

Electronics²

Kontron sets new standards
Development | Prototyping | Production | Assembly

Discover the advantages – Get to know us



kontron
The Power of IoT



»Electronics² is more than just development, prototyping, production and assembly. More than just a company. More than just a location.«



Klauspeter Bader

Jochen Gimple

The best for our customers: Electronics²

Under the service brand „Electronics²“, the companies of the Kontron Group offer a comprehensive range of development and production services as well as innovative products worldwide. The leading electronics service providers united under the umbrella of Kontron AG bundle their expertise and create synergies that offer real added value. The acquisition of KATEK and its subsidiary befex completes the Group's portfolio. Kontron is now one of the top 5 companies in the European ODM/EMS market.

Kontron stands for innovation and quality, with a vision to redefine the world of electronics and enrich it with advanced technologies and sustainable solutions. Experienced electronics service providers offer a comprehensive range of services from the initial idea to the finished product from a single source. Electronics² stands for this comprehensive range of services along the entire production chain: Kontron covers the entire range - from prototypes to small and medium series to high-volume production, which can be offered in the price-sensitive segment.

Consistent quality management and comprehensive certifications ensure that the highest quality standards are met. In addition, special certifications in the medical, avionics and automotive sectors strengthen the position of Kontron's Electronics² range in these sectors.

Our network of manufacturing companies is represented by subsidiaries in Europe and the Americas and partners in Asia. This enables local sites to respond efficiently to the needs of local customers. Flexible structures also enable a local-for-local approach. If necessary, this ensures a rapid response to transport restrictions and trade barriers to ensure smooth delivery.

We set new standards - trust Kontron as your partner.

Jochen Gimple

Head of EPC Operations Kontron Europe
VP Kontron Manufacturing

Klauspeter Bader

VP Sales



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Electronics² – Creating synergies for your projects

By combining our strengths and acting as one, we create significant value for our customers. We leverage synergies, develop innovative solutions faster and produce volume products more cost-effectively.





Electronics² – A strong network for development, production and innovative solutions

- › Hardware development of electronic components and devices
- › Software development for automation, communication and visualization
- › Mechanical design with state-of-the-art development tools
- › Product industrialization from prototype to series production
- › Highest quality manufacturing services
- › Stringent quality and functional testing
- › Final assembly of complex assemblies and devices



IoT/Industry 4.0



Mechanical Engineering



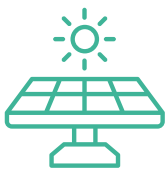
Medical Technology



Building Services Technology



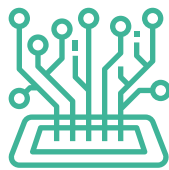
Automotive



Environmental Engineering



Office Technology



Electronics



Laboratory Technology



Home Appliance Technology

CERTIFICATE



DEKRA

ISO 9001:2015

that the organization

Certificates and mandatory norms

We maintain the highest quality standards through consistent quality management and extensive certifications.

Quality is our calling card, and we operate on the basis of a well-internalized, continually audited quality management system. Our **ISO 9001:2015 Certification** demonstrates our commitment to transparent business operation and thoroughly documented processes across all business segments. We pledge to live up to these values, continually review and develop them, and comply with statutory and administrative obligations at all times.

By virtue of our commitment to the environmental management norm **DIN EN ISO 14001**, we assume responsibility for ecological conservation. We define targets for sustainable and resource-saving projects and processes.

