



# R&D Solutions

**Research, development,  
design, manufacture and  
integration of electronic  
systems**

# Innovation is our true passion

HC Linear Ltd., established in 1990, has been a hub for pioneering electrical and software R&D solutions.

Our versatile team specializes in creating tailor-made software, hardware, data analytics, and services, addressing both unique and common industrial needs. From startup demands to the requirements of large and multinational companies, we cater to diverse requirements. At the heart of our mission lies the pursuit of cutting-edge digital solutions for tomorrow's challenges.



**Transforming vision into reality,** we stand by our partners every step of the way, using the knowledge and expertise of our specialized engineering team to turn concepts into functioning systems.

**How we work** ↘

**Feasibility Assessment & Requirement Management**

We evaluate project feasibility and provide assistance in blueprinting, documenting, analyzing, and prioritizing requirements to ensure smooth development processes.

**Electronic Development**

Our expert engineering team utilizes cutting-edge design tools to develop a broad range of services from system designs to custom printed circuit boards (PCB), ensuring the highest quality standards.

**Support Services**

Our commitment doesn't end with the sale. Apart from round-the-clock operations to ongoing maintenance and future enhancements, you can count on us for comprehensive customer care and support services.



**Mechanical Development**

Our engineers leverage the latest 3D CAD/CAM design software to develop every aspect of your product, from enclosures to mounting elements, guaranteeing professional engineering throughout.

**Manufacturing**

With our in-house production capabilities, we strictly maintain control over the entire development and manufacturing process, to ensure high quality parts and comprehensive supervision.

**System Integration**

Our comprehensive approach accelerates the integration of diverse system components and subsystems into an optimal solution.

**Software Development**

We specialize in delivering comprehensive end-to-end (E2E) software solutions developed specifically for industrial environments, ensuring robustness, efficiency, and future readiness.

We provide services tailored to individual tasks as well as support for the holistic process, ensuring comprehensive assistance at every stage.

**Your challenge is our expertise!**

**“Everyone knew it was impossible, until a fool who didn't know came along and did it.”**

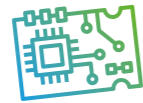
Albert Einstein

# Electronic development



## Low Voltage Electronic Solutions

We have over 30 years of experience in a wide range of low-voltage electronics design for industrial sectors. This ensures that we are able to create electronics from system design to custom printed circuit board (PCB layout), providing solutions for your challenges in the digital world. We guarantee top quality with minimal energy consumption and maximum performance.



