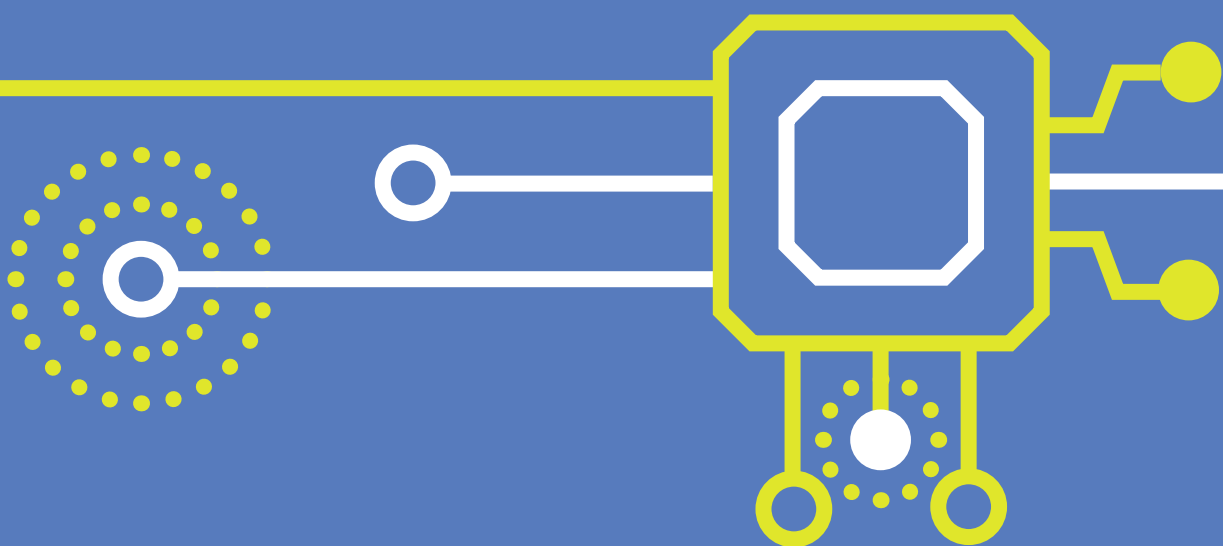
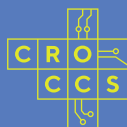


Croatia: Semi— conductors



REPUBLIC of CROATIA
Ministry of
Economy



Croatian
Competence Centre
for Semiconductors

Croatia: Semiconductors

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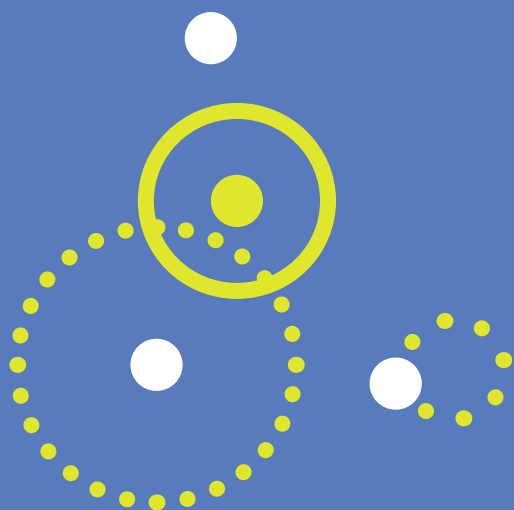
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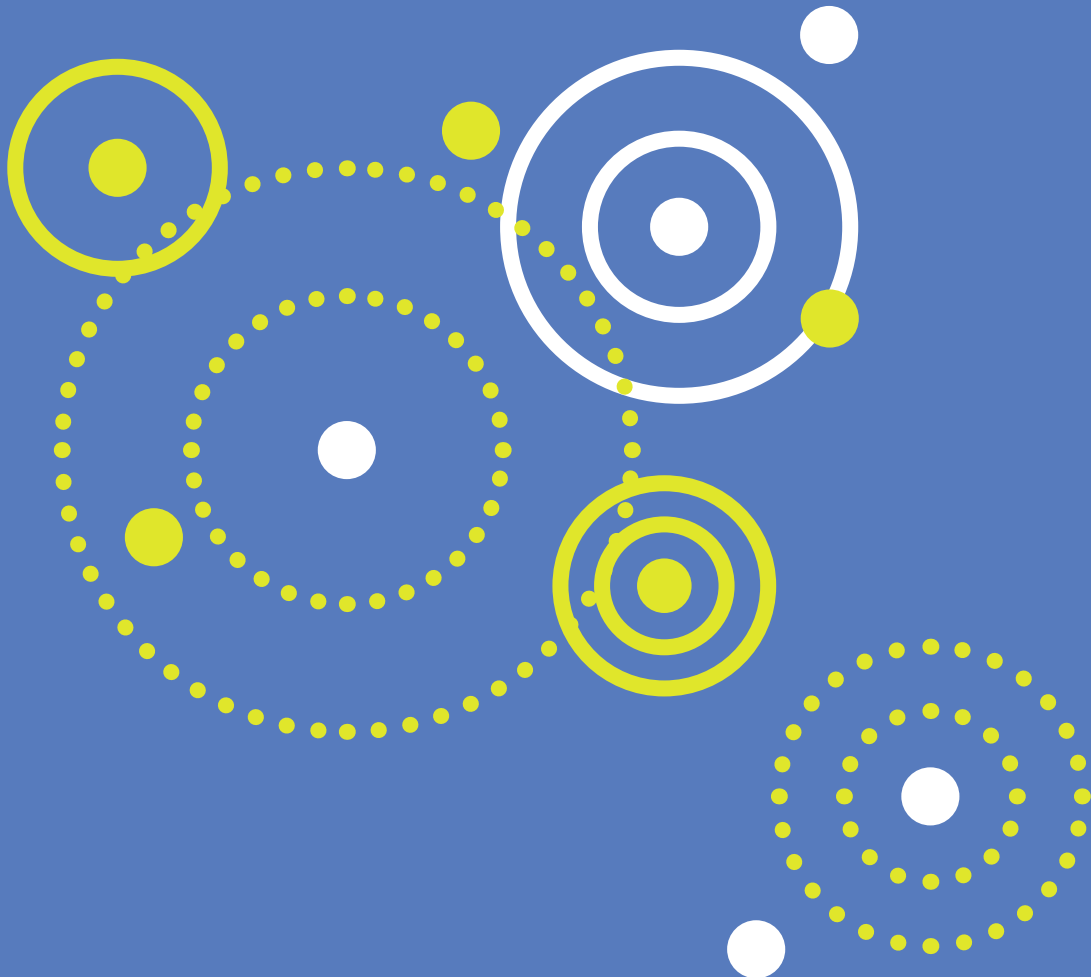
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Introduction



Croatia's Emerging Semiconductor Ecosystem

Croatia's semiconductor sector is built on a foundation of engineering expertise, academic research, and industrial activity spanning the full semiconductor value chain – from advanced materials and precision components for chip production, through chip design, FPGA development, and RF systems, to assembly, testing, and a wide range of end applications in energy, transport, defence, and industrial automation. While Croatia does not host large-scale wafer fabrication facilities, its companies and research institutions are active in segments central to European semiconductor value chains, and several of them have established supply relationships with leading global semiconductor manufacturers and technology companies.

The global semiconductor industry is on track to reach \$1 trillion in annual revenue by 2030, driven by demand for artificial intelligence hardware, data centre infrastructure, automotive electronics, and the electrification of energy and transport systems. At the same time, geopolitical considerations and supply chain resilience concerns have prompted a broad

reassessment of semiconductor geography, with new investment flowing into regions that can offer engineering talent, research capability, and stable regulatory environments. More than 75% of global manufacturing capacity remains concentrated in East Asia, and Europe – which currently accounts for approximately 10% of global production – has responded with the European Chips Act, committing over €43 billion in public and private investment with the goal of strengthening Europe's position in global semiconductor production. This framework is now being revised and expanded under Chips Act 2.0.

Croatia participates in this European effort through the Croatian Competence Centre for Semiconductors (CROCCS), established in 2026 as part of the European Chips Act framework and the pan-European aCCcess network of national semiconductor competence centres. Croatian companies and research institutions are also engaged with Horizon Europe and other EU research and innovation programmes, reflecting a sector that is increasingly connected to broader European semiconductor development initiatives.

A Strong Foundation in Technical Education and Research

Croatia's semiconductor research and education landscape is distributed across several universities and research institutions, each contributing distinct capabilities to the national ecosystem. The University of Zagreb's Faculty of Electrical Engineering and Computing (FER) maintains research programmes in microelectronics, MEMS, power electronics, and embedded systems, and has established collaborative relationships with companies including ams-OSRAM, Infineon, and Ericsson Nikola Tesla. The Faculty of Electrical Engineering, Computer Science and Information Technology in Osijek (FERIT) is active in IC design, embedded systems, power electronics, and metrology. The Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split (FESB) contributes expertise in semiconductor materials, device physics, embedded systems, and testing and reliability. The Faculty of Science of the University of Zagreb (PMF) and the Institute of Physics in Zagreb have established expertise in semiconductor materials, device physics, and photonics. The University of Rijeka's Faculty of Engineering covers automation, electronics, and power systems. The Ruđer Bošković Institute, Croatia's largest research organisation, conducts work in semiconductor materials, photonics, sensors, MEMS, and quantum technologies through its Centre of Research Excellence for Advanced Materials and Sensors (CoRE CEMS). Together, these institutions produce a steady pipeline of electrical engineers, physicists, and computer scientists with competencies relevant to the semiconductor sector.

The establishment of CROCCS was preceded by a 2024 cooperation agreement between

FER and imec, one of Europe's leading research institutes in nano-electronics and digital technologies, headquartered in Belgium. CROCCS is coordinated by FER and brings together a consortium of Croatian academic institutions – including FERIT, PMFST, the Ruđer Bošković Institute, the Institute of Physics in Zagreb and the KONČAR – Electrical Engineering Institute.

Funded through the Digital Europe Programme with a total project value of approximately €2.5 million and running from January 2026 to December 2029, CROCCS is designed to build a complete education–design–processing–characterisation chain for integrated circuits in Croatia. Its objectives include expanding access to IC design tools and European pilot lines for SMEs, developing chip characterisation infrastructure, training engineers in analogue, digital, and mixed-signal design, and fostering joint pre-competitive projects between universities and industry. CROCCS is part of the pan-European aCCcess network connecting national semiconductor competence centres across EU member states.

Croatia's semiconductor ecosystem is further supported by a broad innovation infrastructure. The country has invested in technology parks, incubators, and research centres that facilitate collaboration between academia, startups, and established companies. Government support mechanisms provide financial backing for early-stage technology companies in the electronics and semiconductor space. As an EU member state, Croatia also has access to a

wide range of European funding instruments: Horizon Europe, the European Structural and Investment Funds, and programmes linked directly to the European Chips Act all provide

pathways for Croatian companies and institutions to pursue ambitious semiconductor projects in partnership with peers across the continent.

The Semiconductor Market and Croatia's Growing Role

The global semiconductor industry encompasses the design, development, manufacturing, and integration of microchips and electronic components that power virtually every modern device – from smartphones and automobiles to medical instruments and industrial machinery. In today's technology landscape, semiconductors are the foundational layer of digital society, and their strategic importance has only intensified with the rise of artificial intelligence, 5G communications, autonomous vehicles, and advanced manufacturing.

Croatia's universities collectively produce a substantial engineering talent base. The broader electronics and components manufacturing segment (NACE C26) comprised 530 enterprises employing 5,862 workers in 2025 (FINA), while the ICT sector as a whole contributed 4.7% of gross value added in 2024 (CBS). Engineering salaries in Croatia are considerably lower than in Western European countries, reflecting a structural cost advantage for companies considering design-intensive or R&D operations. Croatian engineers are well-represented in international semiconductor and electronics companies, and a number of companies featured in this publication serve global clients across Europe, North America, and Asia.

The companies and research institutions presented in this publication operate across a wide spectrum of semiconductor-related

activities. In advanced materials and components for electronics manufacturing, Applied Ceramics manufactures precision components from technical ceramics, quartz, silicon, and sapphire for leading global semiconductor manufacturers including TSMC, GlobalFoundries, and Infineon; Meliori Polymer Engineering produces ultraclean polymer parts – including 200 and 300 mm plastic wafer frames – for semiconductor foundries worldwide; EcoCortec manufactures patented ESD-safe anti-corrosion packaging films compliant with military and electronics industry standards; and CROAX delivers high-frequency RF and coaxial cable assemblies operating up to 110 GHz for telecommunications, defence, and research. In digital and analogue chip design, Tachyon LABs develops high-voltage wide-bandgap semiconductor devices using Silicon Carbide and Aluminium Gallium Nitride, targeting future sovereign power semiconductor capabilities; Eridan Communications develops all-GaN RF chip designs and FPGA signal-processing software for next-generation 5G radio architecture from its Zagreb R&D centre; and Protostar Labs develops FPGA IP cores and edge AI systems for demanding applications in space, defence, and industrial automation. In assembly, packaging, and testing, Data Link produces professional LED modules and electronic assemblies using high-capacity automated SMD lines capable of processing 25,000-80,000 components per hour; ELMAR electronic delivers custom embedded electronics

for industrial clients; and Diligic provides turn-key electronics manufacturing services including design, assembly, and component procurement, producing around 100,000 electronic modules per year. In end applications, KONČAR – Croatia’s largest net exporter with over 6,300 employees and a century of power engineering expertise – delivers advanced power systems and rail vehicles integrating cutting-edge semiconductor technologies for the energy transition; Byte Lab, Soldered Electronics, and Geolux bring embedded systems, IoT solutions, and microwave radar instruments to global markets; SOLVIS manufactures photovoltaic modules with a production capacity exceeding 300 MW, supplying solar energy solutions to

more than 40 countries across Europe, North Africa, and North America; Orqa designs and manufactures drone systems, FPV controllers, and radio electronics entirely within the EU, exporting to over 50 countries; Gideon develops AI-powered autonomous vehicles for industrial logistics, backed by a strategic investment from the Toyota Industries Corporation; V-ELIN produces precision measurement and control devices; and ALTPRO manufactures SIL 4-certified railway signalling systems deployed in more than 50 countries. Together, these companies illustrate the breadth and depth of Croatia’s semiconductor and electronics ecosystem – from foundry-grade precision components to intelligent end systems deployed on every continent.