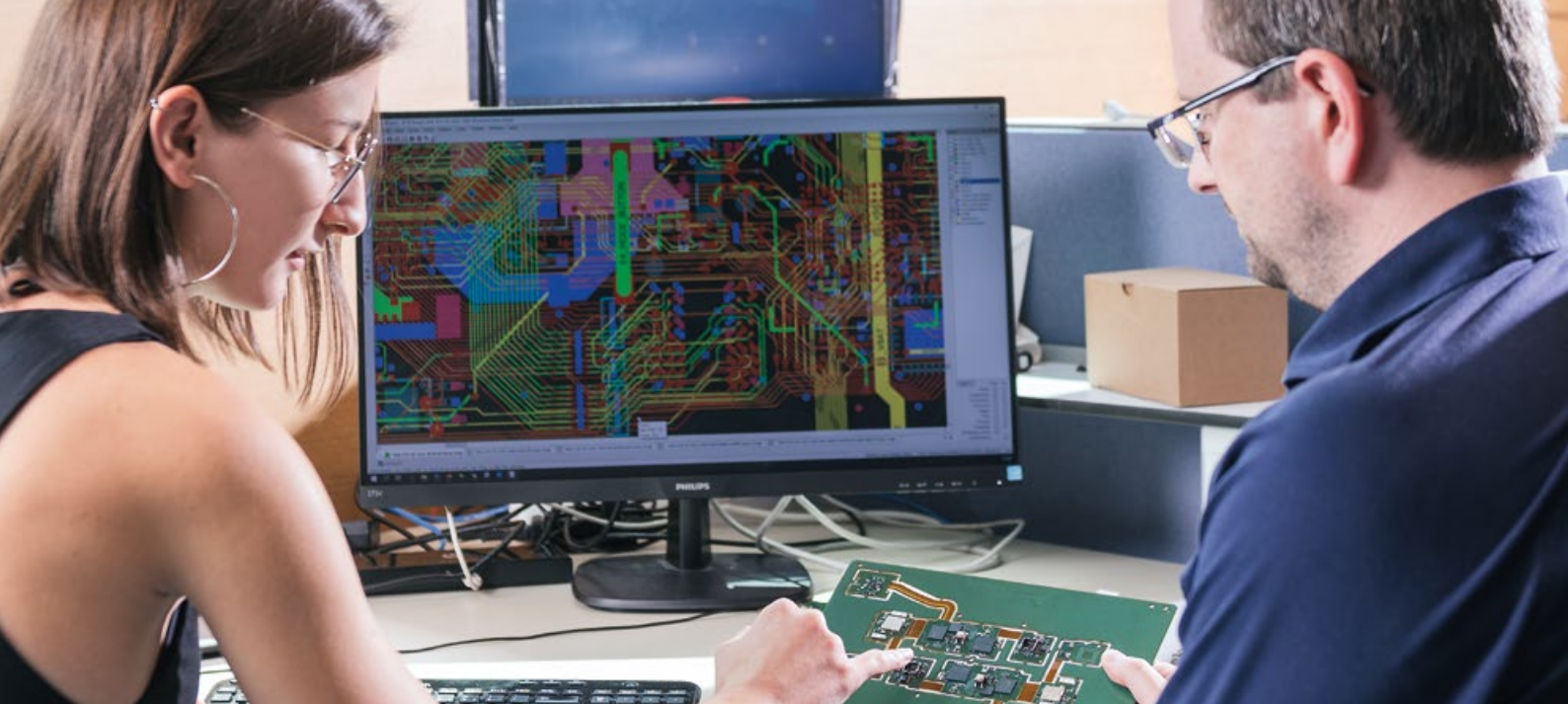
EN ISO 13485 relates to quality management with respect to development and production of custom components and products for the medical technology sector. Only products certified under ISO 13485 may be marketed in the EU.

IATF 16949, a globally recognized standard for quality management systems in the automotive industry, expands our certification portfolio. It covers all aspects of quality management, including product development, manufacturing and customer service.

All facilities are ISO 9001 certified

- **ISO 13485, ATEX/IECEX**
beflex electronic GmbH, Germany
- **ISO 14001, Apple MFI**
Kontron Electronics GmbH, Germany
- **ISO 14001, ISO 13485, UL**
Kontron Electronics Kft, Hungary
- **ISO 13485, ATEX-DIRECTIVE 2014/34/EU, UL, Apple MFI**
Kontron Austria GmbH, Austria
- **ISO 14001, ISO/IEC 27001**
Kontron d.o.o, Slovenia
- **ISO 13485, ISO 14001**
Kontron Europe GmbH, Germany
- **Avionics Maintenance and Repair Organisation, Augsburg Reference: DE.145.0092**
Kontron Europe GmbH, Augsburg, Germany
- **ISO 14001, IATF 16949, ISO 13485, ISO 50001, ISO 45001**
KATEK GmbH, Germany, Hungary and Czech Republic





Product development

We make your ideas reality

Our many years of development experience and our technology expertise on state-of-the-art components and procedures guarantee your success. Based on your product specs, we develop and optimize your product and bring it to series maturity.