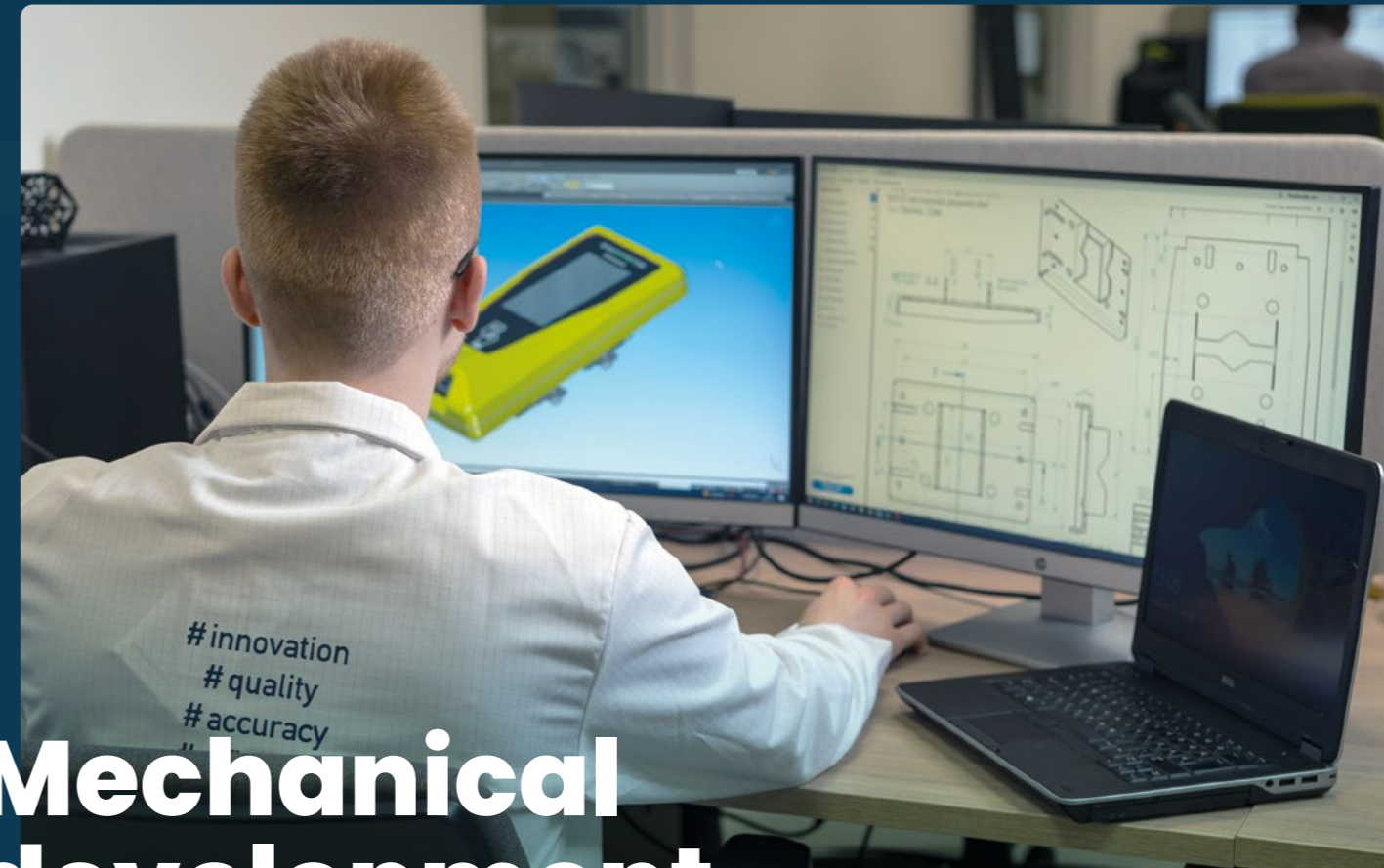
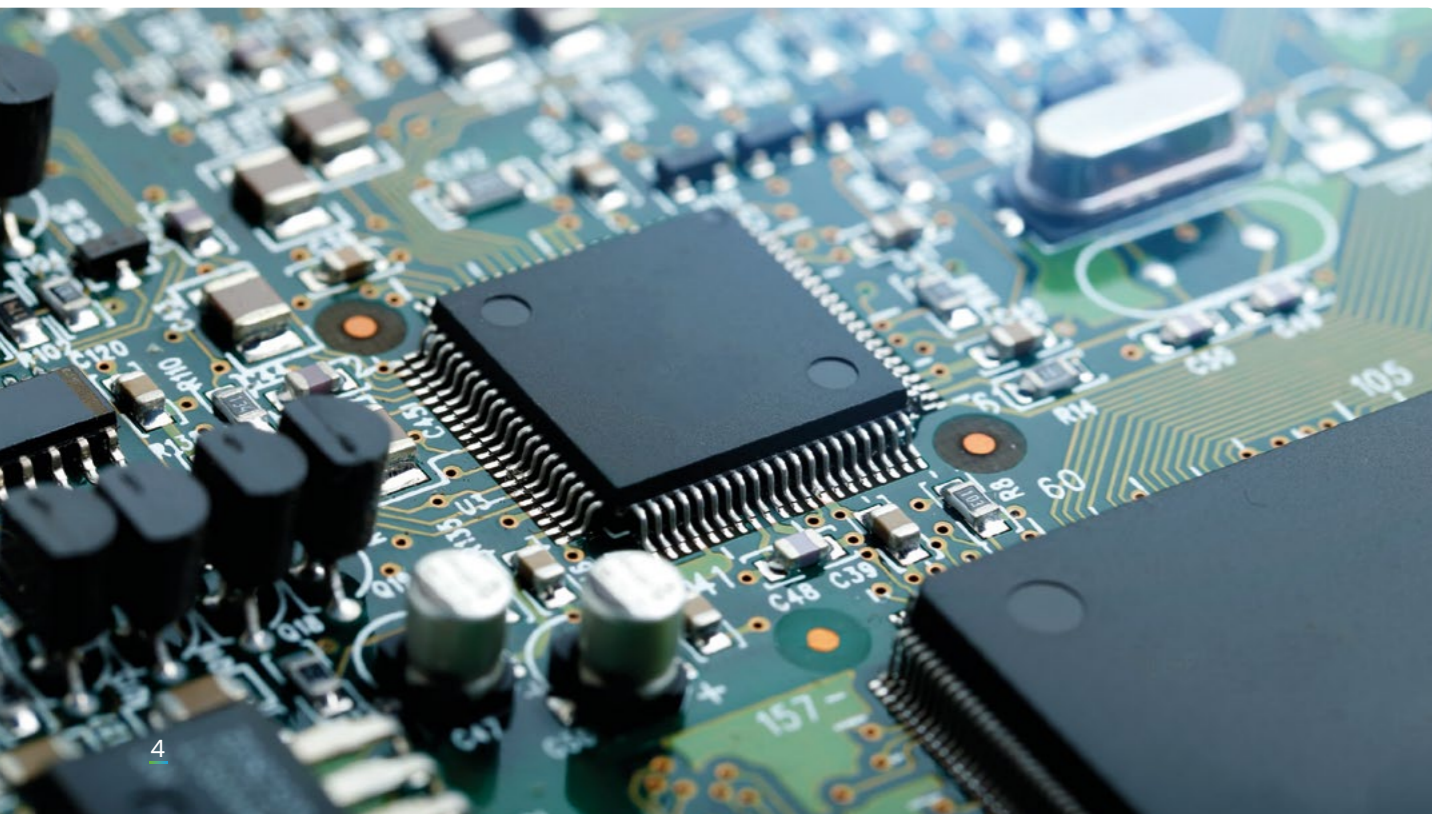
## Customized PCB Design & Manufacturing

