



/// InnoSenT

Your reliable partner for
EMS SERVICES



ABOUT INNOSENT GMBH

Radar expertise and high-quality electronics production from Lower Franconia, Germany.

InnoSenT GmbH has been successfully developing radar components for industrial and automotive applications since 1999. The medium-sized company has earned its expert status through innovative solutions and is now one of the leading radar technology providers worldwide.

This success is based on an efficient and competent team that is dedicated to the further development of radar technology with a strong focus on technical progress, research and quality.

With commitment and creativity, the radar experts at InnoSenT develop customised sensor solutions for a wide range of industries. In addition to the series production of standard radar components, InnoSenT also offers customised solutions for its customers as a service-oriented partner.

The development team always takes a far-sighted approach to product innovations and, despite the clear B2B focus, attaches great importance to the benefits for the end user.

InnoSenT always has a feel for industry trends and faces up to the specific challenges of its customers.

One example of this is the creation of the latest business unit:

EMS services

As part of this service, InnoSenT's RF specialists make their expertise and production capacities available to manufacture their customers' electronic components to order.

YOUR CONTACT PERSON



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HIGH QUALITY, CUSTOMISED & INDIVIDUAL

With many years of experience in the production of electronic components, InnoSenT is a strong partner - even for demanding assembly tasks.

In addition to developing and manufacturing its own radar sensors, InnoSenT also offers comprehensive EMS services.

We manufacture your electronic products flexibly and reliably on our modern machinery - from prototypes and small series to large series projects. You benefit from the modern technical equipment available to you as an EMS partner.

Outsourcing electronics production can also be a sensible solution for established large companies: you gain flexibility, expand your expertise and reduce your internal workload.

A strong team for your order

With 25 years of experience in the development and production of electronic components, InnoSenT offers you unique expertise.

This expertise, combined with a strong team in the areas of radar development, production and test engineering, sets InnoSenT apart in the EMS industry.

Our highly qualified technical staff work with great dedication on your product. They form the foundation for the exceptionally high-quality and customised electronics production that we offer you.

OUR STRENGTHS AT A GLANCE

- HF technology experts
- Experienced manufacturing team
- Development support
- Calibration and focussing of optics
- LED assembly
- Industry experience and network Automotive
- Standardised processes at quality level of the railway industry
- Processing of the smallest components
- Layout design
- In-house test equipment construction

FACTS & FIGURES

InnoSenT as an EMS service provider

- 1000 m² warehouse
- 1500 m² production area
- 60 developers
- 60 production employees
- 2 SMD production lines
- 1 THT production line
- 3 million assembled units in 2019
- 45 development projects and products
- 400 million components SMD assembly capacity on demand

INDUSTRY SPECIALISATION

Our expertise for your market.

At InnoSenT, we are intensively involved with the requirements and challenges of a wide range of industries. By working closely with our customers and partners, we customise our processes and are constantly expanding our expertise.

Thanks to our experience as a manufacturer of sensor technology and radar technology as well as our EMS services, we are ideally position-

ed to manufacture electronic components in various application areas. We can utilise our strengths in the automotive industry, railway industry, camera technology and LED assembly in particular.

Our experience in radar technology and numerous successful EMS projects form the basis for our focus on the following specialist areas:

Railway industry



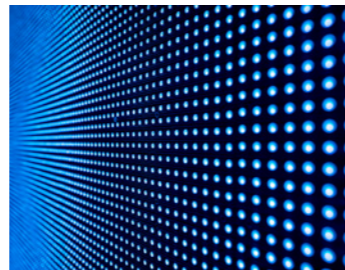
Railway suppliers have to develop products for extreme conditions. Functionality despite vibration or dirt is essential. InnoSenT therefore establishes processes for quality assurance in accordance with railway industry standards and is one of the few EMS providers in Germany with ISO/TS 22163:2017 certification.

Safety technology



Security applications are subject to strict requirements. Failures or malfunctions can have serious consequences. InnoSenT already implements safety-relevant measures in electronics production. The company has many years of experience and expertise in this field.

LED technology



LEDs have been a central component of our products since 1999. InnoSenT has built up extensive expertise and routine in the processing of this technology. The result: the highest production quality for your manufacturing project to ensure optimum results.

(Stereo) camera technology



Through close cooperation with camera manufacturers, InnoSenT has extensive expertise in the production and testing of camera technology. Calibration and focussing of optics as well as hygiene in the workplace are essential. Trained employees ensure the highest standards.

Automotive



The high demands of the automotive industry also characterise electronics production. Thanks to our experience in the production of driver assistance systems, InnoSenT knows the challenges typical of the industry. The IATF 16949:2016 certification guarantees the highest quality and reliability.