We are there to support you when you need construction advice, help with generating CAD layouts or defining specifications for components and design. In addition to a wide array of testing methodologies, we develop and manufacture test equipment for electronic validation of your components. Our EMC lab ensures full compliance with the relevant guidelines and regulations throughout the development process.

Our focus lies on these key industry sectors: Mechanical engineering, automation, transport, home appliance technology, building services engineering, environmental engineering, electric mobility, gateways, IoT devices and medical technology.

Hardware

- › Product specification
- › Circuit design
- › Layout design
- › Commissioning

Software

- › Real-time software
- › Linux BSPs
- › Applications programming
- › Web technology

Mechanics

- › Industrial design
- › 2D/3D construction
- › Materials
- › Tool procurement

Product industrialization

- › Prototype construction
- › EMC lab
- › Declaration of conformity
- › Construction of test equipment



Electronics manufacturing and final assembly

Quality and precision at every stage of production

As an experienced provider of electronics services, we deliver maximum competence in a wide range of manufacturing procedures. We offer a broad scope of services for your entire component assembly, from circuit board mounting to various soldering processes, application of protective coatings and final assembly.

We are pleased to support you with our technology expertise, develop ideas and solutions for your prototypes and assist you in bringing your product to series maturity. We are the trusted partner at your side.

Assembly technologies

- › SMT technologies
- › THT assembly

Soldering processes

- › Reflow soldering
- › Wave soldering
- › Selective soldering

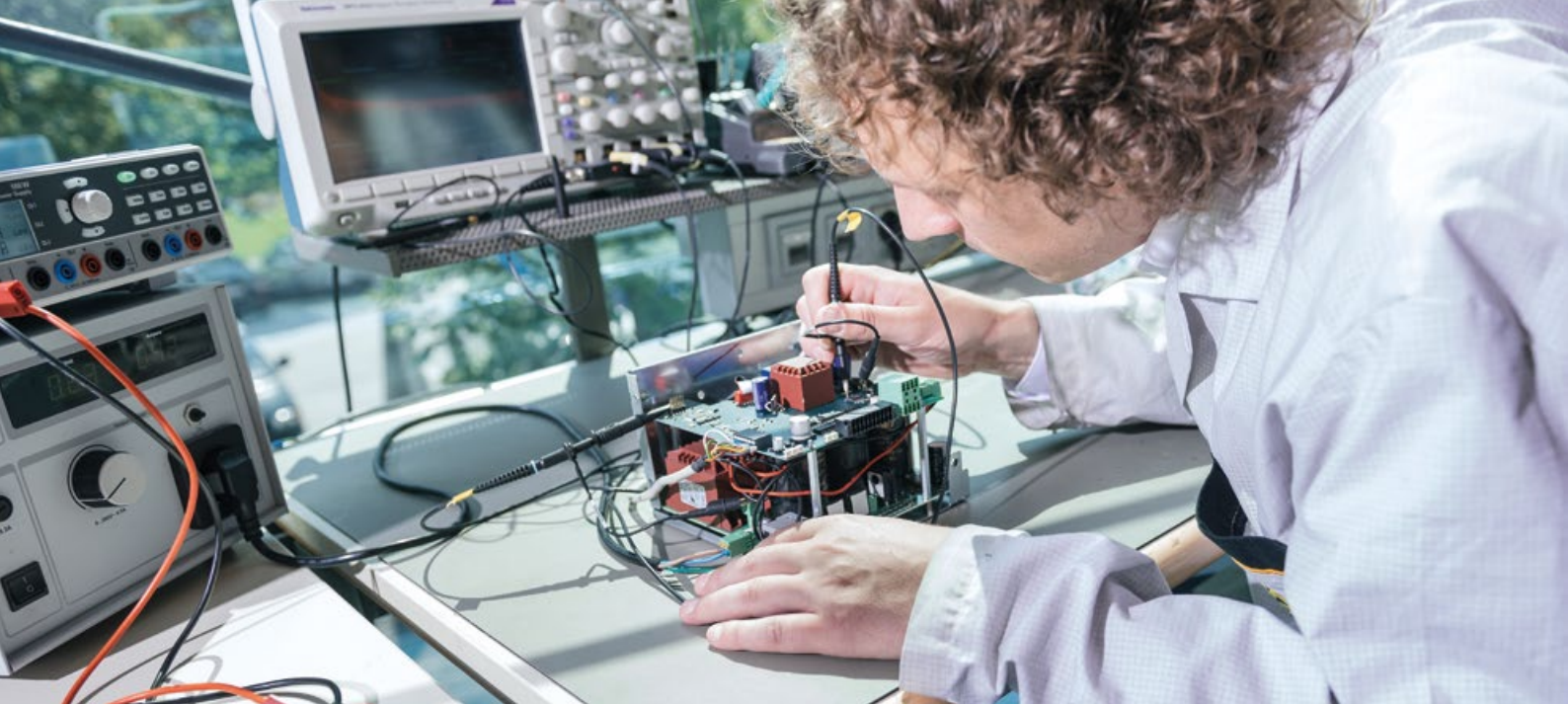
Surface protection

- › Coating
- › Nano coating
- › Grouting

Final assembly

- › Electromechanical components
- › Devices assembly
- › System integration
- › Box building





Testing and programming

Modern technology and maximum quality