Reliable design, PCB assembly and manufacturing, which is backed up by rigorous and detailed testing and the preparation of measurement reports in accordance with standards. Our personalised approach puts your needs first, focusing on factors such as sustainability, cost, manufacturability, testability, repairability and assembly to ensure optimal development results.



## Certification and Sustainability

We conduct developments to meet the expected sector regulations and qualifications. We manage the entire accreditation process, ensuring that the necessary certifications are available and that compliance meets specific industrial standards, nevertheless always focusing on the green planet. We prioritize the software upgradability of our devices, thereby minimizing electronic waste.



# Mechanical development



## Engineering Excellence

Our engineers design, create and refine mechanical enclosures, components, or devices whether they are aluminum, sheet metal, glass or plastic parts. The process involves various stages, such as conceptualization, design, prototyping, testing, and manufacturing to produce functional and efficient mechanical solutions even for specific needs and challenges.



## Prototype Perfection

We conduct thorough testing to verify the functionality, performance, and compliance of developed systems and components. Employing advanced 3D printing technology and, if needed, reverse engineering, we build on your vision with precision and accuracy, ensuring your product meets the highest standards prior to serial production.



## Quality You Can Trust

At the forefront of our priorities is quality, as we leverage dependable materials and established supplier relationships to furnish products renowned for their durability and performance. Ensuring that trust is not just a word but a promise upheld with each interaction. We understand that trust is earned through transparency, reliability, and consistency.

# Software development

At HC Linear, we excel in delivering end-to-end (E2E) software solutions customized for industrial environments. With a focus on innovation, reliability and scalability, we ensure that your software solution is not only robust and efficient but also future-proof, ready to adapt to the evolving demands of your industry.