Measurement and control technology



Thanks to its experience in radar technology, InnoSenT is the ideal partner for measurement and control technology. With our specialised machinery and laboratories, we offer optimum conditions for testing, inspection and production in order to implement your requirements perfectly.

Automation technology



Industry 4.0 requires electronic units that work together precisely and reliably. InnoSenT specialises in the manufacture of such highly complex components. We ensure maximum precision and quality for your assemblies right from the manufacturing process.

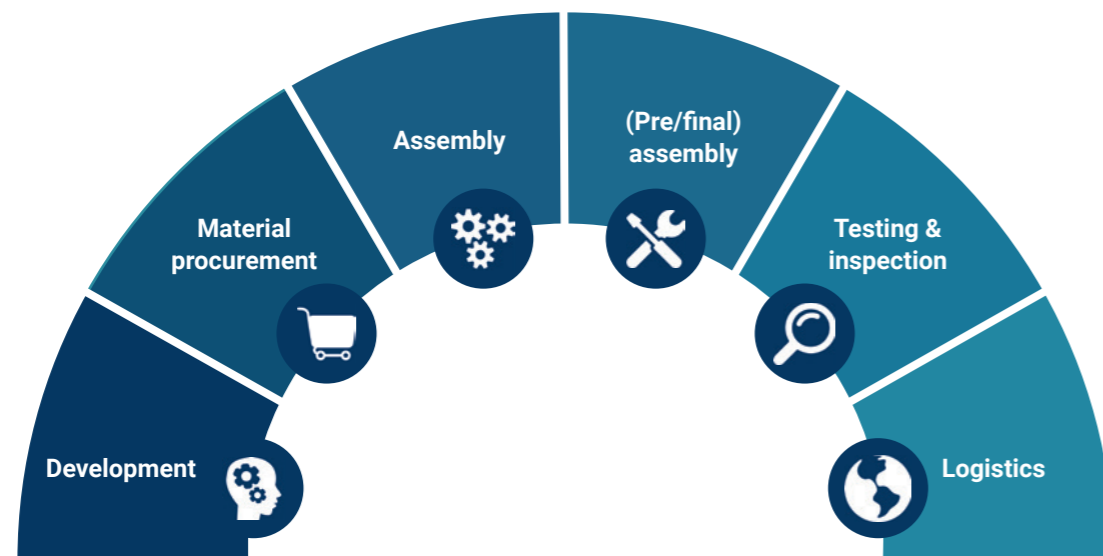
E²MS & SUPPORT ACCORDING TO YOUR WISHES

Take advantage of our comprehensive range of services for outsourcing your electronics production.

As a service-orientated partner, we offer the entire spectrum of EMS services. If required, our experts will support you throughout the entire production cycle. Personalised support and an all-round service guarantee the efficient

implementation of your individual requirements - always at the highest level. You decide flexibly which services you want to use and to what extent.

BEST SERVICE FOR ALL PROJECT STEPS



We plan

We realise your production project in a structured and reliable manner. Our EMS service team advises you during the planning phase and provides you with expert support during the realisation phase.



We develop

Our electrical and engineering specialists develop innovative solutions. We offer development services such as layout design, circuit construction and assembly testing.



We procure

We ensure the availability of your components with efficient obsolescence management and strong suppliers. Our purchasing department ensures cost-optimised, RoHS and REACH-compliant material procurement.



We assemble

Our modern equipment guarantees precise results - from processing the smallest components to 100% traceability, all in accordance with automotive and railway industry standards.



We assemble

We offer manual and fully automated solutions for your assembly, including under class 5 clean room conditions in accordance with DIN ISO 14644-1.



We test

Our test equipment covers production and environmental tests as well as fine adjustments. Calibration and test equipment construction are also part of our services.



We ship

We offer reliable logistics solutions worldwide, including customs clearance and direct dispatch to your customers.



We store

We store your electronic components professionally on approx. 1,000 m² - in dry storage cabinets or shrink-wrapped according to the FIFO principle.



CERTIFIED QUALITY

InnoSenT is certified according to the following standards to ensure the quality of its products:



IRIS certified
ISO 22163:2023



BETTER THAN THE NORM: QUALITY DOWN TO THE SMALLEST DETAIL

We manufacture your electronic products to the highest industry-specific quality standards.

InnoSenT lives an active quality management system that is deeply rooted in the company - visible in our mission statement and certifications. Our quality awareness is already evident in error prevention: we consistently strive for the 'zero-defect' ideal in electronics production.

Trained specialists ensure that everything runs smoothly. We take rework and error analyses seriously and focus on the continuous optimisation of our production products. Existing processes are assessed realistically and critically in order to always fulfil the highest standards.