All electronics components, modules and systems produced by Kontron are subjected to strict functional and quality testing. For us, secure recognition of potential errors is an absolute prerequisite for optimal production quality.

Thanks to our many years of experience in developing and building test equipment and based on our own custom testing infrastructure, we ensure that components are validated in strict compliance with customer specifications.



Inline inspection procedures

- › SPI solder past inspection
- › 3D AOI automated optical inspection

End-of-line testing processes

- › ICT in-circuit test
- › FKT function test
- › BST boundary scan test
- › High-voltage test
- › X-ray

Test equipment construction

- › Testing according to customer specification
- › Own testing services
- › Test software development

Traceability

- › Traceability at the component and assembly levels
- › Process data monitoring and archiving



Maintenance and services

We are optimally equipped

Benefit as a customer from our global supplier network and the advantages of large procurement volumes within the Kontron Group. We are ideally positioned to handle the immense range of requirements, components and production technologies that our customers bring to us.

Our service scope encompasses a wide range of tasks along the entire product lifecycle. Each and every day, we do our best to fulfill your expectations.

»Our SCM and global sourcing teams connect with our suppliers in the closest possible way. Our customer focus and clearly defined delivery channels guarantee efficient supply in normal times but are essential in times of shortage and crisis.«



Thomas Ebner
CPO

Material management

- › Kontron global sourcing, worldwide demand consolidation and direct price negotiations with manufacturers
- › Direct support of all leading semiconductor manufacturers
- › Global network of suppliers
- › On-site staff in the most important procurement markets

Produkt lifecycle management

- › PCN process, EOL monitoring, sourcing, and stocking of discontinued parts
- › Search for and testing of alternative components
- › Connection to silicon experts
- › Long-term storage of components with nitrogen

Logistic concepts

- › Consignment stock for a flexible and needs-based supply
- › Kanban
- › Rolling forecast
- › Security stocks