Looking Ahead

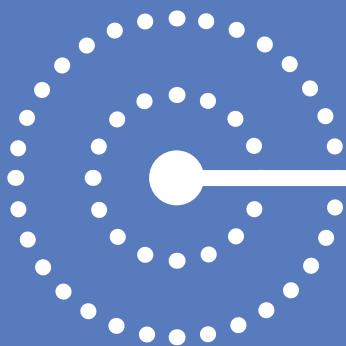
Croatia’s position as an EU member state, combined with Eurozone and Schengen membership, provides a stable and predictable operating environment for semiconductor and electronics companies. Its regulatory framework is fully aligned with European standards, and companies operating in Croatia have access to the EU single market without trade barriers. The Ministry of Economy is responsible for investment facilitation and industrial policy, supporting companies through the investment process and providing access to national and EU funding instruments relevant to the semiconductor and electronics sector.

Croatia’s investment support system for semiconductor and electronics companies is coordinated across multiple partners, each with a defined role in helping investors enter, operate, and expand, namely:

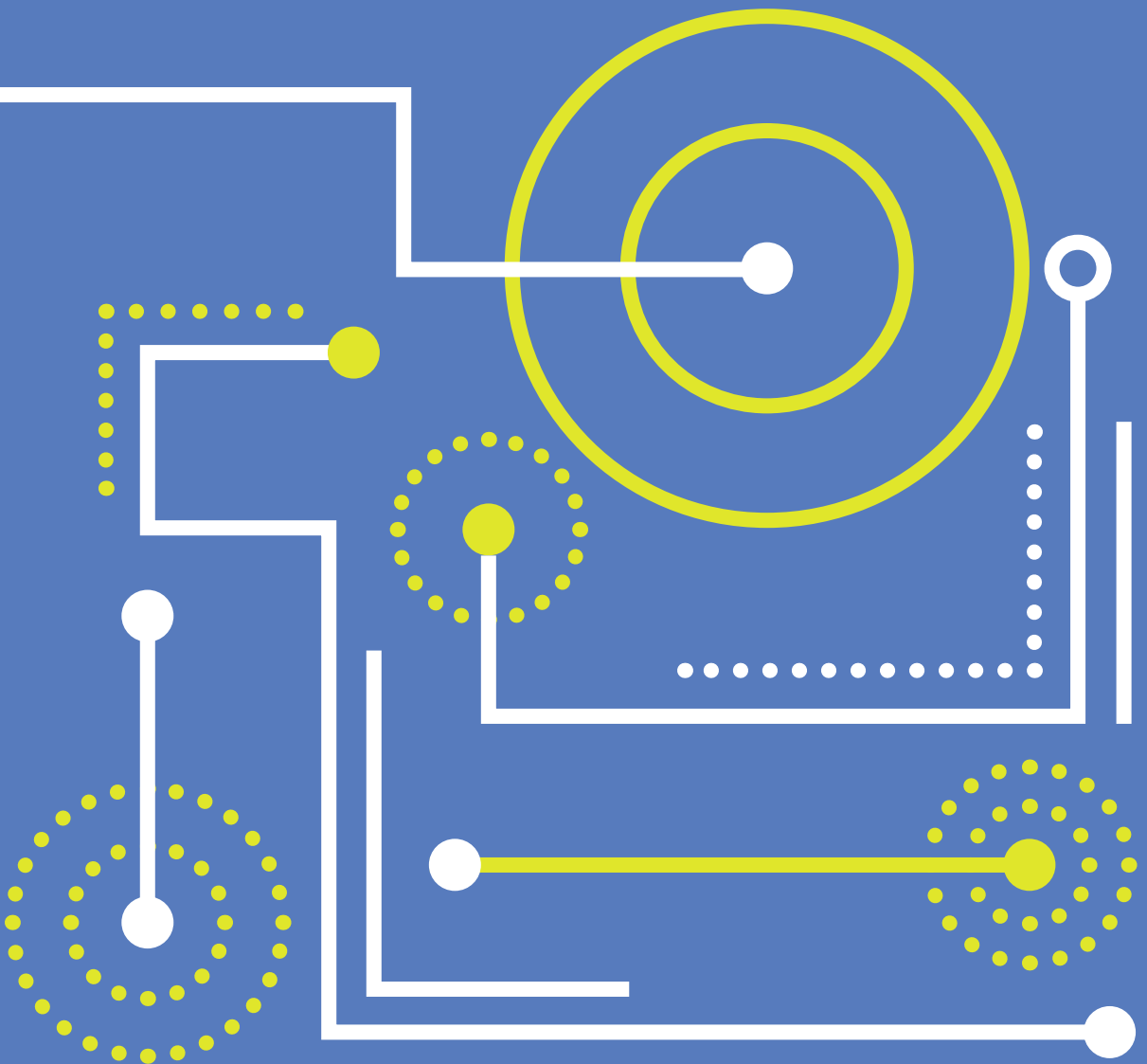
- **EU and national funding:** Croatian companies and research institutions can access Horizon Europe, European Chips Act instruments, the IPCEI on Microelectronics and Communication Technologies, and EU Structural and Investment Funds for semiconductor-related R&D, innovation, and investment activities. CROCCS provides an additional route for SMEs to access European IC design platforms and pilot lines.
- **Investment incentives:** Croatia’s incentive framework includes R&D tax reliefs, grants for job creation and capital investment in strategic sectors, and co-financing schemes administered through the Croatian Agency for SMEs, Innovation and Investments (HAMAG-BICRO) and the Ministry of Economy.

- **Engineering talent:** Croatia's universities in Zagreb, Split, Osijek, and Rijeka offer programmes in electrical engineering, computer science, physics, and related disciplines. CROCCS is developing a dedicated IC design training programme aimed at expanding the number of engineers with chip design skills in analogue, digital, and mixed-signal domains. Engineering labour costs are substantially lower than in Western European countries, which is a relevant factor for design-intensive and R&D-focused operations.
- **Business and regulatory environment:** As an EU, Eurozone, and Schengen member, Croatia operates within a stable legal and regulatory framework fully aligned with European standards. The Ministry of Economy provides administrative support for companies considering investment, including guidance on incentives, permit granting, and available programmes.

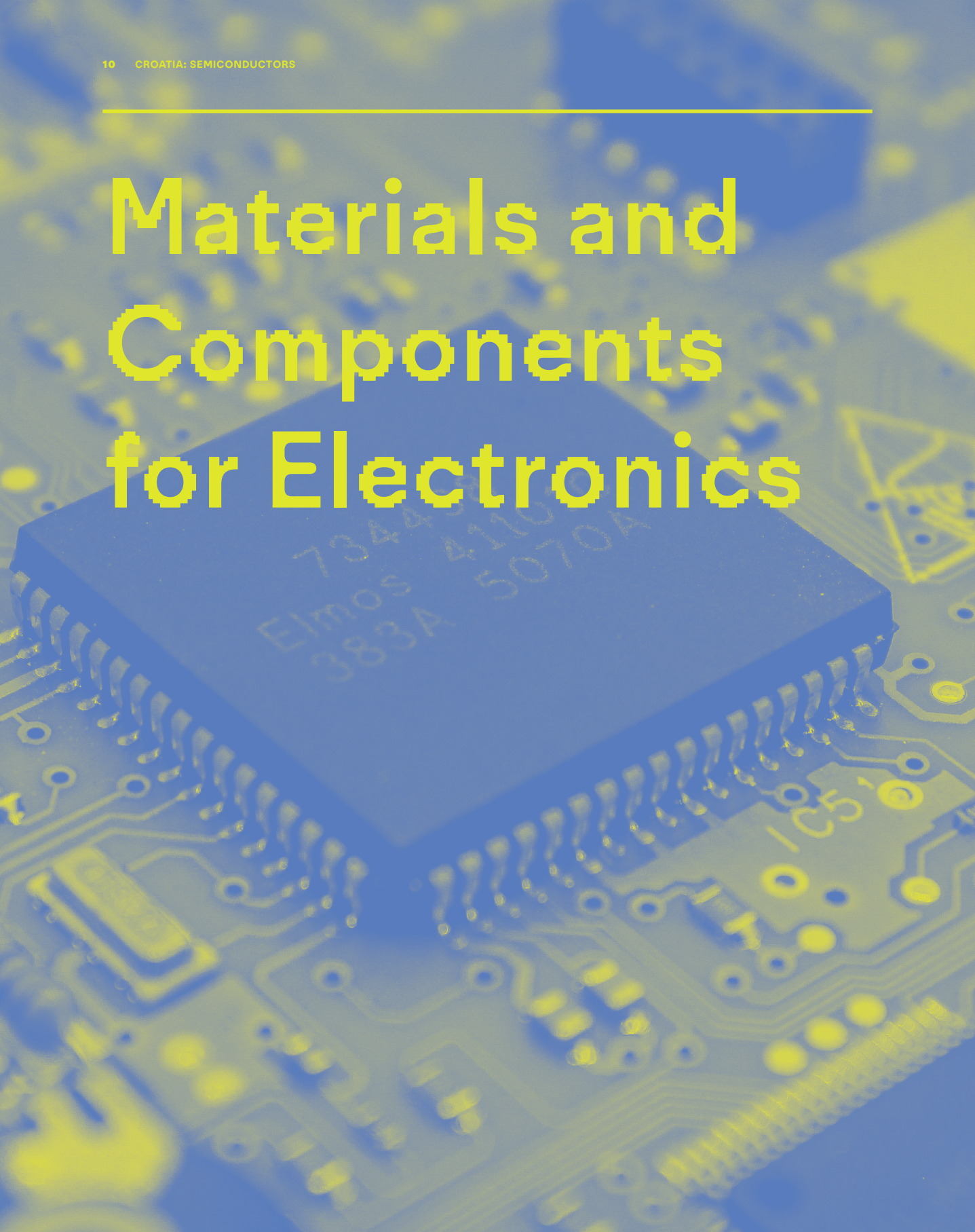
The following sections present an overview of Croatian companies and research institutions active in the semiconductor sector, organised by their position in the semiconductor value chain – from materials and components for electronics manufacturing, through digital and analogue chip design, assembly and testing, to end applications in energy, transport, defence, and industrial automation. The academic and research institutions section covers universities and research organisations that contribute to the sector's talent base and research activities, including CROCCS consortium partners.



Companies



Materials and Components for Electronics



COMPANY NAME

Applied Ceramics

CONTACT

Address Capraška 10
Sisak, Croatia

Website www.appliedceramics.net

Social Media LinkedIn: Applied Ceramics

Primary Contact Vesna Turk, Sales Manager
vesna@apceramics.com
+385 99 808 2495

ABOUT THE COMPANY

Applied Ceramics is a high-tech manufacturing company established in 2005 as a Silicon Valley investment in Croatia. Operating from Sisak, the company is part of the global semiconductor value chain. It specialises in the development and high-precision manufacturing of advanced, custom-engineered components made from technical ceramics, quartz, silicon and sapphire for leading global semiconductor manufacturers.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Equipment & Components for Chip Production
- Semiconductor Components / Modules

BUSINESS MODEL

- Manufacturing
- Equipment/Materials supplier

KEY TECHNOLOGIES / COMPETENCIES

- Semiconductor materials
- Other: Etch, CVD, PVD processes for semiconductor manufacturing; advanced materials engineering; precision machining and surface finishing; high-purity materials processing

TECHNOLOGICAL INNOVATIONS

Development of high-performance components from technical ceramics, quartz and sapphire for semiconductor manufacturing, including advanced material processing, advanced materials engineering and precision engineering for demanding chip production environments.

KEY PRODUCTS

Custom-engineered, high-precision components and consumables made from high-purity technical ceramics, quartz, silicon and sapphire for semiconductor manufacturing equipment, including critical parts such as rings, plates, pins and complex assemblies used in etch, CVD and PVD processes.

KEY TARGET INDUSTRIES

Semiconductor industry (foundries, OEMs and equipment manufacturers), and advanced electronics and high-tech sectors.