**Our expertise covers a diverse range of software solutions, including**

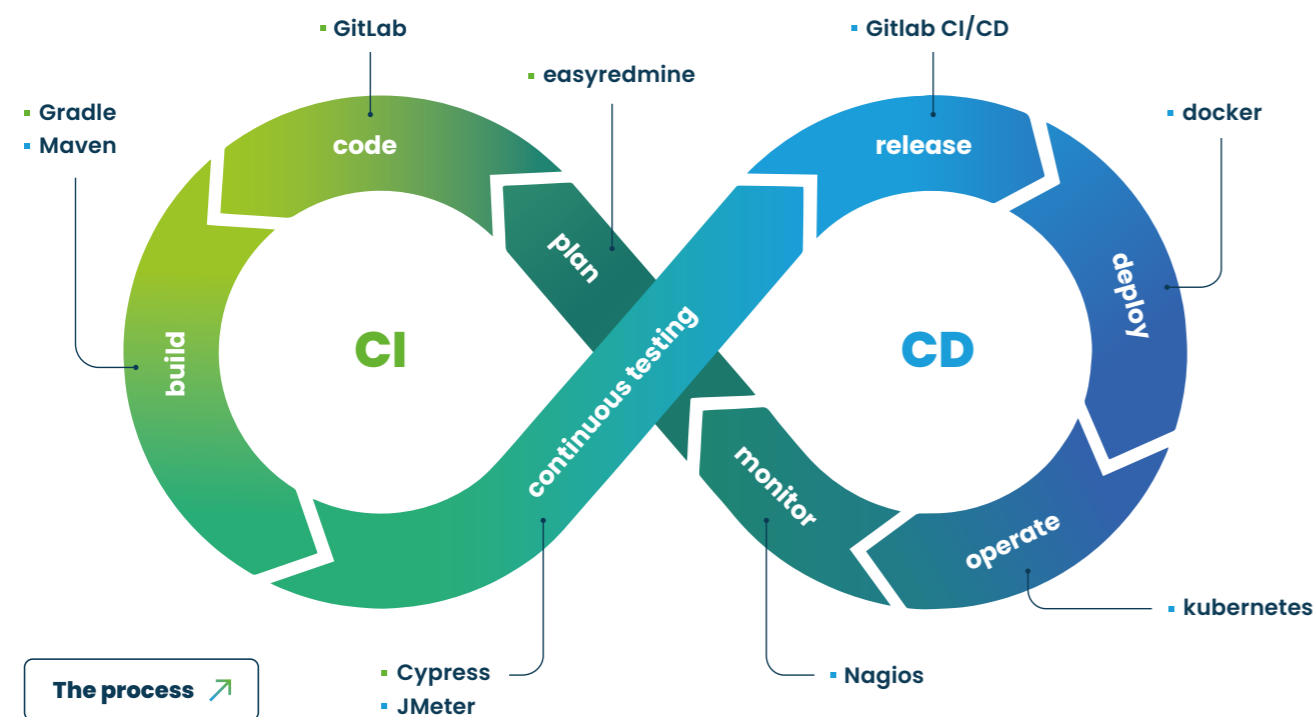
- data analytics
- mobile applications
- web applications
- cloud-based solutions



## Agile Software Solutions

At HC Linear, we prioritize agility, fostering seamless collaboration with clients to iterate swiftly and deliver first-rate software solutions. We leverage our expertise in machine learning (ML) and artificial intelligence (AI)

to enhance our IT solutions. Additionally, we employ automated testing to complete it in a much faster and more efficient way.