Repairs service

- › Repair in cases of warranty and services
- › Technical support



Our production sites

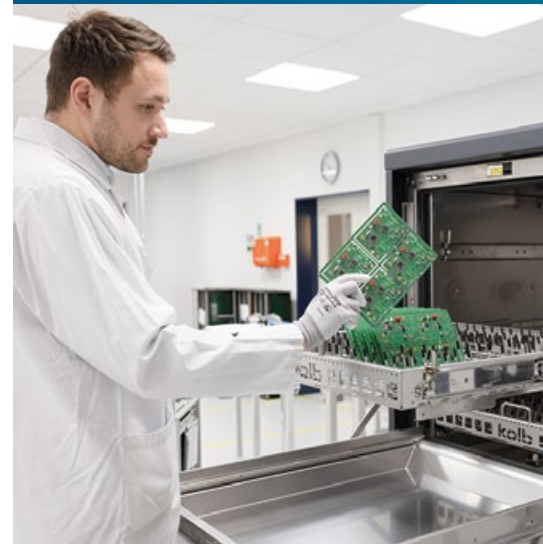
beflex electronic GmbH, Germany

As a prototype and low-volume electronics manufacturer, we support our customers directly in the development process and bring new products to series production quickly and efficiently. With our five branches in Germany, we follow the principle of being reachable within two hours from anywhere in Germany, thus ensuring physical proximity to our customers.

With 25 years of experience, we take on the complex challenges our customers face. With services such as obsolescence management, layout design and test equipment construction, we are not just an EMS provider, but a competent partner offering comprehensive support.

beflex in detail

- › Five subsidiaries in Germany
- › Class 8 cleanrooms
- › SMD & THT Assembly
- › Small series production equipment in Hamburg and Leipzig
- › Prototyping, low-volume production, layout design, obsolescence management, test equipment design/build
- › Certificates ISO 9001, ISO 13485, ATEX/IECEX





»With our expertise and one-face-to-the-customer principle, we are the solution guarantor for all customers who need a flexible and competent partner at their side when launching a new project.«



Bernd Lauterwasser
Head of layout design



Our production sites

Kontron Europe GmbH, Germany

We are your competent partner for end-to-end manufacturing of industrial PCs, HMIs and high-grade electronic systems and devices. Together with our broad service portfolio, our highly flexible manufacturing facilities (work cell design) permit rapid scaling and adaptation to client requirements. We also assume assembly, systems integration and avionics services, all „Made in Germany“.

Quality is our absolute priority. To meet this self-imposed demand, Kontron has developed an AI-based optical quality monitoring system. Additionally, a MES system permits paperless, data-driven production planning and control as well as documentation and replicability of all individual process steps. Both systems help us guarantee that we deliver first-class quality and offer our clients maximum transparency and planning security.

Our customers' success is our prime motivation.



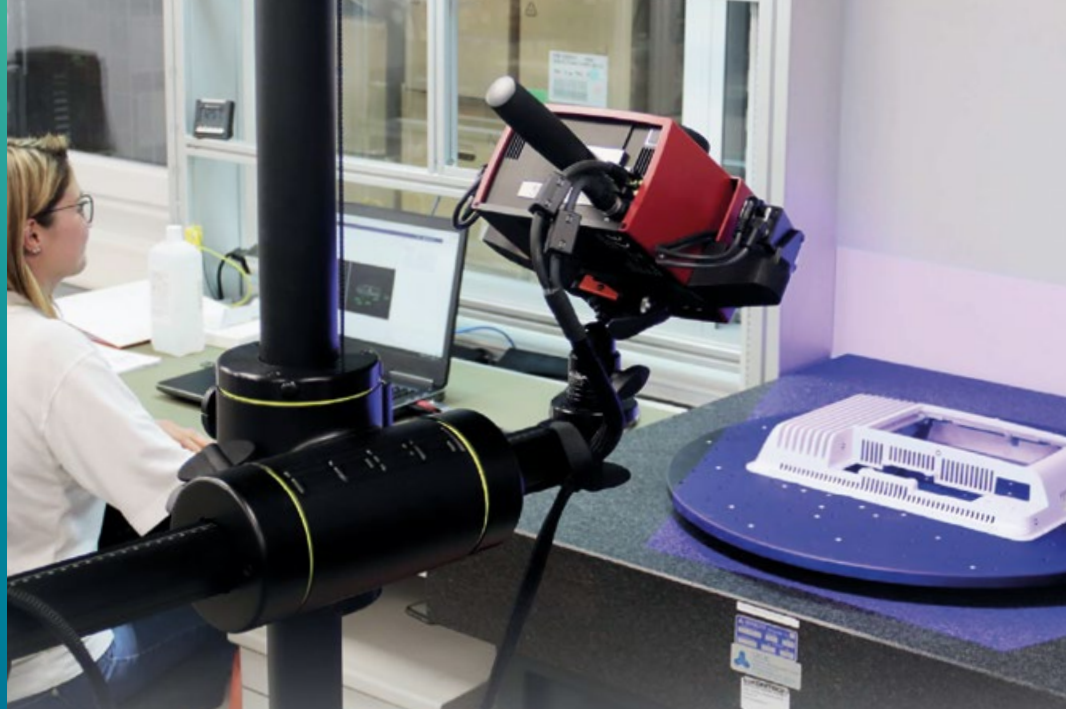
»End-to-end MES-driven, automated processes guarantee maximum quality, flexibility and security.«