EXPORT MARKETS

European Union, United States and Asia, with an established presence in key semiconductor markets including Germany, Italy, Taiwan, Japan and China, supported by a global manufacturing footprint and sales network.

**COLLABORATION WITH ACADEMIA
OR RESEARCH INSTITUTES**

Long-term collaboration with the University of Zagreb (Faculty of Mechanical Engineering and Naval Architecture, Faculty of Chemical Engineering and Technology, Faculty of Metallurgy) and Ruđer Bošković Institute in advanced materials research, development and technology transfer.

AWARDS OR RECOGNITIONS

Recipient of multiple national and international awards, including the Croatian Chamber of Economy Golden Kuna Award for innovation, Lider Invest awards (Best Small Manufacturing Investment and Export Leader), Ron Brown Award for contributions to economic cooperation, EY Entrepreneur of the Year finalist recognition, and other recognitions for innovation and export excellence.

KEY CLIENTS/REFERENCES

Leading global semiconductor companies, including TSMC, GlobalFoundries, STMicroelectronics, Infineon Technologies, X-FAB, Bosch, NXP Semiconductors and Texas Instruments, demonstrating strong integration into the global semiconductor supply chain.

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

Collaboration with international research organisations, including SLAC National Accelerator Laboratory (Stanford University) and CERN, as well as participation in the Croatian Microelectronics and Semiconductor Industry Community (ZaMiP).

STANDARDS/CERTIFICATES

ISO 9001:2015

COMPANY NAME

Meliori Polymer Engineering

CONTACT

Address Dolačka 6, 22000 Šibenik, Croatia
Website www.meliori.hr
Social Media LinkedIn: Meliori Polymer Engineering d.o.o.
Primary Contact Dr Antonia Omazić, CEO
Antonia.omazic@meliori.hr
+385 99 826 7667

ABOUT THE COMPANY

Meliori Polymer Engineering d.o.o. is a European high-tech manufacturing company founded in 2023 and based in Šibenik, Croatia. The company specialises in ultraclean components made from high-performance engineering polymers for the semiconductor industry. Its core competencies include polymer engineering, precision manufacturing, contamination-controlled processing, and cleanroom-compliant cleaning and packaging for high-volume semiconductor applications.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Materials for Chip Production

BUSINESS MODEL

- Manufacturing

KEY TECHNOLOGIES / COMPETENCIES

- Semiconductor materials

TECHNOLOGICAL INNOVATIONS

Meliori Polymer Engineering focuses on ultraclean production of high-engineering polymer parts at high volume. The production process combines precision polymer processing with additional finishing processes, followed by cleanroom-controlled cleaning and packaging for semiconductor-grade quality.

KEY PRODUCTS

High-volume production of 200 & 300 mm plastic wafer frames, including refurbishing.

EXPORT MARKETS

Worldwide

KEY TARGET INDUSTRIES

Wafer foundries & OSAT facilities

**COLLABORATION WITH ACADEMIA
OR RESEARCH INSTITUTES**

Collaboration on various master's degree projects with the University of Zagreb and the University of Split, supported by the IPCEI Microelectronics and Communication Technologies initiative

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

Supported by the IPCEI Microelectronics and Communication Technologies initiative

STANDARDS/CERTIFICATES

ISO 9001 Quality Management System implemented. Manufacturing and contamination control processes aligned with semiconductor industry practices and cleanroom guidelines based on ISO 14644. Production is managed using established quality management and process control methodologies, including SPC, FMEA, FIFO material flow, full traceability, and structured process documentation to support consistent and reliable high-volume manufacturing.

COMPANY NAME

Krempel Croatia

CONTACT

Address Ulica Krešimira Blaževića 17,
35000 Slavonski Brod, Croatia

Website <https://krempel.com/en/company/locations/slavonski-brod>

Social Media LinkedIn: KREMPPEL

Primary Contact Ivan Zgrebec
Director of Operations – Croatia
i.zgrebec@krempel.com
+385 99 162 1324

ABOUT THE COMPANY

Krempel Croatia d.o.o. specialises in cutting electrical-insulation composite materials used across various industrial sectors. The company was founded in Slavonski Brod in 2024 as part of the Krempel Group, which operates 13 locations worldwide. Krempel Croatia employs 53 people. Its production facility covers more than 4,000 m² and houses 20 cutting machines.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- Assembly & Packaging
- Metrology & Inspection & Testing
- Equipment & Components for Chip Production
- Semiconductor Components / Modules
- R&D / Educational Activity / Support Activity

BUSINESS MODEL

- Manufacturing
- Equipment/Materials supplier

KEY TECHNOLOGIES / COMPETENCIES

- Automotive electronics
- Semiconductor materials

TECHNOLOGICAL INNOVATIONS

TRIVOLTHERM® E-Fluid-Safe insulation material, high-temp insulation materials up to thermal class 180, KremGuard epoxy-resin-based prepreg system, KremSol Repair for the repair of PV backsheet laminates, phenolic resin system, VIDAFLEX Fire-sleeve protection for cables, hoses and pipes

KEY TARGET INDUSTRIES

Energy, mobility, industry

KEY CLIENTS/REFERENCES

ABB Group, ANDRITZ HYDRO, Airbus Group, BOSCH, Innomotics GmbH, Iveco S.p.A., GE, MAHLE GmbH, Renault S.A., Rheinmetall AG, Schaeffler Group, Siemens AG, AB SKF, VOITH Group, WEG S.A.

EXPORT MARKETS

Worldwide

STANDARDS/CERTIFICATES

ISO 9001, IATF 16949

COMPANY NAME

EcoCortec

CONTACT

Address Ulica Bele Bartoka 29, 31300
Beli Manastir, Croatia

Website www.ecocortec.hr

Social media LinkedIn: Ana Juraga Oluic
– Cortec® Corporation/
EcoCortec

Primary Contact Dijana Zrinski
General Manager
dijana.zrinski@ecocortec.hr
+385 91 270 5011

ABOUT THE COMPANY

EcoCortec d.o.o., based in Beli Manastir, Croatia, is a manufacturer of bioplastics and advanced anti-corrosion packaging solutions. The company specialises in patented VpCI® films, bags, and papers used to protect metals in demanding industrial and military applications, including ESD-safe films for simultaneous corrosion protection and electrostatic discharge control of sensitive electronic components. Established in 2004 as a subsidiary of the Cortec Corporation, EcoCortec combines extrusion, converting, and printing capabilities with strong sustainability, recycling programmes for used corrosion protection films, and a dedicated ESD product line that meets modern electronics packaging standards.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- Assembly & Packaging
- R&D / Educational Activity / Support

BUSINESS MODEL

- Manufacturing

EXPORT MARKETS

EcoCortec's VpCI and ESD films and bags are exported globally, with key markets in the EU (automotive, metalworking, energy), the United Kingdom, the Middle East, and Asia-Pacific (China, Indonesia, Singapore).

KEY TECHNOLOGIES / COMPETENCIES

- Packaging technologies

KEY TARGET INDUSTRIES

All industries

COLLABORATION WITH ACADEMIA
OR RESEARCH INSTITUTES

The Cortec Corporation collaborates with universities and research bodies through its ISO/IEC 17025 accredited R&D labs in the US and Croatia, supporting joint testing, product development, and corrosion/ESD research projects with academic and industry partners.

TECHNOLOGICAL INNOVATIONS

- VpCI®-126® Film and Bags – Standard blue multi-metal VpCI film and bags for export and storage; one of Cortec's most widely used PE corrosion protection films.
- EcoSonic® VpCI®-125 Static Dissipative Film & Bags- combine the most effective multi-metal corrosion protection with strong static dissipative properties. The film has unique ability to protect sensitive electronic and electrical equipment and conforms to MIL-PRF-81705D standard.
- ElectriCorr VpCI product line - specialised cleaners and coatings designed to protect electrical and electronic equipment from rust and corrosion. They protect sensitive components without altering electrical resistance, conductivity, or magnetic properties.
- VpCI® Emitters (105/111) – Self-adhesive VpCI® emitter cups for protecting enclosed electrical and electronic cabinets
- from corrosion.

STANDARDS/CERTIFICATES

The Cortec Corporation and EcoCortec operate under ISO 9001 and ISO 14001 quality and environmental management systems, with additional ISO 17025 accreditation for testing laboratories. Key VpCI and ESD films comply with REACH/RoHS and meet relevant ASTM, NACE, German TL8135, biodegradability standard ASTM D6400, and military ESD requirements MIL-PRF-81705 for static dissipative performance.

KEY CLIENTS/REFERENCES

As part of the Cortec Corporation, EcoCortec's key clients are global OEMs and tier suppliers in the automotive, heavy machinery, energy, oil & gas, marine, electronics, and construction sectors that require high reliability corrosion and ESD protection in export packaging and long-term preservation projects.

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

EcoCortec has participated in the following projects as an industrial partner: the European BIOCOMPACT project (Interreg CENTRAL EUROPE, backed by the ERDF) focusing on biodegradable paper-plastic packaging and circular economy models for biocomposite packaging, and the Marine Clean project for removing existing marine debris and preventing new litter from entering the marine environment.

AWARDS OR RECOGNITIONS

EcoCortec has received the 2024 Lider Invest award for best medium-sized production investment in Croatia, as well as the 2025 German Packaging Award in the Sustainability – Overall Concept category for its circular VpCI film recycling system developed with its partner Jakob Schober GmbH.

Digital and Analogue Design

COMPANY NAME

Tachyon LABs

CONTACT

Address Perivoj Gospe od zdravlja 1,
23000 Zadar, Croatia

Primary Contact Goran Medić, CEO
goran@tachyonlabs.eu
+385 98 330 974

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Metrology & Inspection & Testing
- IC Design
- Design Tools (EDA/CAD) / Software Tools
- Materials for Chip Production
- Equipment & Components for Chip Production
- Chip Manufacturing / Fabrication
- Semiconductor Components / Modules
- R&D / Educational Activity / Support Activity
- Other: Ecosystem development within Croatia (university, defence, end-user companies)

KEY TECHNOLOGIES / COMPETENCIES

- Analogue design
- Embedded systems
- Sensor technologies
- Power electronics
- RF design
- Automotive electronics
- Photonics
- Semiconductor materials
- Packaging technologies
- Other: Deep technology, intellectual property

ABOUT THE COMPANY

Tachyon LABs d.o.o. develops advanced power semiconductor technologies using wide-bandgap materials including silicon carbide (SiC) and aluminium gallium nitride (AlGaN). The company designs high-voltage semiconductor devices and intellectual property for energy, industrial and aerospace systems. In Phase 1, the entity operates as a fabless company leveraging commercial semiconductor foundries for rapid development and reduced risk. In Phase 2, the company focuses on developing sovereign integrated power semiconductor foundry capabilities in Croatia.

BUSINESS MODEL

- Manufacturing
- Design services
- IP provider
- Validation/Verification services
- Software / EDA tools
- Fabless
- Other: Future full semiconductor foundry advance power electronics medium volume

TECHNOLOGICAL INNOVATIONS

Development of high-voltage wide-bandgap semiconductor devices using silicon carbide (SiC) and aluminium gallium nitride (AlGaN) materials. Advanced transistor and diode architectures enable higher efficiency, higher temperature operation and reduced losses. Radiation-hardened variants available for high performance aerospace applications.

KEY PRODUCTS

- High-Voltage Power Transistors (1.2-3.3 kV and above): Wide-bandgap SiC and AlGaN power MOSFET devices for high-efficiency power conversion. Available as wafer-level devices, bare die, or packaged components.
- High-Voltage Power Diodes (1.2-3.3 kV and above): Schottky and fast-recovery diodes designed for high-efficiency switching applications in industrial and energy systems.
- Discrete Power Semiconductor Devices: Custom and standard power devices supplied as full wafers, bare die, or packaged components.
- Semiconductor Device Design & TCAD Simulation: Advanced physics-based modelling, device optimisation and process simulation using semiconductor TCAD tools.
- High-Voltage Device Test & Characterisation: Parametric testing, reliability evaluation and yield analysis for high-voltage semiconductor devices.
- Radiation-Hard Power Electronics Development: Device architectures designed for radiation-tolerant and harsh-environment operation.
- Intellectual Property Licensing: Licensing of proprietary semiconductor device architectures and fabrication processes to foundries and integrated device manufacturers (IDMs).
- Prototype Device Development: Design and fabrication support for next-generation semiconductor power devices.
- Semiconductor Process & Yield Optimisation: Process design, device scaling and yield improvement methodologies.
- Technology Transfer to Manufacturing Foundries: Support for transferring semiconductor device technologies into commercial fabrication facilities.

KEY TARGET INDUSTRIES

- Aerospace & Defence: Radiation-tolerant and high-reliability power semiconductor devices for satellite systems, avionics, radar, and defence electronics.
- Energy Transmission & Generation: High-voltage power electronics for grid infrastructure, renewable energy systems, HVDC transmission, and power conversion equipment.
- Industrial Automation: Power semiconductor devices for motor drives, robotics, factory automation systems, and high-efficiency industrial power supplies.
- Rail & Traction Power Electronics: High-voltage switching devices for railway traction systems, locomotive power converters, and rail infrastructure electrification.
- Harsh Environment & Radiation-Hardened Electronics: Power devices designed for extreme temperature, radiation, and high-reliability environments including space, defence, and critical infrastructure.