The process →

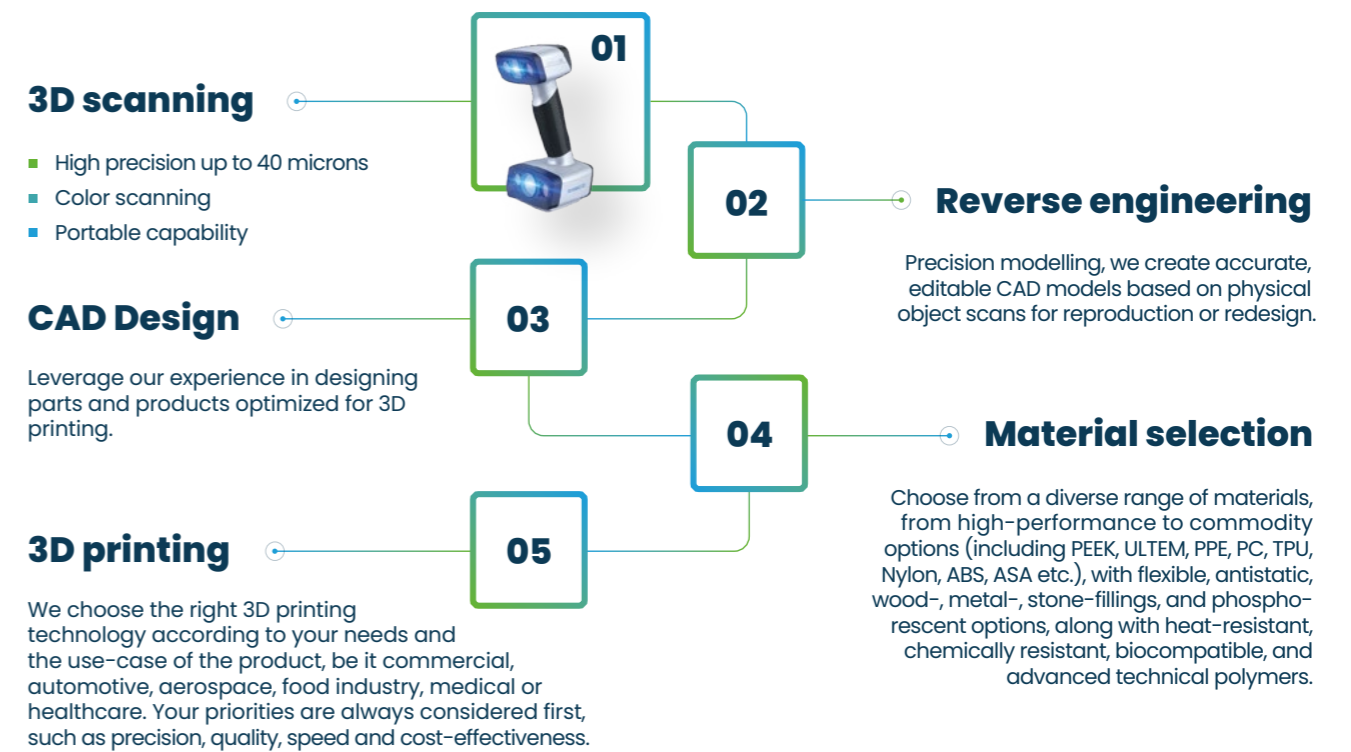
# 3D Printing & Scanning



**Turning your concept into reality? Look no further!**

Our complex solutions, ranging from 3D modelling to scanning and from commercial to industrial 3D printing, are tailored to your vision. With diverse

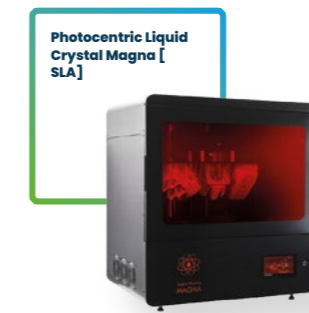
materials and extensive expertise, we serve projects across all industries. Partner with us to bring your ideas to life using our advanced 3D machinery park.



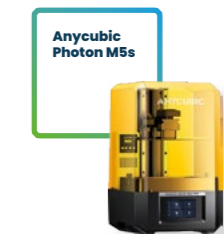
### Some of our 3D printers



Achieve advanced printing capabilities with a spacious build volume of 610 x 508 x 508 mm, 300°C chamber, and 500°C extruders.



Offering high-temperature, flame-retardant and flexible resin printing suitable for diverse industries.



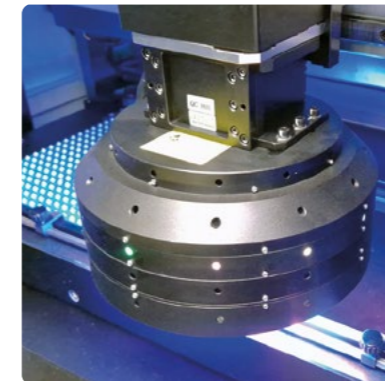
Experience detailed, high-speed printing with SLA technology, perfect for crafting intricate prototypes and functional parts.

# Electronic Manufacturing

We provide our customers with efficient, fast and quality solutions, from prototype development to series production, with complete control over the final product!

Our state-of-the-art facility features automated SMT production lines and THT assembly capabilities for quick, flexible product changes. The automated optical inspection technology detects production errors, while safety testing ensures compliance with industry standards.

Our team's expertise and commitment to excellence ensures worry-free operation and unmatched reliability in every product.



Electronic manufacturing process →

→ Let's transform your ideas into reality!



## Procurement

We leverage dependable materials and established supplier relationships to furnish products renowned for their durability and performance.



## Traceability

Components, assemblies and systems are managed with serial numbers, and production is ERP documented. The structured data are available for production analyses.



## SMT

Fully automated in-line SMT production line, multifunctional pick & place machine, even for large panels and special parts, enabling fast and flexible product changeover.



## THT

We provide machine and hand soldering of THT components. Through-hole technology, or THT, refers to a mounting technique for wired electronic components.



## Testing

With automated optical inspection (AOI), errors in production can be identified using image processing and also using an in-circuit tester (ICT).



## Assembly

After the assembly of the devices, we conduct functional, safety and environmental tests on the finished products before packaging and delivery.