Walter Gruber
Director production & logistics

Augsburg in detail

- ▶ Production area
7,800 square meters
- ▶ Assembly for Industrial
PC's, HMI's, complex
systems and devices
- ▶ Avionics Maintenance
and Repair Organisation,
Augsburg Reference:
DE.145.0092
- ▶ Product Approvals: UL, CSA,
TÜV, Intertek, CCC (China),
CQC (China), BIS (India),
DNV (Maritime)
- ▶ 200,000 systems per year
- ▶ Certifications: ISO 13485,
ISO 9001, ISO 14001





Our productions sites

Kontron Electronics GmbH, Germany

We are the competent and experienced full-service provider at your side. We cover all aspects of electronics, development and manufacturing services. Our portfolio includes proprietary and client-specific products as well as development and engineering services for complex electronics components, modules and systems.

We assume production and assembly services for complete assembly groups – profit from our knowhow! With our high-powered team and more than 25 years of experience, we stand ready to turn your requirements and expectations into future-proof products and solutions.

Frickenhausen in detail

- › Production area
600 square meters
- › System assembly,
box building
- › 260,000 assembled units
per year
- › 1 Nano Coating system
- › Certifications: ISO 9001,
ISO 14001, Apple MFI





»Quality is paramount – every assembly is tested and validated before it leaves our premises.«



Simon Mistele
Test equipment engineering



Our production sites

Kontron Austria GmbH, Austria

As all-round service provider, we handle development as well as production of complex electronic components, modules and systems in the industrial and medical technology.

We are also your partner for end-to-end manufacturing of electronic assemblies, devices and systems. Our experienced and competent specialists are ready to support you in consulting and development, production and process optimization, as well as professional outsourcing of your assemblies and complete systems.

»We act as partners to our clients throughout the entire production process, tackling all challenges with innovation and flexibility.«



Stephan Niederhauser
Dipl.-ing., site manager

Engerwitzdorf in detail

- › Production area ca. 1,400 square meters
- › Assembly area 700 square meters (Linz)
- › 200,000 assembled units per year
- › 1 Wave and selective soldering
- › 1 Potting
- › 1 Counting X-Ray
- › Traceability
- › Certifications: ISO 9001, ISO 13485



Ebbs in detail

- › Production area ca. 1,500 square meters
- › 500,000 assembled units per year
- › 3x SMT assembly lines
- › 1 Coating system
- › 1 Potting
- › 1 X-Ray
- › 1 Counting X-Ray
- › Traceability
- › Certifications: ISO 9001, ISO 13485, ATEX-Directive 2014/34/EU, UL, Apple MF



»We are at home in the industry sector and also have deep expertise in the fields of safety and medical technology.«



Andreas Schlaffer
Head of R&D



Our production sites

Kontron Electronics Kft, Hungary

We are a provider of production and assembly services with decades of experience in producing entire electronic assemblies, devices and systems. At our facilities in Tab und Pécs, we offer our entire range of services. With our modern, high-performing machine pool and continual optimization of our processes and production methods, we guarantee maximum quality.