EXPORT MARKETS

European Union, United Kingdom, United States, Australia, and Asia-Pacific semiconductor and power electronics markets.

COLLABORATION WITH ACADEMIA OR RESEARCH INSTITUTES

Adelaide University, University of Zadar, University of Zagreb

KEY CLIENTS/REFERENCES

Industry partners / technology ecosystem references:

- Veeco Instruments Inc. (USA)
- AIXTRON SE
- Adelaide University

COMPANY NAME

ams-OSRAM AG (company group)

OSRAM d.o.o. (Zagreb office)

CONTACT

Address Global Headquarters:
Tobelbader Strasse 30, 8141
Premstätten, Austria
Co-Headquarters: Marcel-
Breuer-Strasse 4, 80807
Munich, Germany
Zagreb office: Višnjevac 3,
10000 Zagreb, Croatia

Website <https://ams-osram.com/>
<https://www.osram.hr/>

Social Media LinkedIn: ams OSRAM
X: ams OSRAM
Facebook: ams OSRAM
YouTube: amsOSRAMofficial
Instagram: amsosram

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Senior Staff Engineer
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+385 99 850 1825

ABOUT THE COMPANY

ams-OSRAM AG is a global leader in intelligent light and sensor solutions, serving automotive, industrial, medical, and consumer markets. Founded in 1981 and operating as ams-OSRAM since 2021, the company combines semiconductor design, optoelectronics, and lighting expertise to deliver differentiated photonic technologies.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- Assembly & Packaging
- IC Design
- Chip Manufacturing / Fabrication
- Semiconductor Components / Modules
- R&D / Educational Activity / Support Activity

BUSINESS MODEL

- Manufacturing
- System integration
- Design services
- IP provider

KEY TECHNOLOGIES / COMPETENCIES

- Digital design
- Analogue design
- Embedded systems
- Sensor technologies
- Automotive electronics
- Biomedical electronics
- Photonics
- Semiconductor materials
- Packaging technologies

TECHNOLOGICAL INNOVATIONS

ams-OSRAM pioneers digital photonics, combining high-performance LEDs, lasers (VCSELs/EELs), advanced optical sensors, and mixed-signal ICs to enable LiDAR, adaptive automotive lighting, 3D sensing, and medical imaging solutions.

KEY TARGET INDUSTRIES

- Automotive & mobility
- Manufacturing & industrial automation
- Medical & healthcare
- Consumer electronics
- IoT & smart living
- Robotics & autonomous systems
- Energy efficiency & sustainability
- Computing & visualisation

EXPORT MARKETS

Europe (EU, UK), North America (United States, Canada), Asia-Pacific (China, Japan, South Korea, Taiwan, Southeast Asia), Middle East, Africa, Latin America (Brazil, Mexico, Argentina)

KEY PRODUCTS / SERVICES

- Automotive LEDs (signal & forward lighting): high-reliability LEDs for headlights, signalling, and interior lighting, produced at billions of units annually for global OEMs.
- VCSEL & EEL lasers, infrared and visible lasers enabling LiDAR, 3D sensing, and illumination, shipped at hundreds of millions of devices per year across automotive and consumer markets.
- CMOS optical sensors, ambient light, proximity, spectral, and image sensors for mobile, automotive, and industrial use; high-volume semiconductor production.
- LiDAR light sources & modules, automotive-grade laser emitters and optical components supporting ADAS and autonomous driving systems; automotive-scale production.
- Emitter driver & analog/mixed-signal ICs: power management, LED drivers, and sensor interface ICs enabling complete photonic systems; shipped in millions annually.
- Medical & industrial imaging components: photon-counting sensors, IR emitters, and optical components used in diagnostics, monitoring, and automation; specialty high-value volumes.
- Automotive & specialty lamps, halogen, HID, and LED retrofit lamps for OEM and aftermarket channels; tens of millions of units annually worldwide.
- Optical modules & micro-optics, integrated light and sensor modules with advanced packaging and optics; supports custom and series production.
- Horticulture & UV-C lighting solutions, LEDs and systems for plant growth, disinfection, and purification; industrial-scale deployment globally.
- Application-specific solutions (ASICs & systems): customised photonic and sensing solutions for automotive, industrial, and medical customers; project-driven, long-term production programmes.

KEY CLIENTS/REFERENCES

- Automotive Manufacturers (OEMs): Supplying lighting and sensing technologies to global vehicle manufacturers across passenger and commercial vehicle platforms.
- Automotive Tier-1 System Suppliers: Provides components and solutions supporting advanced lighting, sensing, and perception systems integrated into vehicle platforms.
- Industrial Equipment Manufacturers: Serves manufacturers of automation, machine vision, safety, and control equipment with optical sensors, emitters, and integrated solutions.
- Medical Technology Companies: Supplies photonic components used in medical imaging, diagnostics, monitoring, and therapeutic equipment.
- Consumer Electronics Manufacturers: Provides optical sensors, light emitters, and mixed-signal semiconductor solutions for high-volume consumer and wearable devices.
- Infrastructure, Energy & Specialty Application Providers: Supports partners in intelligent lighting, smart infrastructure, horticulture, and disinfection applications.
- Global Distributors & System Integrators: Works with authorised distributors and technology integrators to serve regional and international markets.

COLLABORATION WITH ACADEMIA OR RESEARCH INSTITUTES

- Universities and academic institutions: Collaborates with universities on applied research, joint development activities, and student engagement programmes, including but not limited to: Faculty of Electrical Engineering and Computing (FER), University of Zagreb and Graz University of Technology (TU Graz).
- Public research institutes and technology centres: Engages with national and international research centres on pre-competitive research, technology development, and industrial innovation initiatives.
- European Union & publicly funded R&D programmes: Participates in EU-level and national public research programmes related to semiconductors, photonics, advanced manufacturing, sustainability, and digital technologies.
- Joint research and development projects: Conducts collaborative R&D projects with academic and research partners in areas such as optoelectronics, sensing technologies, automotive applications, and medical systems.
- Talent development & knowledge transfer: Supports internships, thesis projects, doctoral and industrial PhD programmes, and joint supervision schemes to enable knowledge transfer between academia and industry.

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

- European Union research & innovation programmes: Participates in EU-funded research and innovation initiatives, including multi-partner projects under frameworks such as Horizon Europe and its predecessor programmes, addressing photonics, semiconductor technologies, mobility, sustainability, and digital transformation.
- European Chips Act-related initiatives: Is involved in activities aligned with the objectives of the European Chips Act, contributing to strengthening Europe's semiconductor ecosystem through advanced manufacturing, technology development, and skills initiatives, subject to applicable public funding schemes.
- IPCEI (Important Projects of Common

European Interest): Engages in or supports collaborative initiatives consistent with IPCEI objectives, particularly in the semiconductor and microelectronics domains, in cooperation with European industry partners and public authorities.

- International and cross-border R&D collaborations: Takes part in international research collaborations and consortia

with industrial, academic, and research partners, supporting cross-border innovation and technology transfer.

- Public-private partnerships: Contributes to public-private research and innovation efforts aimed at advancing strategic technologies, improving industrial resilience, and fostering sustainable economic development.

STANDARDS/CERTIFICATES

- ISO 9001 – Quality management systems
- IATF 16949 – Automotive quality management systems
- ISO 14001 – Environmental management systems
- ISO 45001 – Occupational health and safety management
- ISO 50001 – Energy management systems (selected sites)
- AEC-Q100 / AEC-Q102 – Qualification standards for automotive-grade semiconductor components
- IEC / EN Standards – Compliance with applicable international and European electrical and photonics standards
- IPC Standards – Electronics manufacturing, assembly, and reliability standards (where applicable)
- RoHS & REACH Compliance – Conformance with EU directives on hazardous substances and chemical safety
- Automotive OEM-Specific Certifications – Site and product qualifications aligned with individual customer requirements

AWARDS OR RECOGNITIONS

- German Future Award (Deutscher Zukunftspreis) – Jointly awarded to ams-OSRAM and research partners for breakthrough digital light and micro-LED headlamp technology, recognised at the national level for outstanding technological innovation.
- German Innovation Awards (multiple years) – Recognised repeatedly for innovation in automotive lighting, consumer lighting, and mobility technologies, including awards in both B2B and B2C categories.
- German Design Award – Honoured for excellence in product and lighting design, particularly in automotive LED solutions.
- OVE Innovation Award (Austria) – Awarded by the Austrian Electrotechnical Association for advanced photon-counting and medical imaging technologies.
- Motortec Innovation Award – Recognised for innovation in automotive lighting components at an international automotive technology exhibition.
- Industry & customer recognition awards – Receives recurring awards from industry partners and customers for quality, delivery performance, and supply-chain excellence in automotive and consumer electronics markets.

COMPANY NAME

Eridan Communications

CONTACT

Address Savska cesta 144A, 10000
Zagreb, Croatia

Website <https://eridan.io/>

Social Media YouTube: eridanhq
LinkedIn: Eridan
X: EridanHQ

Primary Contact Dubravko Babić
Managing Director
dbabic@eridan.io
+385 99 261 3000

ABOUT THE COMPANY

Founded in Zagreb in 2019, Eridan Communications d.o.o. is a wholly owned subsidiary of the start-up company Eridan Communications, Inc. headquartered in Santa Clara, California, USA, and founded in 2013. Eridan Communications, Inc. produces 5G radios with original radiofrequency (RF) transmitter architecture. All gallium-nitride RF-chip designs, signal-processing FPGA software, and user interface software for Eridan Communications, Inc. products are being developed by Eridan Communications d.o.o.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Metrology & Inspection & Testing
- IC Design
- R&D / Educational Activity / Support Activity

BUSINESS MODEL

- Design services
- IP provider
- Fabless

KEY TECHNOLOGIES / COMPETENCIES

- Digital design
- Analogue design
- Embedded systems
- Power electronics
- RF design

TECHNOLOGICAL INNOVATIONS

At the heart of the company's innovation is a breakthrough Switch-Mode Direct Polar transmitter: a digitally controlled, ultra-efficient design that removes the traditional linear amplifier.

KEY PRODUCTS

- Switch-Mode Direct Polar transmitter
- Ultra-Clean Signal™ Eridan radio

KEY TARGET INDUSTRIES

Telecom, aerospace & defence

KEY CLIENTS/REFERENCES

- DARPA, U.S. Department of Defense, NTIA
- NVIDIA Corporation, GlobalFoundries Inc., Verizon Communications Inc., Rakuten Group, Inc., SynaXG, Accelleran SA

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

National Telecommunications and Information Administration (NTIA) – Public Wireless Supply Chain Innovation Fund for radio unit (RU) commercialisation

COLLABORATION WITH ACADEMIA OR RESEARCH INSTITUTES

University of Zagreb, Faculty of Electrical Engineering and Computing

EXPORT MARKETS

Global

COMPANY NAME

Protostar Labs

CONTACT

Address Vijenac Salomona Henricha
Gutmanna 4B, 31551 Belišće,
Croatia

Website <https://protostar.ai/>

Social Media LinkedIn: Protostar Labs
Facebook: Protostar Labs

Primary Contact Filip Novoselnik
CEO
filip@protostar.ai
+385 99 232 1648

ABOUT THE COMPANY

Protostar Labs d.o.o. is a Croatian R&D company founded in 2019, specialising in edge AI, embedded vision, FPGA design, and custom cameras and optical payloads for space, defence, and other high-reliability applications. They provide end-to-end engineering – from hardware design and embedded software to AI/ML model deployment and FPGA development – delivering deterministic, low-latency intelligent systems for the most demanding environments.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- Design Tools (EDA/CAD) / Software Tools

BUSINESS MODEL

- System integration
- Design services
- IP provider
- Software / EDA tools

KEY TECHNOLOGIES / COMPETENCIES

- Digital design
- Analogue design
- Embedded systems

KEY TARGET INDUSTRIES

Space, aerospace & defence, industrial, robotics

TECHNOLOGICAL INNOVATIONS

Protostar Labs has developed ProtoSDK for rapid AI/ML deployment onto FPGA systems, a multispectral camera platform, and specialised Light Pollution Characterisation Module (LPCM) and Single Pixel Detector (SPD) analyser solutions for low-latency embedded vision and sensing.

EXPORT MARKETS

Europe and the United States

KEY PRODUCTS / SERVICES

- Data Processing Unit (DPU) – Onboard processing platform for space and high-reliability applications, supporting AI inference, sensor integration, and low-latency data processing.
- ProtoSDK – Software stack for rapid deployment of AI/ML models onto FPGA-based and embedded systems.
- FPGA IP Cores – Custom IP blocks for image processing, sensor integration, data movement, and hardware acceleration.
- Custom PCB Design – Design and development of high-reliability PCBs for embedded vision, sensing, and computer systems.
- Camera Payloads – Custom visible, thermal, multispectral, and mission-specific camera solutions.
- Embedded AI Systems – End-to-end edge vision systems optimised for low SWaP and real-time inference.
- R&D Services – Applied research, prototyping, and technology development for space, defence, and industrial clients.