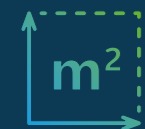
# Design, development, production and support in one hand

30<sup>+</sup>

more than 30 years of expertise



**1000 +**  
more than 1000 products developed



**2000 m² +**  
r&d on over 2000 square metres



**8500 +**  
on-board systems in 3 countries



**3 million +**  
used by more than 3 million people per day



VOLVO

SIEMENS

BYD

IVECO

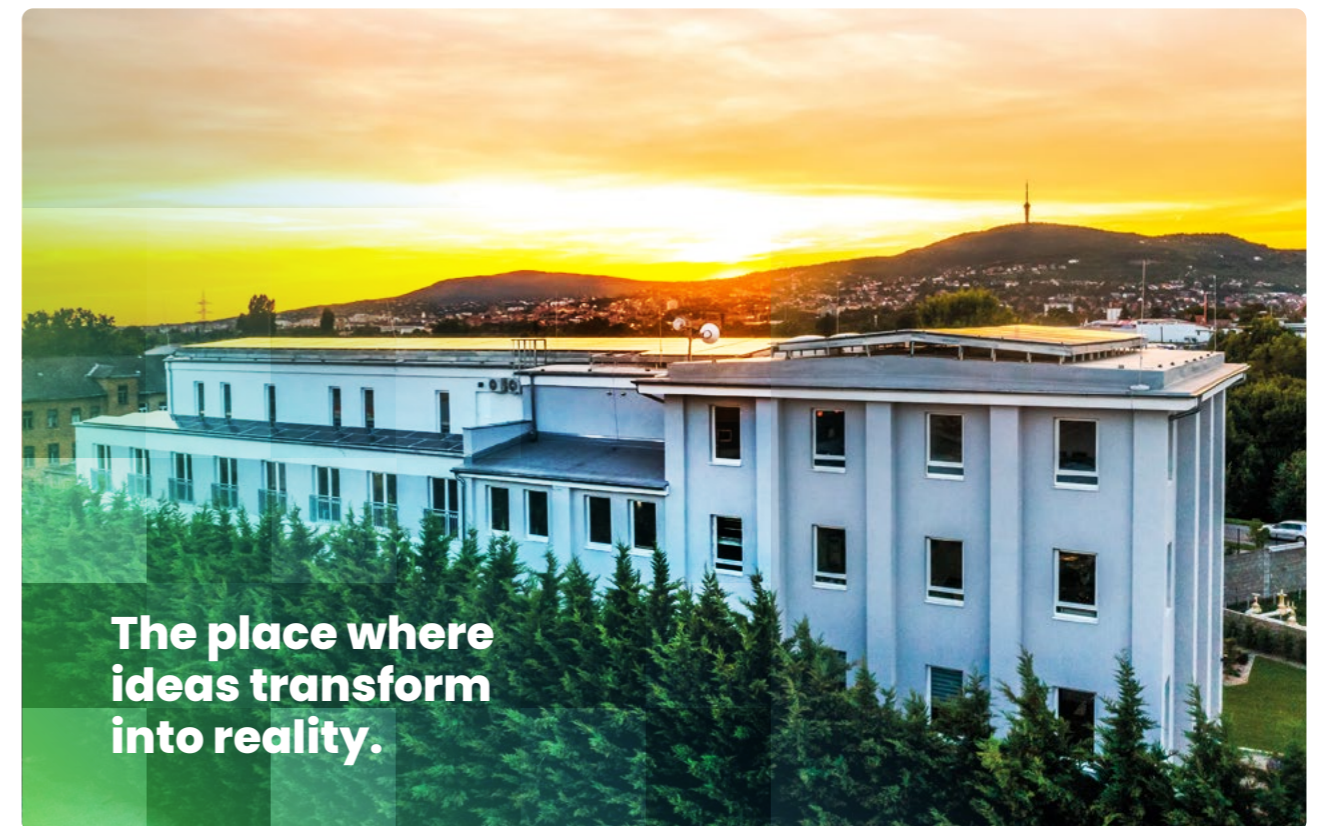
T Systems



→ ...and many other partners

# What we are proud of

We are proud of our commitment to innovation and excellence, constantly pushing boundaries to deliver cutting-edge solutions while ensuring quality to exceed expectations and set new standards.



The place where ideas transform into reality.

# Why us?



## Complexity

From concept to working products, we offer seamless R&D solutions with in-house production.



## Experience

Benefit from over 30 years of expertise and skilled teams delivering professional engineering.



## Efficiency

Our specialization in end-to-end solutions ensures durability and value across various industries.



## Sustainability

We care deeply about our planet and the future. We place a strong emphasis on sustainable electronic solutions.



## Commitment

Our dedication extends beyond sales, focusing on client satisfaction and collaborative growth.



## Support

Enjoy round-the-clock operations, maintenance, and enhancements for optimal performance.

■ ■ ■ **HC Linear**<sup>®</sup>  
R&D SOLUTIONS | SINCE 1990

For more information visit: [www.hclinear.com](http://www.hclinear.com)