl
Manager



DI Dr. Gregor Novak
Manager



Turnover
€106 million



R&D quota
5.00 %



Employees
544

FROM IDEA TO SOLUTION



The best guidance at every stage of the process – from the development department to our own accredited test laboratories and process-optimised production right up to backstage services, BECOM offers the perfect environment for successful projects.

From the first idea to a product ready to enter production, BECOM makes it possible. Teams of experts find innovative solutions for unique challenges and complex processes.

Highly-efficient production, automated processes and innovative logistics make BECOM the ideal partner for electrical components in the automotive, medical technology and industrial electronics sectors.

With support throughout the development process and standalone design solutions, BECOM offers much more than measurement technology. Testing is performed by EMC experts in our firm's own accredited laboratories.

BECOM is a reliable partner before, during and after each stage of the process. From project and material management to after-sales services, our clients always get more than just a product.

RESEARCH & DEVELOPMENT

- System development
- Hardware development
- Software development
- Mechanical development
- PCB design
- Process development
- Development of test methods
- Embedded systems
- Time-of-Flight (ToF) technology

VALIDATION

- Accredited EMC laboratory
- Environmental testing
- Electrical testing
- Thermography measurements
- Authorized calibration body for ISO/IEC 1702

PRODUCTION

- SMT production
- THT production
- Robotics
- Coating
- Potting
- LED centering
- Assembling/Box build
- Traceability
- Digitalization

BACKSTAGE SERVICES

- Project management
- Product lifecycle
- New product introduction/NPI
- Obsolescence management
- Product changes
- Risk management
- Logistics
- After sales services
- Feasibility evaluation



RESEARCH AND DEVELOPMENT

From ideas and the first development stages up to production-ready products and more – BECOM's teams of experts guide our clients in the fields of hardware, software and mechanics throughout the entire development and added-value chain. Innovative solutions in developing systems and functions are just as feasible as in optimising processes and developing test methods to accompany manufacturing.

Based on the V Model, SPICE for Automotive Systems and agile development methods, our experts develop hardware, software and mechanics for clients in the industrial electronics, automotive and medical industries. The Product Development and Process Development departments at BECOM work closely together and jointly create efficient, world-class solutions and innovative technologies.

Innovative solutions

Circuit boards for the high-performance LED sector developed by BECOM replace previously commonplace metal core circuit boards. The new design is not only more robust and long-lasting, but also creates significantly more added value for our clients.

Solutions for every challenge

- LED lighting electronics
- 3D cameras (ToF)
- Control units/embedded systems
- Power electronics
- Non-invasive medical electronics

Prepared for the future

BECOM continuously invests in the future through its outstanding R&D quota. World-class developments in ToF cameras and new solutions in the LED sector demonstrate a capacity for innovation of the highest level.



VALIDATION

BECOM has been the first-choice for EMC compliance and environmental assessments for more than a decade. Clients from industry, the railways, the automotive sector, telecommunications and IT rely on our ISO/IEC 1705 accredited test laboratories. With support throughout the development process and standalone design solutions, BECOM's experts offer much more than 'just' measurement technology. Results can be interpreted immediately if so desired and used to create solution and design proposals.

BECOM guides its clients through every phase of a project, from system develop-

ment, PCB design, routing, signal integrity to problem solving in existing systems right up to the final approval and validation stage. Providing support from the earliest preliminary and planning phases avoids the need for potential redesigns later on in the development cycle.

BECOM also offers all-inclusive services for setting up and running tests, from the test case preparation using LabVIEW, monitoring and controlling the tests, automating the functionality tests and climatic chambers right up to generating test reports and developing the electronics for selecting test specimens.

EMC test laboratories

- 450 m² with areas for HF, electronic tests and ESD
- Semi anechoic chamber (SAC) with 4m height scanner – full compliance
- CISPR 25 absorption chamber 6x5m – full compliance
- Shielded room – performance-related HF tests
- Pre-compliance absorption chamber for small test specimens

Climatic test laboratory

- 14 temperature chambers, also known as climatic chambers
- Temperature: -70° C to +180° C
- Relative humidity: 0 % to 100 %
- Temperature shock: -75° C to +200° C
- Climate stress screening: temperature gradients of up to 15° K/min



PRODUCTION

Highly flexible and always on time. At BECOM, a team specialising in automation solutions guarantees effective operations and extremely efficient production processes. Cutting-edge production facilities enable the fully-automated, semi-automated or even manual production of electronic components and devices.

With our own test centres and multi-stage quality management, BECOM guarantees the highest quality throughout the entire production process. Thanks to an intelligent

logistics system, BECOM is able to ensure optimum traceability throughout the whole operation. Our in-house development teams and innovative machine-machine and human-machine interfaces give our clients a decisive edge in Industry 4.0. As a result of investments in people and technology in all of our facilities, today BECOM is a trailblazer in the fields of automation and digitisation. Solutions developed by us in-house in both of these sectors guarantee optimal quality from the development stage right up to the end products.