»Our highly competent and committed staff receive continual training and are always up to speed on the latest methods and technologies.«



Mónika Csécsné Mihály
Production manager

Tab in detail

- › Production area ca. 2,000 square meters
- › 750,000 assembled units per year
- › 3 SMT assembly lines
- › 1 Wave and selective soldering
- › 1 Coating system
- › Certifications: ISO 9001, ISO 14001, UL



Pécs in detail

- › Production area
ca. 3,500 square meters
- › 750,000 assembled
units per year
- › 3 SMT assembly lines
- › 1 Wave and selective
soldering
- › 1 Coating system
- › Traceability
- › Certifications: ISO 9001,
ISO 13485, ISO 14001, UL



»As a competent high-tech provider with deep sense of excellence, we offer our clients reliability and quality.«



Erika Óbertné-Simics
Production manager



Our production sites

Kontron d.o.o., Slovenia

We are a versatile one-stop shop for electronics manufacturing services. Our company portfolio includes research and development, introduction of new products as well as series production. Our scope also includes electronics and final assembly, programming and testing as well as system integration.

Of course, we also see to proper packaging and delivery of goods to your desired location via our logistics center. Should any questions remain after delivery, our aftersales support team is available at all times. It's been our job for almost 75 years!





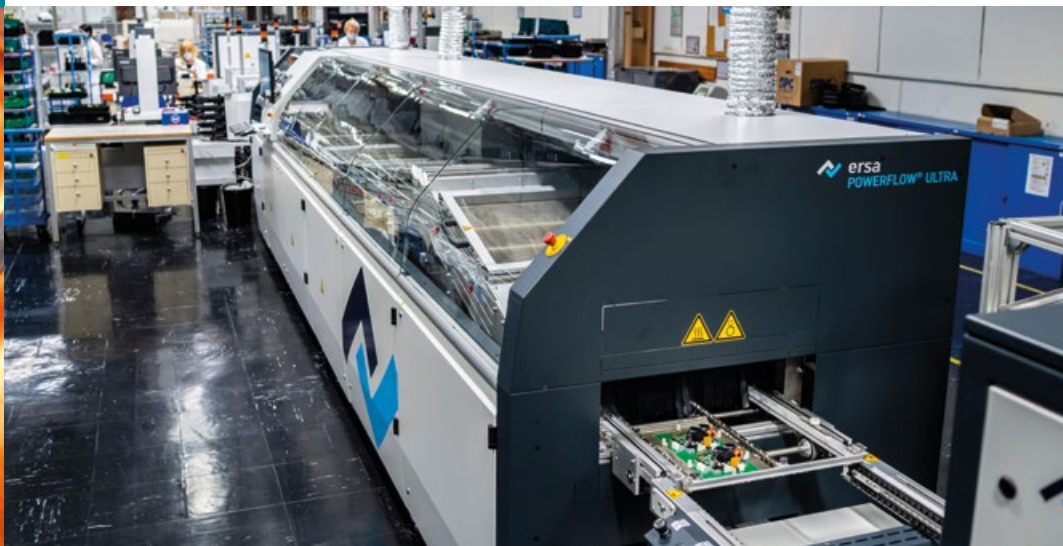
Kranj in detail

- › Production area
4,500 square meters
- › 600,000 assembled
units per year
- › 4 SMT assembly lines
- › 1 Wave and selective soldering
- › 1 X-Ray
- › 2 Coating system
- › 1 Nano Coating system
- › Press fit
- › Cable assembly
- › Certifications: ISO 14001,
ISO 9001, ISO/IEC 27001

»Highly automated manufacturing as well as strong technology and production competency are our guarantee for quality products.«