KEY CLIENTS/REFERENCES

European Space Agency, Kolektor, Vindija d.d., Vegvisir, Fraunhofer Institute, INA d.d., KISPE Ltd

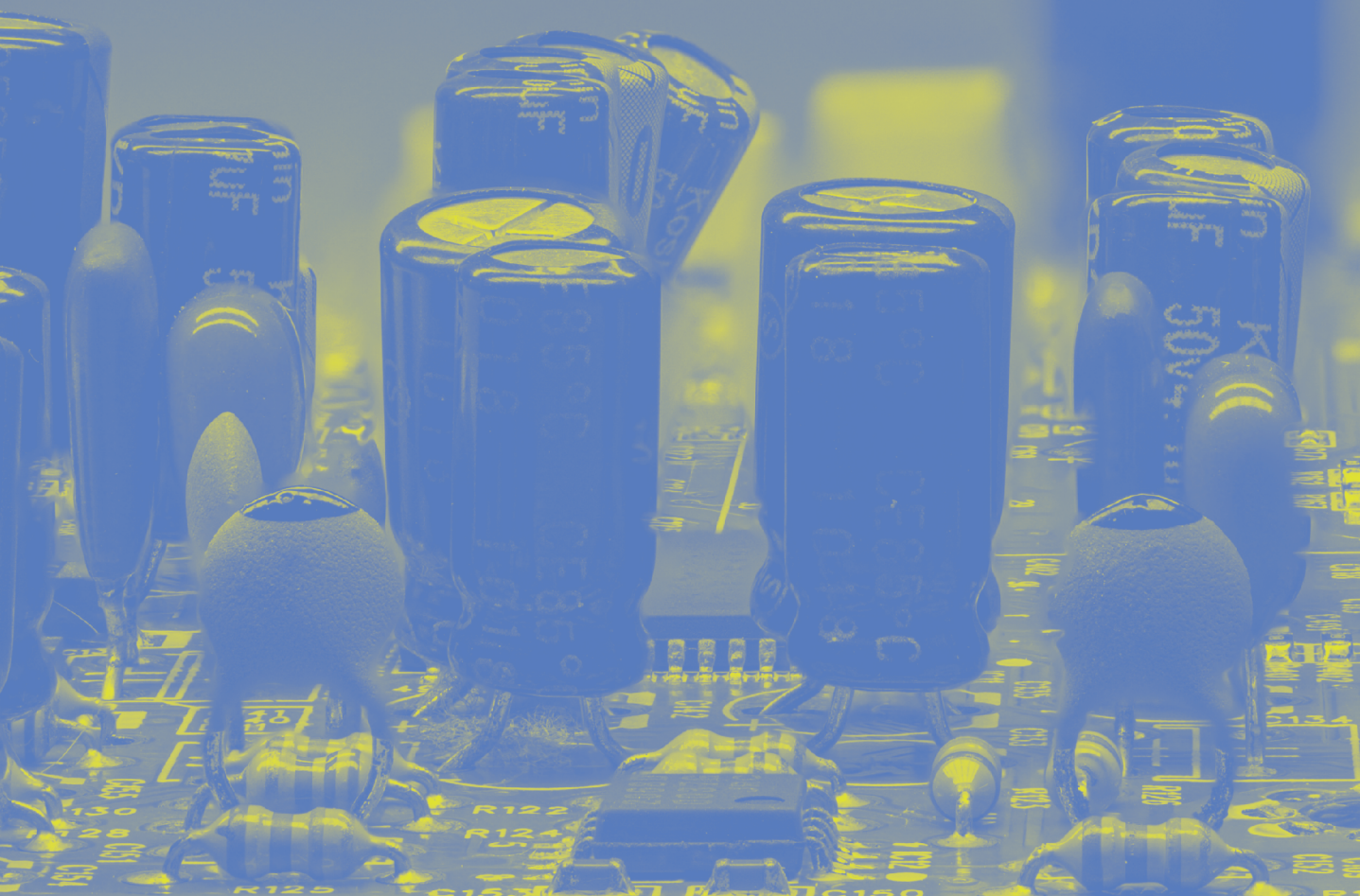
COLLABORATION WITH ACADEMIA OR RESEARCH INSTITUTES

Faculty of Electrical Engineering and Computing, University of Zagreb (FER); Faculty of Electrical Engineering, Computer Science and Information Technology Osijek, Josip Juraj Strossmayer University of Osijek (FERIT); University of New Mexico (UNM); University of Massachusetts Lowell (UML); European Union-funded research and innovation projects.

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

Horizon Europe; European Space Agency (ESA) projects; EU co-funded R&D projects (e.g. SKORPI); collaborative projects with academic partners (FER).

Assembly, Packaging & Testing



COMPANY NAME

Data Link

CONTACT

Address Ulica Blajburških žrtava 16,
43000 Bjelovar, Croatia

Website <https://datal.com/>

Social Media LinkedIn: Data Link Bjelovar
Facebook: DATA LINK d.o.o.

Primary Contact Rinalda Petani Pažin, Director
rinalda.petani-pazin@datal.com
Siniša Sudarević
Sales Representative /
Production & Quality
Control Expert
sinisa.sudarevic@datal.com

ABOUT THE COMPANY

Data Link Ltd. was established in 1991 with its head office in Bjelovar. In recent years, the company has been focusing on the development and production of professional LED lighting, perfecting its products and production technology, software solutions, and LED light fixture technology. Using two fully automated high-capacity SMD lines, it is able to produce a large series of LED modules with two soldering processes: the standard Reflow technique and the special Vapour Phase soldering procedure in strictly controlled temperature conditions. Data Link can produce linear LED modules up to 1200 mm in length, and both lines' capacity exceeds 25,000 – 80,000 components per hour. It offers production capacities of various electronic assemblies without compromising quality.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products

BUSINESS MODEL

- Manufacturing
- System integration

KEY TECHNOLOGIES / COMPETENCIES

- Power electronics
- Automotive electronics

KEY PRODUCTS / SERVICES

- C3V/C2V – 3,000,000 pcs per year, for automotive
- FED – 300 pcs
- Gate – 7,000 pcs
- Logic – 7,000 pcs
- PCB module for luminaries – 5,000-10,000 pcs per year
- EMS (Electronics Manufacturing Services)

TECHNOLOGICAL INNOVATIONS

- PCB development and assembly
- Optical inspection, safe and reliable component storage
- Traceability of installed components

KEY TARGET INDUSTRIES

- Automotive industry
- Consumer electronics
- LED lighting
- Aerospace industry

EXPORT MARKETS

European Union, Serbia, Montenegro, the
Bahamas, United Arab Emirates, Bahrain

KEY CLIENTS/REFERENCES

SELK d.d., EPCOS AG, TDK, BOURNS, Inc.,
KING ITC d.o.o.

**COLLABORATION WITH ACADEMIA OR RESEARCH
INSTITUTES**

Bjelovar University of Applied Sciences, Đurđevac
Vocational School

STANDARDS/CERTIFICATES

ISO 9001, IPC A610, IPC ESD, FIDI20ATEXQ001

COMPANY NAME

CROAX

CONTACT

Address Industrijska ulica 23, 35400
Nova Gradiška, Croatia

Website www.croax.hr

Primary Contact Boris Numanović
Managing Director
info@croax.hr
+385 99 400 1515

ABOUT THE COMPANY

CROAX d.o.o. is a Croatian manufacturing company established in 2023, specialising in RF and high-frequency cable assemblies, RF connectors, and customised cable solutions up to 110 GHz. The company delivers highly reliable solutions for communications, medical, defence, and industrial applications. CROAX operates in partnership with the German company elspec GmbH, further strengthening its technological capabilities and international presence.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- Assembly & Packaging
- Metrology & Inspection & Testing
- Semiconductor Components / Modules

BUSINESS MODEL

- Manufacturing
- System integration
- Equipment/Materials supplier

KEY TECHNOLOGIES / COMPETENCIES

- Sensor technologies
- Power electronics
- RF design
- Other: High-frequency coaxial cable assemblies (up to 110 GHz), cryogenic coaxial systems

TECHNOLOGICAL INNOVATIONS

Development of high-frequency RF cable assemblies up to 110 GHz, including cryogenic coaxial solutions and customised high-precision test and measurement systems for demanding industrial and defence applications.

KEY PRODUCTS / SERVICES

- RF coaxial cable assemblies (up to 110 GHz)
- High-frequency RF connectors
- Cryogenic coaxial cables
- Test & measurement cable solutions
- Military-grade cable assemblies
- Medical cable assemblies
- High-reliability data cables
- Custom harness systems
- Customised high-frequency solutions
- Design and development of specialised RF systems

Production is based on customised series and project-based delivery according to client requirements.

KEY TARGET INDUSTRIES

Telecommunications, the semiconductor industry, defence and security, medical technology, industrial automation, test and measurement equipment, research laboratories

KEY CLIENTS/REFERENCES

Industrial and technology partners in telecommunications, defence, medical equipment, and laboratory measurement sectors, including the Elspec Group and the DESY Research Centre.

COLLABORATION WITH ACADEMIA OR RESEARCH INSTITUTES

Project-based and development cooperation with technical and research partners in RF technologies and high-frequency systems, including the DESY Research Centre.

EXPORT MARKETS

European Union

STANDARDS/CERTIFICATES

ISO 9001:2015 – Quality Management System

COMPANY NAME

ELMAR electronic

CONTACT

Address Kopilica 5, 21000 Split, Croatia
Website www.elmar-el.hr
Primary Contact Goran Radan, Director
elmar@elmar-el.hr
 +385 21 323 670

ABOUT THE COMPANY

ELMAR electronic d.o.o., based in Split, Croatia, develops and produces specialised electronic and embedded solutions for industrial and semiconductor-related applications. The company focuses on hardware development, embedded systems, and electronic modules for professional equipment. It was established in 1980.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- Assembly & Packaging
- Metrology & Inspection & Testing
- IC Design
- Semiconductor Components / Modules
- R&D / Educational Activity / Support Activity

TECHNOLOGICAL INNOVATIONS

Development of specialised electronic modules and embedded control systems for industrial and semiconductor-related equipment.

BUSINESS MODEL

- Manufacturing
- System integration
- Design services

KEY PRODUCTS / SERVICES

- Embedded control modules – custom electronics for industrial systems
- Embedded firmware development – software for microcontrollers and digital systems
- Electronic design services – schematic, PCB design and prototyping
- Industrial electronic modules – series production
- Testing and validation of electronic systems

KEY TECHNOLOGIES / COMPETENCIES

- Digital design
- Analogue design
- Embedded systems
- Sensor technologies
- Power electronics
- RF design
- Automotive electronics

KEY TARGET INDUSTRIES

Industrial electronics, semiconductor equipment, automation, IoT devices, measurement and control systems.

EXPORT MARKETS

Europe, Southern and Western America, Australia

COLLABORATION WITH ACADEMIA OR RESEARCH INSTITUTES

Collaboration with Croatian technical universities and engineering partners.

KEY CLIENTS/REFERENCES

Industrial partners and equipment manufacturers (NDA projects).

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

Participation in EU-funded innovation and technology initiatives when applicable.

COMPANY NAME

Dilogic

CONTACT

Address RZ Rakitovec 510, 10410
Rakitovec, Croatia

Website www.dilogic.hr

Primary Contact Dejan Đurđenić, CEO
dejan@dilogic.hr
+385 98 357 619

ABOUT THE COMPANY

Dilogic d.o.o. was founded in 1994 as an engineering design bureau, and has since evolved into a respectable EMS company, integrating design, manufacturing and component procurement services and offering customers “turn-key” solutions.

KEY TECHNOLOGIES / COMPETENCIES

- Digital design
- Analogue design
- Embedded systems
- Sensor technologies
- Power electronics

KEY PRODUCTS / SERVICES

Dilogic produces around 100,000 pcs of various electronic modules per year.