The right solution to every challenge

Production

- SMT production
- THT production
- Robotics
- Coating
- Potting
- LED centering
- Press-fit technology
- Fully automated depanelisation
- Assembling/Box build

Testing

- AOI
- X-Ray
- SPI
- ICT testing/flying probe tests
- Functional tests
- Boundary scan tests
- Burn in/Run in
- EOL
- Calibration



BACKSTAGE SERVICES

It is only when every process is running smoothly in the background that a project can truly be deemed successful. Alongside classic services such as development, validation and production, today BECOM also performs such services as NPI, feasibility assessments, logistics and material and obsolescence management.

Feasibility assessments	Teams of experts sound out feasibility in technical, economic and organisational fields and devise alternatives where they are needed.
Introduction of new products	From the first draft right up to production and quality assurance, BECOM focusses on the functionality, usability and EMC of new products from the outset.
Obsolescence management	BECOM uses its experience to focus on planning for the long term with regard to material and product availability, and offers reliable long-term availability through stable partners.
Logistics	Intelligent solutions for production, material and shipping logistics as well as a state-of-the-art logistics centre guarantee just-in-time delivery.
After sales service	BECOM provides support beyond the production and delivery stages, for example with material availability, replacement parts, end-of-life management and obsolescence management.
Risk management	By assessing the technical feasibility, hedging on price fluctuations, developing suppliers, employing a buffer strategy and securing second sources, BECOM is able to mitigate against risks.



AUTOMOTIVE

BECOM has been winning over the automotive industry with reliable production and innovative developments since the turn of the millennium. Through the use of our own test laboratories and accurate documentation, BECOM ensures optimal quality and traceability at all times. BECOM offers services covering the development, production and assembly of prototypes, mass production of components for LEDs, ToF cameras, control units and power electronics. Today, international business locations and the highest quality standards have made BECOM a Tier 1 and Tier 2 partner for numerous top names in the automotive sector.

BMW relies on BECOM

BECOM is a long-standing Tier 1 supplier and innovation partner of BMW. Our components for high-performance LEDs now light up the road for millions of vehicles.

Sensors and Time-of-Flight (ToF)

Wide-ranging expertise in the field of sensors and testing – including an extensive selection of in-house developed ToF cameras – make BECOM an ideal partner for the future in the automotive sector.

References

BMW, BMW Motorrad, Citroen, Daimler, Ducati, Ford, Jaguar, Landrover, Linde, MAN, Mercedes, Peugeot, Scania, Volvo



INDUSTRIAL ELECTRONICS

Industrial electronics is one of the cornerstones of BECOM's business operations. BECOM combines optimal process development, highly-efficient production and exceptional product quality to make the firm the go-to choice for clients and partners from all branches of industry. With seasoned experts, innovative production processes and accredited test laboratories, BECOM provides guidance throughout the entire lifecycle. For highly complex components – such as for engine test stands – BECOM

complies with above-average standards set by clients in the automotive and medical technology sectors. BECOM guarantees the success of its high-precision products, such as the Siemens SMART METER, by ensuring the traceability and exact calibration of all components. Coating and potting processes are likewise carried out in-house. This ensures that long-lasting components – such as those for power stations – are optimally protected against environmental influences such as temperature or humidity.

Innovation

As a leading provider of high-performance ToF cameras and components, BECOM continuously works to develop even more reliable and efficient methods of production and solutions for its clients.

References

Electronics for engine test stands (AVL), sensors for automated warehouses (SSI), sensors for ToF cameras, electronic controls for cranes (Palfinger), electronics for power station controls (Andritz Hydro), LED boards for overhead displays (Swarco Futurit), toll systems (Efkon), electronic controls for trains (Zelisko), electronics for fingerprint readers (Idencom), SMART METER (Siemens), electronic sensors for coffee machines and automated water taps (Aquis), robotic lawnmowers (Stihl)



MEDICINE

Innovative solutions and wide-ranging expertise make BECOM the ideal partner for developing and producing Class I, II and III medical products. Thanks to established contacts within the authorities, BECOM provides its clients with reliable advice and guidance concerning every test and approval process.