Jernej Polič
Director of business unit EMS





Our production sites

KATEK GmbH, Germany, Hungary and Czech Republic

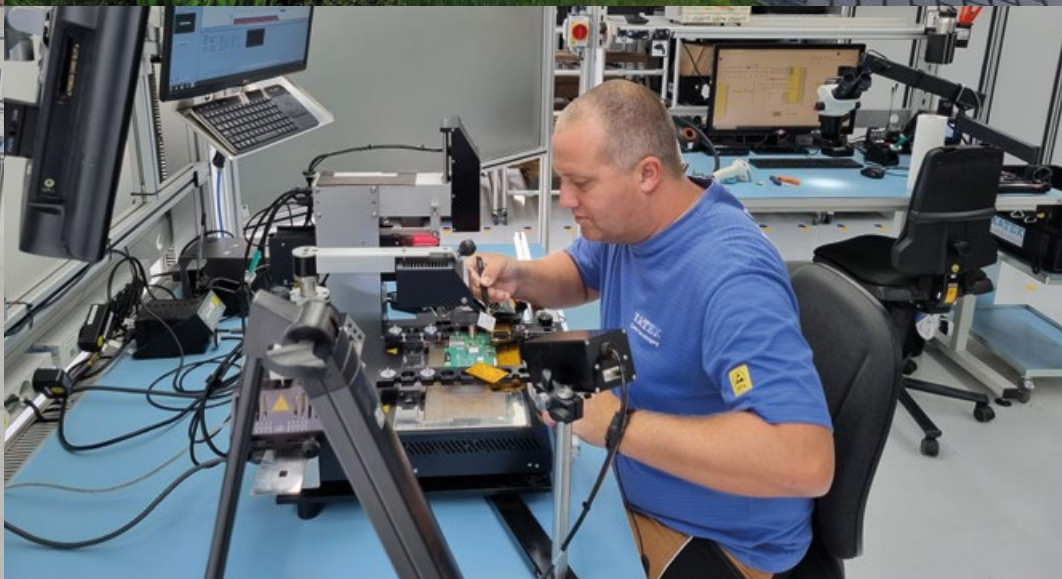
We are an innovative partner for innovation and growth sectors such as Industry, Lifestyle and Healthcare, Automotive and eMobility. Using digital twins and comprehensive traceability, every step of the production process is precisely tracked. Our specially developed best-in-class testing concepts, including high-frequency testing, set new standards in quality assurance.

We are particularly active in medium and high-volume production and offer comprehensive PCB and product development services, including Design for Excellence (DfX), Original Design Manufacturing (ODM) and Joint Design Manufacturing (JDM). Our individual and customized service ensures that we optimally meet the specific needs of each customer.

Grassau (DE), Gyor (HU), Horni Sucha (CZ) in detail

- Production and logistics space 18,500 square meters
- 12 SMT assembly lines
- 15 Wave and selective soldering
- 3 X-Ray
- 4 Coating systems
- 1 Potting system
- 1 Nano Coating system
- Press fit, gluing, box build
- Ca. 10 Mio. assembled units per year
- Certifications: ISO 9001, ISO 14001, IATF 16949, ISO 13485, ISO 50001, ISO 45001





»For more than 40 years, we have put our customers at the center of everything we do. Through continuous development, we offer a customized, personal and comprehensive service for all aspects of electronics.«



Katrin Fricke
Managing director



As an ODM/EMS partner, we offer you the following benefits

- ▶ **Low volume/high mix to high volume/low mix**
As a leading electronics service provider, we can economically offer the entire range from small and medium quantities to large volumes.
- ▶ **Very high volume/low mix**
We can have very large quantities produced by our cooperation partner in Asia.
- ▶ **Active site selection**
We produce at the site that best meets your requirements.
- ▶ **Logistics concepts**
Consignment warehousing, Kanban, rolling forecast, security stockpiles.
- ▶ **Product and cost analysis**
Upon request, you will receive suggestions for cost reduction in the component selection and manufacturing processes.
- ▶ **Lifecycle analysis and management**
Choose the optimal time for new design or redesign based on our forecast data.
- ▶ **Global sourcing**
Take advantage of our global purchasing networks.
- ▶ **Internal second source**
We offer maximum supply security in the event of production downtime. Thanks to site-independent redundancy, we are able to ensure resilient production.

Kontron Your One-Stop-Shop for Custom and Standard Products as well as ODM and EMS Services.



»Development and manufacturing are matters of trust
That's what we stand for with our name and reputation
– now and in future.«

Speak to us – we are there for you!

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