POSITION IN SEMICONDUCTOR

VALUE CHAIN

- Applications / End Products

KEY TARGET INDUSTRIES

Industrial automation

BUSINESS MODEL

- Manufacturing
- System integration
- Design services
- IP provider

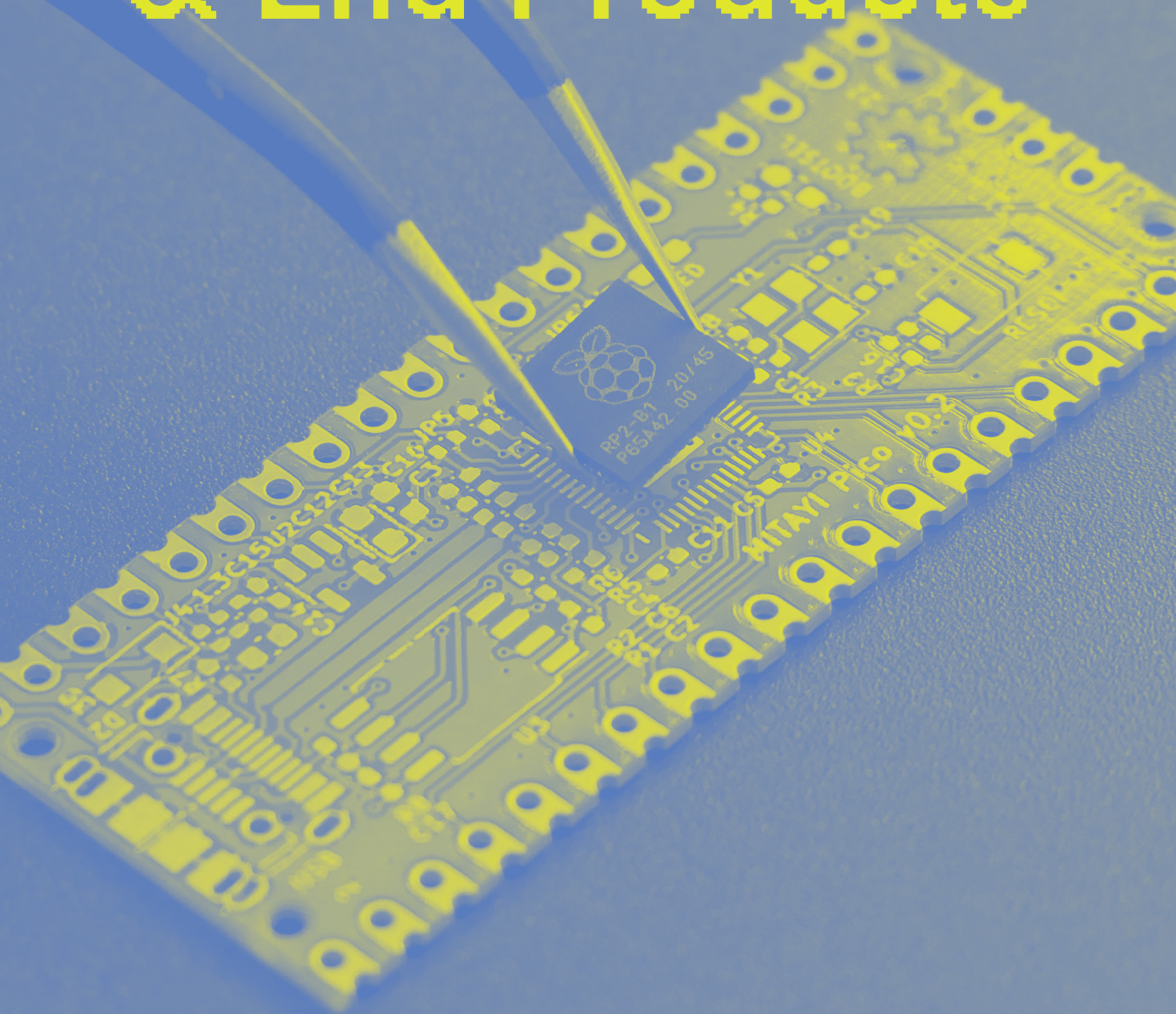
EXPORT MARKETS

European Union, Switzerland, United Kingdom

STANDARDS/CERTIFICATES

ISO 9001, ISO14001, ISO27001, ISO45001,
IPC-A-610

Applications & End Products



COMPANY NAME

KONČAR

CONTACT

Address Fallerovo šetalište 22, 10000 Zagreb, Croatia

Website www.koncar.hr/en

Social Media LinkedIn: KONČAR Group
YouTube: @KONČARGroup

Primary Contact Fran Barbarić
Corporate Strategy
Senior Associate
fran.barbaric@koncar.hr
+385 99 160 0050

ABOUT THE COMPANY

Established in 1921, KONČAR d.d. is Croatia's largest net exporter and a regional leader in power engineering and rail vehicle manufacturing. With 6,300+ employees, the company combines century-long expertise, advanced engineering, and innovation to deliver cutting-edge solutions for the energy transition, decarbonisation, and sustainable infrastructure.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- Metrology & Inspection & Testing
- R&D / Educational Activity / Support Activity

BUSINESS MODEL

- System integration
- Validation/Verification services

KEY TECHNOLOGIES / COMPETENCIES

- Digital design
- Analogue design
- Embedded systems
- Power electronics
- RF design

TECHNOLOGICAL INNOVATIONS

Advanced power conversion solutions for the railway industry, renewable energy and battery storage applications, including high-efficiency converters, grid interfaces and customised power electronics for demanding energy and transport systems.

KEY TARGET INDUSTRIES

Railway and traction, renewable energy, battery energy storage systems, hydropower, grid-connected power electronics, and data centre power infrastructure.

EXPORT MARKETS

Railway: Croatia, Latvia, India, Japan and the United Kingdom
Energy and renewables: Turkey, Morocco, Bulgaria, Slovenia, Ivory Coast and the United Kingdom

KEY PRODUCTS / SERVICES

Power converters and power electronics solutions for:

- TMK2400/2500 trams – traction and auxiliary power converters
- BEMV/BMV battery trains – traction and auxiliary power converters
- KonCharge train charger – charging system for BEMV/BMV battery trains
- Centralised inverter for photovoltaic systems VIS
- Battery Energy Storage System (BESS) for energy storage at the VIS Solar Power Plant
- Frequency converter for the submersible generator at Otočac Small Hydropower Plant
- HPR – high power rack for data centres

KEY CLIENTS/REFERENCES

- Croatian Railways (Hrvatske željeznice), Zagreb Electric Tram (ZET)
- Indian Railways, Hitachi, Ltd., Turbo Power Systems Ltd
- Yeniköy Kemerköy Elektrik Üretim ve Ticaret A.Ş. (owned by Limak Enerji and IC İnşaat Enerji)
- Soma Termik Santral Elektrik Üretim A.Ş. (owned by Anadolu Birlik Holding A.Ş.)
- Office National de l'Électricité et de l'Eau Potable – Branche Electricité (ONEE)
- Natsionalna Električeska Kompania EAD (NEK EAD)
- Valmet / GE; end user Ivoire Hydro Energy – HE (Singrobo-Ahouaty Hydropower Project)
- Dravske elektrarne Maribor / HESS Excitation & Engineering Services Ltd

COLLABORATION WITH ACADEMIA OR RESEARCH INSTITUTES

- University of Zagreb, Faculty of Electrical Engineering and Computing (FER)
- University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture (FESB)
- Silicon Austria Labs (SAL)
- Graz University of Technology (TU Graz)

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

- Croatian RDI grant projects – increasing the development of new products and services resulting from research and development activities
- European project – GreenChips-EDU
- CROCCS – Croatian Competence Centre for Semiconductors

STANDARDS/CERTIFICATES

- ISO 9001, 10002, 14001, 18295-1, 20000-1, 22301, 37001,
- 45001, 50001
- ISO/IEC 17020, 17025, 17065, 27001
- SCCP
- EMAS
- IPC 7711, IPC-A-610, IPC-A-600, IPC CIS+

COMPANY NAME

Geolux

CONTACT

Address Ulica Ljudevita Gaja 62, 10430 Samobor, Croatia

Website www.geolux-radars.com

Social Media LinkedIn: Geolux - Hydromet instruments and early warning systems

Primary Contact Tomislav Grubeša, CTO
Tomislav.grubesa@geolux.hr
+385 1 670 1241

ABOUT THE COMPANY

Geolux d.o.o. specialises in designing robust, reliable, and precise instruments, built to perform in the harshest environments. From flood early warning systems to irrigation control, hydrological monitoring, sewage management, and hydropower control, Geolux provides innovative solutions that empower effective water management, trusted around the globe. Geolux was founded in 2007 in Zagreb, Croatia.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- R&D / Educational Activity / Support Activity

BUSINESS MODEL

- Manufacturing
- System integration

KEY TECHNOLOGIES / COMPETENCIES

- Embedded systems
- Sensor technologies
- RF design

TECHNOLOGICAL INNOVATIONS

Geolux develops advanced microwave radar systems for real-time water level and flow monitoring and critical infrastructure protection. Its contactless, maintenance-free sensors use proprietary signal processing and IoT connectivity for accurate hydrological data in extreme weather and flood conditions.

KEY PRODUCTS / SERVICES

- Radar Level Sensor (LX80) – Non-contact microwave radar for continuous water level monitoring in rivers, lakes, and reservoirs. Deployed globally across 50+ countries.
- Radar Velocity Meter (RSS-2-300W) – Surface velocity radar for accurate open-channel water velocity measurement without in-water installation. Thousands of units installed worldwide.
- Radar Flow Meter (FX100) – Combination of water level and water velocity radar inside of the single robust unit used for non-contact water flow metering in open channels, rivers, streams etc. Thousands of units installed worldwide.
- Radar Flow Meter with additional LIDAR sensor (FX200) – Combination of water level and water velocity radar inside a single robust unit used for non-contact water flow metering in open channels, rivers, streams etc. This unit has an additional LIDAR sensor used to scan the geometry of the riverbed (cross-section), which is required for flow calculation. This is a Geolux patented technology. Thousands of units installed worldwide.
- Flood Monitoring Systems – Integrated early-warning solutions combining radar sensors, telemetry, and cloud platforms. National and regional deployments.
- Snow & Ice Monitoring Radar – Remote monitoring of snowpack and ice thickness for hydrological forecasting. Used in alpine and cold-region networks.
- IoT Telemetry & Cloud Platform – Real-time data acquisition, analytics, and remote sensor management. Supports large national hydrological networks.
- Custom OEM Radar Solutions – Tailored radar modules for integration into third-party environmental monitoring systems. Partnerships with global system integrators.

KEY TARGET INDUSTRIES

Hydrology and water management, environmental protection, meteorology, disaster risk reduction, smart cities, critical infrastructure protection, IoT.

EXPORT MARKETS

Since 2024, Geolux technologies have been deployed on every continent, including Antarctica.

KEY CLIENTS/REFERENCES

Končar - Digital d.o.o., Suintech Co., Ltd., KING ICT d.o.o., C & H, Inc, DTPLENIRO TECHSOLUTIONS, PVT LTD, OTT Hydromet GmbH, Hrvatske vode, AEM, InSitu

COLLABORATION WITH ACADEMIA OR RESEARCH INSTITUTES

Technical University of Denmark, Technical University of Munich

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

Unmanned Airborne Water Observing System (UAWOS_101081783) – Horizon Europe

STANDARDS/CERTIFICATES

ISO 9001, ISO 14001

AWARDS OR RECOGNITIONS

Over the years, Geolux's dedication to excellence has been recognised by the Croatian Chamber of Economy, which awarded the company the Award for Best Company in the Post-Startup Category.

COMPANY NAME

V-ELIN

CONTACT

Address Preloška ulica 25, 40000
Čakovec, Croatia

Website www.v-elin.hr

Social Media LinkedIn: v-elin

Primary Contact Gordan Vrbaneć, Manager
gordan.vrbaneć@v-elin.hr
+385 98 242 278

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- Assembly & Packaging
- Metrology & Inspection & Testing
- Semiconductor Components / Modules
- R&D / Educational Activity / Support Activity

BUSINESS MODEL

- Manufacturing
- Design services
- Equipment/Materials supplier

KEY TECHNOLOGIES / COMPETENCIES

- Digital design
- Analogue design
- Embedded systems

ABOUT THE COMPANY

V-ELIN d.o.o. was founded in 1992 by one owner. Today, it has 10 employees focused on development and production. Its products relate to the measurement of electrical and non-electrical quantities, automation, control and remote control, and are intended for the manufacturing industry, the energy sector, distributors of drinking water and sewage water, and waste management companies. The measurements mainly entail level and flow in open channels and sewers, water quality, and air quality (with emphasis on odorous gases). Remote monitoring and management refer to the management of water and sewage systems. The company also provides energy management, on-line measurement services and analyses of domestic electricity, water, sewage, hot water, steam etc. V-ELIN also undertakes the production and measurement of finished automation cabinets.

TECHNOLOGICAL INNOVATIONS

The company's products include a VEMOGS remote station (GPRS communication) for monitoring, measuring and controlling systems, a VEMOGS computing unit (support of the sensor system), a Parshall constriction with a computing unit (measurement of flow in sewage), an air quality measurement system (NH₃, H₂S, meteorological parameters), a hydrostatic probe (digital and analogue) with battery power, an electric fencing system, a fish barrier and many others.

KEY PRODUCTS / SERVICES

- Hydrostatic probe (analogue and digital)
- VEMOGS remote station
- VEMOGS calculation unit
- Wastewater quantity measurement system
- Wastewater quality measurement system
- Air quality and meteorological data measurement system
- Fish barriers
- Electric fencing system

KEY CLIENTS/REFERENCES

- Systems that require the implementation of automation, measurement and control cabinets
- Environmental organizations – for fish barriers and monitoring of water level, flow and quality
- Hydroelectric power plants – for measuring the level and flow of water
- Water distributors – smaller monitoring and management systems
- Sewage distributors – smaller control and management systems
- Potential pollutants – measurements of air and water quality
- Potential threat – sirens to alert the public

KEY TARGET INDUSTRIES

Energy, industrial automation

EXPORT MARKETS

European Union

COLLABORATION WITH ACADEMIA OR RESEARCH INSTITUTES

The company is open to participation in EU projects for the development of new products.