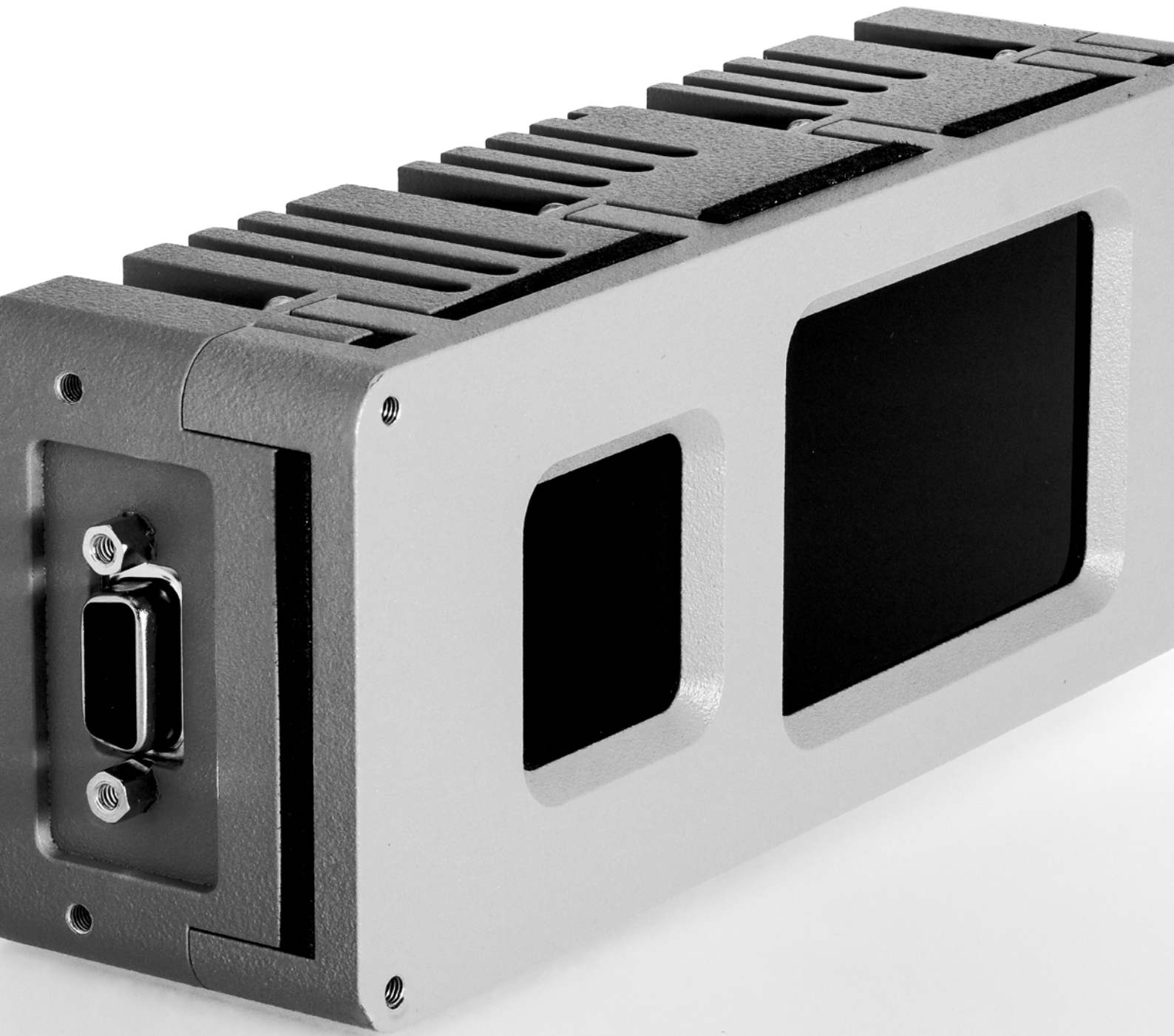
Our own in-house test facilities and specially trained personnel guarantee optimal safety for clients and patients at every stage of the working process. BECOM is able to win over established major clients and innovative start-ups in equal measure with flexible structures and many years of experience.

References

Neuro Appliance, Otto Bock, Roche Diagnostics, Schrack Seconet

Standards and directives

- ISO 13485:2016
- ISO 60601 series (general standard for electronic medical devices)
- ISO 62304 (medical device software)
- MDD 92/43/EEC (EU directive on medical products)
- IVDD 98/79/EG (EU directive on in vitro diagnostic medical devices)
- RL 90/385/EEG (EU directive on active implantable medical devices)
- Medical Devices Act of the respective country issuing approval



PRODUCTS

BECOM aspires not only to develop innovative technology, but also to integrate it seamlessly into client solutions and our own products. As an experienced partner with a long track-record of innovation, BECOM guarantees long-term availability and offers experience in production, industrialisation and backstage services alongside expertise in cutting-edge technology. BECOM guides its clients through the entire development and integration process, from the design of

optical systems through the testing phase right up to validation and mass production. 3D cameras based on time-of-flight and constructed using a modular system make it considerably easier for BECOM to develop and realise complex sensor technologies. From highly flexible prototyping to individually produced solutions, new applications can be realised more quickly and simply than ever before.

Maximum performance

Time-of-flight cameras developed by BECOM boast both maximum performance and a robust design. They are consequently ideal for a multitude of applications, being suitable for use in demanding outdoor conditions where they are exposed to solar radiation and the effects of the weather.

Fields of application

Automation, automotive sector, buses and trains, driverless transport systems, building technology, Industry 4.0, logistics, medicine, identification systems, safety systems

LOCATIONS

NORTH AMERICA

IVP, Inc. USA
Los Angeles, USA

EUROPE

BECOM Electronics GmbH
Hochstraß, Austria

BECOM Systems GmbH
BLUETECHNIX Lab GmbH
Wien, Austria

BECOM Electronics Hungary Kft.
Környe, Hungary

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