High testing standards are firmly integrated into our production processes and ensure strict control and selection of products. Our employees work carefully, efficiently and with a trained eye that often exceeds our customers' expectations.

In this way, we provide our customers with flawless quality products and the best possible service.

ELECTRONICS PRODUCTION: SUSTAINABLE AND RESOURCE-SAVING

We take responsibility for future generations - a conviction that characterises our actions.

By sustainably reducing the use of resources, energy consumption, waste and emissions, we make an active contribution to environmental protection. When purchasing and shipping, we pay attention to efficient transport routes and environmental compatibility.

plies with RoHS and REACH. Environmentally conscious behaviour is a matter of course for us - from purchasing and production to occupational health and safety measures.

The use of environmentally harmful substances is avoided and our procurement strictly com-

With our ISO 14001:2015 and ISO 50001:2011 certifications, we guarantee compliance with all requirements and live a sustainable understanding of quality.

THE BEST EQUIPMENT FOR THAT LITTLE BIT MORE

On a production area of 1,500 m², InnoSenT offers both efficient standard processes and customised solutions - even for complex requirements. With our expertise and state-of-the-art

technology, we deliver the quality and efficiency that will perfect your application. Together we achieve optimum results for your customers!

Rooms and employees

- EGB-compliant production: Workstations and floor to the highest standards
- Expertise in vacuum soldering technology

Production volume & capacity

- Assembly capacity: Approx. 400 million SMD components (capacity can be expanded 'on demand')
- Flexible production: Large series (industrial and automotive), prototypes and small series

Component range

- Standard SMD components
- Component size up to 0201
- BGAs and THT components

Processable panels

PCB formats: from 50 mm x 100 mm up to 320 mm x 280 mm

Testing & inspection

- Sampling tests during series production, temperature and vibration loads
- Environmental tests in our own laboratory
- Development team on site for quick adjustments
- Extensive testing and measurement technology for industrial and automotive applications
- In-house test equipment construction for individual requirements

Quality assurance

- Certified in accordance with IATF 16949 (automotive standard) and ISO 9001
- Railway standard certification in accordance with ISO/TS 22163
- Process monitoring with 100% traceability through unique serial numbers

Sustainability

- Certified in accordance with ISO 50001 and ISO 14001
- Compliant with RoHS and REACH directives

MACHINERY: TECHNICAL KEY POINTS

PCB marking (ASYS Insignium 4000)	<ul style="list-style-type: none"> • PCB and panel labelling with data matrix code/plain text • Data matrix code for traceability (customised content possible) • Customised plain text labelling possible
LP cleaning system (PB 500/1 / ACS 01)	<ul style="list-style-type: none"> • Cleaning of all PCBs before paste printing with ionised air and extraction system
Paste printing (EKRA Serio 4000 / DEK Horizon 03iX)	<ul style="list-style-type: none"> • Fully automatic in-line paste printing with ProActiv technology
3D SPI (Koh Young 8030-2)	<ul style="list-style-type: none"> • Automatic 3D inspection of the printing process • Automatic good/bad sorting
SMD assembly (ASM Siplace SX2)	<ul style="list-style-type: none"> • Siplace placement machine • Placement in flux (dipping module), with epoxy (glue feeder) and pin-in-paste • pin-in-paste (twinhead) possible • Placement from tray also possible
THT assembly (Ersa ECOSELECT 4)	<ul style="list-style-type: none"> • Selective soldering system • Precise soldering of individual components compared to the wave soldering system
Reflow soldering (SMT Quatro Peak S N2)	<ul style="list-style-type: none"> • Nitrogen reflow full convection ovens • In-line vacuum soldering can be switched on as required
AOI (KohYoung Zenith 2)	<ul style="list-style-type: none"> • Automatic optical inspection in accordance with IPC-A-610 Class 3 (3D) • 100% inspection of all assembled components
AXI (Göpel X Line 3D X10)	<ul style="list-style-type: none"> • 3D X-ray system • Especially for concealed solder joints
ICT (Aeroflex 4250 / Digitaltest Sigma MTS 300)	<ul style="list-style-type: none"> • Ideal for larger series • Optional programming of components possible
Flying Probe (TAKAYA APT-1600 FD-A)	<ul style="list-style-type: none"> • Individual testing of assemblies, ideal for samples/small series • Optional programming of components possible
Testing	<ul style="list-style-type: none"> • Test equipment construction for product-specific test equipment • Absorber chamber for measuring high-frequency components in the frequency range > 10GHz
Depanelling (ASYS DIVISIO 5100)	<ul style="list-style-type: none"> • Milling & sawing • Parallel cutting knives



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