STANDARDS/CERTIFICATES

ISO 9001, ISO 14001

AWARDS OR RECOGNITIONS

Honorary member of the Zagreb Electrical Society
Award for VEMOGS

COMPANY NAME

Soldered Electronics

CONTACT

Address	Vinkovačka cesta 68, 31000 Osijek, Croatia
Website	soldered.com manufacturing.soldered.com engineering.soldered.com www.solderedelectronics.com
Social Media	LinkedIn: Soldered Electronics GitHub: Soldered Electronics Twitter/X: @solderedcom Instagram: isolderedelectronics Facebook: solderedelectronics
Primary Contact	David Zovko, Founder & CEO david@soldered.com

POSITION IN SEMICONDUCTOR VALUE CHAIN

- › Applications / End Products
- › Assembly & Packaging
- › Semiconductor Components / Modules
- › R&D / Educational Activity / Support Activity

KEY TECHNOLOGIES / COMPETENCIES

- › Digital design
- › Analogue design
- › Embedded systems
- › Sensor technologies
- › Power electronics
- › RF design

ABOUT THE COMPANY

Soldered Electronics d.o.o. (established in 2016 in Osijek, Croatia) operates three divisions: Soldered for Makers – 250+ open-source hardware products, 80+ countries via Mouser, Digikey & Reichelt; Soldered Manufacturing – certified EU EMS partner for PCB assembly; Soldered Engineering – custom e-paper and IoT product development, concept to production. ISO 9001 & IATF 16949 certification is in progress.

BUSINESS MODEL

- › Manufacturing
- › Design services
- › Equipment/Materials supplier

TECHNOLOGICAL INNOVATIONS

- › Inkplate – open-source e-paper platform with direct E-ink panel manipulation (B&W, greyscale, full-colour)
- › Proprietary e-paper timing controller expertise (Soldered Engineering)
- › Automated EU EMS line for series production (Soldered Manufacturing)
- › easyC/Qwiic ecosystem – 63+ plug-and-play modules
- › NULA series – ecosystem of microcontroller dev boards

KEY PRODUCTS / SERVICES

- Inkplate series (6, 10, 5, 2, 6 MOTION, 6 COLOR, 13 SPECTRA) – open-source ESP32 e-paper dev boards with Wi-Fi, full-colour and greyscale options
- EMS – Electronics Manufacturing Services (Soldered Manufacturing): certified PCB assembly, SMT, THT, fullbox-build, ISO 9001 & IATF 16949 in progress
- Custom e-paper product development (Soldered Engineering) – concept-to-production for industrial, medical, consumer; direct E-ink panel control, LoRa/LTE/5G/NB-IoT
- NULA boards – ultra-low power dev boards ecosystem
- easyC/Qwiic ecosystem – 63+ plug-and-play modules
- Solder Kits – STEM soldering kits
- Power management modules
- Communication modules (LoRa, GPS, BLE, Wi-Fi)
- IoT low-power connected devices (LoRa, LTE, 5G, NB-IoT)

**COLLABORATION WITH ACADEMIA
OR RESEARCH INSTITUTES**

Faculty of Electrical Engineering, Computer Science and Information Technology, Osijek (FERIT); Faculty of Electrical Engineering and Computing, Zagreb (FER); Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Split (FESB); Croatian Makers (nonprofit STEM education programme, 1,000+ institutions); Školska knjiga d.d. (educational publisher, 20,000+ children annually); BIGZ školstvo d.o.o. (Serbia, 5,000+ children annually)

KEY TARGET INDUSTRIES

Aerospace & defence, IoT & connected devices, consumer electronics, robotics & automation, education & STEM

EXPORT MARKETS

EU-focused (Germany, France, Austria, Netherlands, UK, Nordic countries, Balkans region) + USA; products shipped to 80+ countries.

KEY CLIENTS/REFERENCES

Diehl Aviation (Germany, aerospace), Rimac Automobili d.o.o. (Croatia, automotive), Infineon Technologies AG (Germany, strategic hardware partner), Mouser Electronics, Inc. (USA), Digikey Corporation (USA), Reichelt Elektronik GmbH & Co. KG (Germany), Končar Group (Croatia), Croatian Makers (educational nonprofit organisation)

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

Open to Horizon Europe and IPCEI partnerships.

STANDARDS/CERTIFICATES

Certifications in progress: ISO 9001, ISO 14001, ISO 27001, IATF 16949.

All products marked with CE, RoHS and UKCA.

AWARDS OR RECOGNITIONS

TrustPilot score of 4.8/5

COMPANY NAME

Byte Lab Group

CONTACT

Address Medarska ulica 69/1, 10090
Zagreb, Croatia

Website www.byte-lab.com

Social Media LinkedIn: Byte Lab
Clutch: Byte Lab
Instagram: byte.lab

Primary Contact Josip Puškar
Director of Business
Development
puskarj@byte-lab.com

ABOUT THE COMPANY

Byte Lab Group (Byte Lab Grupa d.o.o.) is a vertically integrated electronics company based in Zagreb, Croatia, specialising in end-to-end product development. By combining embedded hardware and software engineering with prototyping, manufacturing, and mobile and cloud solutions, all under one roof, the company ensures seamless execution, faster time-to-market, and full ownership from concept to production.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- Metrology & Inspection & Testing
- Equipment & Components for Chip Production
- Semiconductor Components / Modules
- R&D / Educational Activity / Support Activity
- Other: Consulting services, ATE (automatic test equipment)

BUSINESS MODEL

- Manufacturing
- System integration
- Design services
- Validation/Verification services
- Equipment/Materials supplier

KEY TECHNOLOGIES / COMPETENCIES

- Embedded systems
- Sensor technologies
- RF design
- Biomedical electronics
- Photonics

TECHNOLOGICAL INNOVATIONS

Edge AI solutions:

- Innovative Edge AI hardware for ultra-low power, long battery life
- E-nose – AI smell sensing with gas arrays for quality & freshness detection
- Continuous sound monitoring for early detection and preventive maintenance

KEY PRODUCTS / SERVICES

- Complete electronic product development
- Development of embedded software
- Development of embedded hardware
- Prototyping and low volume manufacturing of electronic products
- Consulting for IoT product development
- Custom ATE (automatic test equipment)
- Edge AI solutions
- Mobile Apps for Connected Devices

KEY TARGET INDUSTRIES

Consumer electronics, aerospace & defence, medical industry, energy, industrial automation, IoT, security, technology & digital, utilities, micromobility, transportation & logistics

EXPORT MARKETS

Nordic countries, DACH, Benelux, USA

KEY CLIENTS/REFERENCES

Philips N.V., Bosch, Kärcher B.V., Honeywell International Inc., Signify N.V., Belimo Holding AG, ABUS, Blues Wireless Inc., Bugatti Rimac d.o.o., Porsche Greyp, A1 Group, Primion Group, EnOcean GmbH, VusionGroup S.A., the 3M Company, BASO, El-Björn AB, Enviolo B.V.

**COLLABORATION WITH ACADEMIA
OR RESEARCH INSTITUTES**

FER, TVZ, FERIT, FESB, RITECH

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

- Business Innovation of the Consortium for the Establishment of Competitive Production of New Products and Integration into Global Value Chains
- Commercialization of an Innovative IoT Device for Gas Meter Digitalization
- Laboratory Validation of Extra Slim PoE Regulator
- Support Chips Initiative

STANDARDS/CERTIFICATES

ISO 9001, ISO14001, ISO27001, IPC-A-610

AWARDS OR RECOGNITIONS

- The Silver Tesla's Egg Award 2007 – Motion Capture System
- Red Dot Design Award 2018, 2024
- German Innovation Award 2018 (QUS)

COMPANY NAME

ALTPRO

CONTACT

Address Velika cesta 41, 10090 Zagreb, Croatia

Website www.altpro.com

Social Media LinkedIn: ALTPRO
Facebook: ALTPRO
Youtube: @altpro-signalling

Primary Contact Tin Viduka
Board Member – Sales & Marketing
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+385 91 377 7311

ABOUT THE COMPANY

ALTPRO d.o.o. is a specialised signalling company providing safety-critical systems for railway infrastructure and rolling stock. Its portfolio includes train detection systems, level crossing protection and INDUSI-based ATP systems (I60 and PZB90). With over 30 years (the company was established in 1994) of experience and solutions used in more than 50 countries on six continents, ALTPRO is a global partner in railway safety. The company employs over 200 experts and certifies its products according to the highest safety standards (SIL 4).

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- R&D / Educational Activity / Support Activity

BUSINESS MODEL

- Manufacturing
- System integration
- Equipment/Materials supplier
- Software / EDA tools

KEY TECHNOLOGIES / COMPETENCIES

- Digital design
- Analogue design
- Embedded systems
- Sensor technologies

KEY PRODUCTS / SERVICES

- Level crossing protection – Innovative, reliable solutions to secure level crossings, critical points in railway infrastructure.
- Axle counting – Advanced systems for train detection that utilise inductive rail wheel sensors installed along the railway line.
- Train detection systems – Designed to accurately detect the presence of trains on railway tracks using high-performance inductive rail wheel sensors.
- CCS Integration – Signalling equipment, telecommunications, power supply, technical protection and video surveillance.
- Civil Works – Various railway infrastructure works, ranging from power supply and system connections to level crossing renovations and complex works.
- INDUSI Automatic Train Protection – INDUSI technology, both major versions: I60 (RAS8385) and PZB90 (RAS90).
- Integrated Solutions – ETCS and event recorder solutions for rolling stock tailored to both national and European standards.
- Rolling stock services – Maintenance and technical support services, homologation process and market placing.

KEY TARGET INDUSTRIES

Railway industry

EXPORT MARKETS

ALTPRO exports railway signalling solutions to 55+ countries, with key markets in Southeast Europe, Asia (India, China), Egypt and the USA, delivering SIL 4 certified systems for rail, metro, tram and urban transport projects worldwide.

**COLLABORATION WITH ACADEMIA
OR RESEARCH INSTITUTES**

ALTPRO actively collaborates with prestigious institutions, including the Faculty of Transport Sciences, the Faculty of Electrical Engineering and Computing, the University of Zagreb, and many others.

STANDARDS/CERTIFICATES

ISO 9001, ISO 14001, ISO 27001

AWARDS OR RECOGNITIONS

- Platinum Key for Continuous Excellence in Business awarded by the Croatian Exporters Association in December 2024
- Four Golden Keys for the best exporter in 2018 and 2020, as well as for the best exporter in the specific markets of India in 2019 and China in 2021
- Zlatna Kuna (Golden Marten) awards from the Croatian Chamber of Economy, as well as the Order of Danica of Croatia state medal awarded by the Government of the Republic of Croatia
- A large number of international awards for innovation from scientific congresses and fairs around the world, including the US, Japan, Malaysia, Taiwan and various European countries
- EY Entrepreneur of the Year award in Croatia in 2025 for Zvonimir Viduka, the CEO and founder of ALTPRO

COMPANY NAME

Gideon

CONTACT

Address Radnička cesta 177, 10000
Zagreb, Croatia
3500 South DuPont Highway,
Suite EN-101, Dover, DE 19901,
United States of America

Website www.gideon.ai

Social Media LinkedIn: Gideon
Youtube: @GideonRobotics

Primary Contact Dario Ljubić
Sales & Strategic Projects
Executive
Phone (USA): +1 629 213 2189
Phone (Cro): +385 91 620 1074

ABOUT THE COMPANY

Gideon is the first mover in delivering fully autonomous vehicles for loading and unloading palletised trailers in manufacturing and warehousing. Equipped with proprietary software and hardware, Gideon's autonomous vehicles streamline customer processes and ensure maximum efficiency. Gideon's expertise was recognised by Fortune 500 companies and forklift OEMs – most notably the Toyota Industries Corporation, which made a strategic investment in Gideon in 2024. The company was founded in 2017 in Croatia, and expanded to the USA in 2020.

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products

BUSINESS MODEL

- Manufacturing
- System integration

KEY TECHNOLOGIES / COMPETENCIES

- Embedded systems

KEY PRODUCTS / SERVICES

Gideon's key product is Trey – an autonomous trailer loading and unloading forklift.

TECHNOLOGICAL INNOVATIONS

- Autonomous forklift for loading and unloading palletised trailers
- Proprietary camera system (hardware and software)
- The company is fully vertically integrated and develops: - 2D and 3D localisation - Navigation - Semantic segmentation, object detection, and position estimation - Fleet management and coordination - Warehouse execution layer

KEY TARGET INDUSTRIES

Automotive, food and beverage, logistics, paper and pulp, manufacturing, distribution

EXPORT MARKETS

United States of America, Canada,
European Union

KEY CLIENTS/REFERENCES

Fortune 500 companies

**COLLABORATION WITH ACADEMIA
OR RESEARCH INSTITUTES**

Faculty of Electrical Engineering and Computing,
University of Zagreb (FER), industry collaboration
with NVIDIA

STANDARDS/CERTIFICATES

ISO 9001, ISO 27001

AWARDS OR RECOGNITIONS

- Baby Unicorn Award, 2025 (Game Changer Conference, Zagreb)
- Croatian start-ups on Start.Up! Germany 2018 Road Show contest – winner;
- Digital Takeover Business Leaders, 2018 – recognition; contribution to the development of the robotics industry in Croatia;
- DB Schenker Start-up Award, Essen, 2018;
- ABB Robotics Innovation Challenge, Zurich 2019; finalist
- Nomination for the Zlatna kuna (Golden Marten) award, 2019

COMPANY NAME

SOLVIS

CONTACT

Address Ulica Vesne Parun 15, 42000
Varaždin, Croatia

Website www.solvis.hr

Social Media LinkedIn: SOLVIS
Facebook: Solvis

Primary Contact Jasmina Novak
Project Manager
Jasmina.novak@solvis.hr
+385 91 420 0888

ABOUT THE COMPANY

SOLVIS d.o.o. is a European company with a production facility in Varaždin, Croatia, specialising in the production of photovoltaic (PV) modules for more than 17 years, with a particular focus on integrated PV-BIPV (Building Integrated Photovoltaics) solutions and other customised options. Since the company was founded, its goal has been to produce environmentally friendly, affordable sources of energy and bring them to the level of everyday use for energy generation and as building material. Its products are the result of their own product development and research, accompanied by continuous investment in knowledge and equipment. Thanks to its expansive, state-of-the-art production lines, today SOLVIS has a production capacity of more than 300 MW, which will increase to 600 MW by the end of 2026. Its engineering team provides turn-key PV plan solutions and technical expertise and services. Today, SOLVIS is one of the largest panel manufacturers in Europe, having already supplied over 1 GW of high-quality solar modules and BIPV to customers in more than 40 countries across Europe, North Africa, and North America.

KEY PRODUCTS / SERVICES

Photovoltaic (PV) modules, integrated PV-BIPV (Building Integrated Photovoltaics) modules and solutions, integrated facade PV systems, customised modules and solutions, flexible and lightweight modules, rooftop integrations, development and realisation of own PV projects, development and construction of projects for customers, complete energy solutions.

POSITION IN SEMICONDUCTOR VALUE CHAIN

Other: Photovoltaic module producer and integrator

BUSINESS MODEL

- Manufacturing
- System integration
- Equipment/Materials supplier

KEY TECHNOLOGIES /
COMPETENCIES

- Other: Photovoltaic technologies

EXPORT MARKETS

Main export markets (among the 40 markets in the EU): Italy, France, Austria, Germany, Slovenia.

KEY TARGET INDUSTRIES

Energy, electrical equipment

STANDARDS/CERTIFICATES

ISO 9001, ISO 14001

COMPANY NAME

Orqa

CONTACT

Address Ulica Josipa Jurja Strossmayera
341, 31000 Osijek, Croatia

Website www.orqafpv.com

Social Media LinkedIn: Orqa FPV

Primary Contact Tomislav Krolo, COO
tom@orqafpv.com
+385 91 469 1286

POSITION IN SEMICONDUCTOR VALUE CHAIN

- Applications / End Products
- Assembly & Packaging
- IC Design
- Semiconductor Components / Modules
- R&D / Educational Activity / Support Activity

BUSINESS MODEL

- Manufacturing
- System integration
- Design services
- IP provider
- Equipment/Materials supplier

TECHNOLOGICAL INNOVATIONS

Orqa offers vertically integrated, NDAA-compliant FPV systems free of Chinese components, specialised in in-house design and production of drones, flight controllers, and high-performance radio systems, ensuring complete EU supply chain independence.

ABOUT THE COMPANY

Orqa d.o.o. is a leading European drone technology company with specialised experience in the development and production of unmanned aerial systems. Established in 2016, the company produces and sells components, radio systems, drones, FPV goggles and controllers. Orqa's infrastructure ensures complete oversight from initial concepts to final deployment, enabling the manufacturing of over 230,000 product items in 2025 and supporting export to more than 50 countries worldwide. Orqa guarantees complete supply chain independence by developing and producing all systems entirely within the EU.

KEY TECHNOLOGIES / COMPETENCIES

- Digital design
- Embedded systems
- Sensor technologies
- RF design
- Semiconductor materials

KEY TARGET INDUSTRIES

Aerospace & defence, public safety & enterprise, consumer electronics, FPV enthusiast robotics & industrial automation

EXPORT MARKETS

USA, Canada, European Union, Middle East, Indo-Pacific

KEY PRODUCTS / SERVICES

- Video goggles for drone pilots: FPV. One Pilot, FPV.One Race, FPV.Pro
- Radio controllers: FPV.Ctrl (drone and simulator controller), Tac.Ctrl (tactical controller for enterprise and defence drones)
- Drones: MRM2-10, MRM2-10 AI, MRM2-10F, MRM1-5, MRK-1-8 Kit, education: micro-drone (Riplet), DroneSoccer
- Radio/video receivers and transmitters: DualSubGHz JR Module Radio Transmitter, DualSubGHz Hybrid all-in-one Video Transmitter/ Radio Receiver. RapidFIRE 5.8 GHz Video Receiver, Ghost 2.4 GHz JR Radio Transmitter, Ghost Atto 2.4 GHz JR Radio Receiver
- Drone critical components: Orqa FC3030, Orqa ESC3030

In 2025, Orqa produced 230,000 product items and made 25 million EUR in revenue. Orqa has been nearly doubling its production capacity and revenue almost every year, and this trend is expected to continue in 2026.

AWARDS OR RECOGNITIONS

- Named the Most Innovative Company in Croatia by the Croatian Chamber of Economy in 2022
- Awarded the Best Company in the Osijek-Baranja County award in 2025
- Ranked 19th on the Deloitte CE Technology Fast 50 list in 2025

KEY CLIENTS/REFERENCES

Consumer, public safety, defence

**COLLABORATION WITH ACADEMIA
OR RESEARCH INSTITUTES**

Faculty of Electrical Engineering and Computing, University of Zagreb; Faculty of Electrical Engineering, University of Osijek; Agricultural Institute Osijek; Dr. Franjo Tuđman Defense and Security University, Zagreb

PARTICIPATION IN EU OR INTERNATIONAL PROJECTS

Projects being implemented:

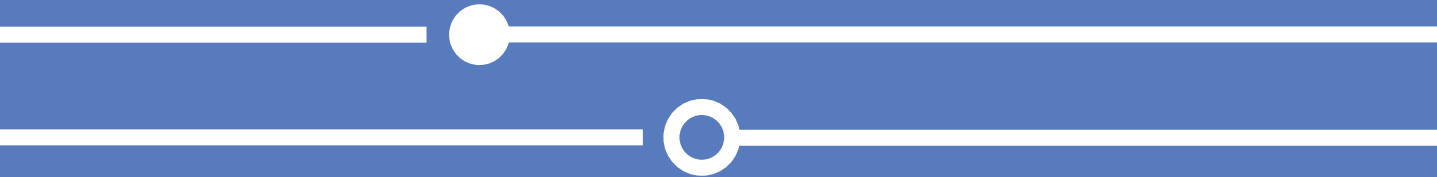
EDF Projects to be submitted: HORIZON, IPCEI, EDF (EDIP, ERA)

National programmes financed through EU funds: Operational Programme Competitiveness and Cohesion (within the National Recovery and Resilience Plan (NRRP))

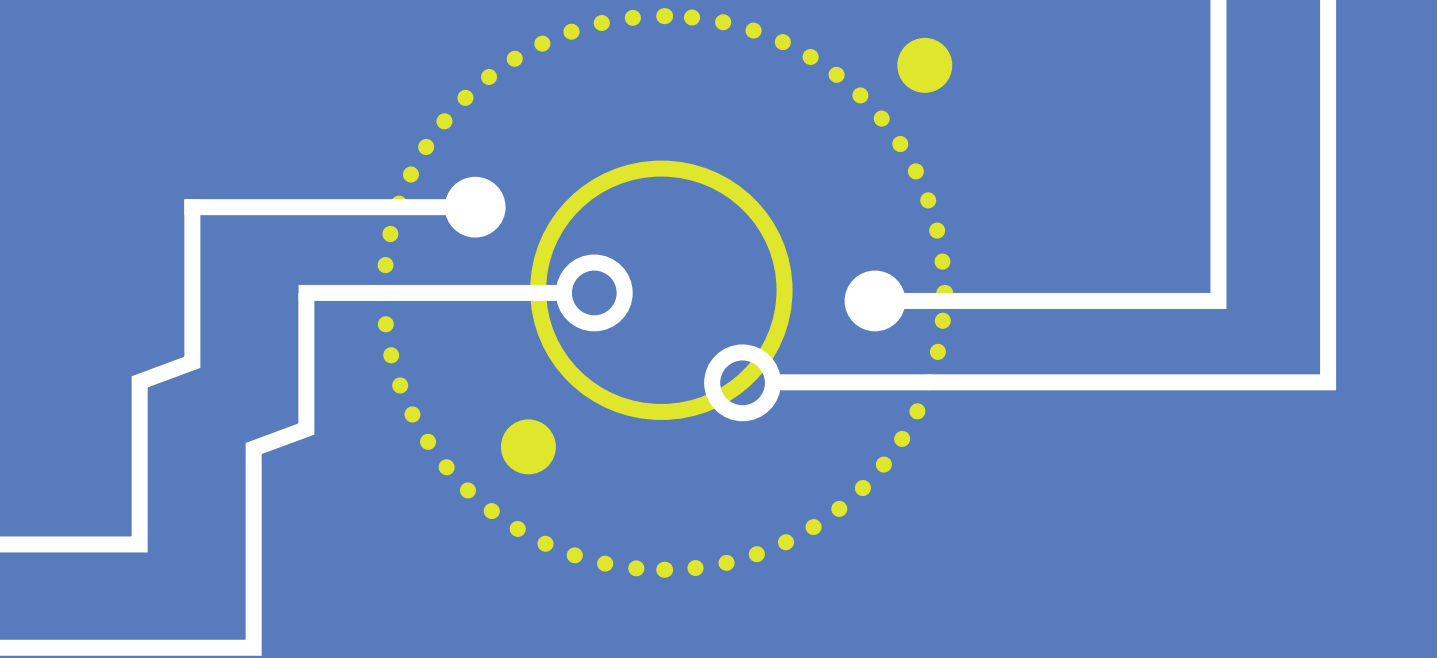
International Defense Programme: US DoD Drone Dominance Initiative

STANDARDS/CERTIFICATES

ISO 9001



Public Educational and Research Facilities



FACULTY / DEPARTMENT / RESEARCH CENTRE NAME

University of Zagreb, Faculty of Electrical Engineering and Computing

TYPE OF INSTITUTION

Higher education institution

CONTACT

Address Unska ulica 3, 10000 Zagreb, Croatia
Website www.fer.unizg.hr
Social Media LinkedIn: FER
 Facebook: FER
Primary Contact Faculty of Electrical Engineering and Computing
fer@fer.hr

ABOUT THE INSTITUTION

The Faculty of Electrical Engineering and Computing (FER), established in 1956 in Zagreb, is Croatia's leading technical university for electrical engineering, computing, and electronics. Renowned for research excellence, FER conducts advanced work in semiconductors, microelectronics, and embedded systems. The faculty maintains strong industry collaborations, contributing to technology transfer, innovation projects, and applied research with national and international partners.

SEMICONDUCTOR RESEARCH AREAS

- Device Physics & Modelling
- IC Design
- Embedded Systems & SoC Architecture
- Power Electronics & Energy Conversion
- MEMS / Sensors / Actuators
- Photonics & Optoelectronics
- Quantum Technologies
- AI/ML Hardware & Neuromorphic Computing
- Metrology, Testing & Reliability
- EDA / Design Automation Tools

KEY INDUSTRY PARTNERS

ams-OSRAM, Infineon Technologies AG, KONČAR d.d., Rimac Technology d.o.o., Ericsson Nikola Tesla d.d.

KEY LABORATORIES & INFRASTRUCTURE

FER has several laboratories working in the field of semiconductors. The Laboratory for Integrated Circuits and Electromagnetic Compatibility (IC&EMC Lab) provides integrated circuit testing in air conditioning chambers using advanced modular measurement systems with special focus on electromagnetic compatibility. The Laboratory for Micro- and Nano-Electronics (MiNEL) enables measurements and characterisation of circuits directly on semiconductor wafers. The HPC Architecture and Application Research Center (HPCAARC) has equipment and personnel for the development, verification and testing of digital chip designs. The Laboratory for Intelligent Sensor Systems (LISS) is equipped with infrastructure and software licences for modelling, design and functional testing of microelectromechanical (MEMS) and electromagnetic sensors and electronic systems. The Laboratory for Power Electronics enables advanced testing and characterisation of power converters.

INDUSTRY PARTNERSHIP MODEL

- Contract research
- Joint development agreements
- Sponsored PhDs
- Licensing
- Prototype development
- Testing & validation services
- Consulting

TECHNOLOGY READINESS LEVEL (TRL) RANGE

- Basic research
- Prototype validation
- Industry-ready solutions

NUMBER OF STUDENTS IN**SEMICONDUCTOR-RELEVANT PROGRAMMES**

Approximately 60 students enrol at the master-level semiconductor-related programme each year

**PHD CANDIDATES IN
MICROELECTRONICS /
SEMICONDUCTOR FIELDS**

Approximately 15

**ANNUAL GRADUATES (BACHELOR /
MASTER / PHD)**

Approximately 500 / 500 / 15

**TOTAL ACADEMIC & RESEARCH STAFF
(IN SEMICONDUCTOR-RELATED
ACTIVITIES)**

Approximately 43

**INDUSTRY-INTEGRATED
PROGRAMMES**

- Internships with semiconductor companies
- Industry-sponsored theses

INTERNATIONAL ACADEMIC PARTNERSHIPS

Erasmus+ student and staff mobility, CEEPUS, double degree programme with the Polytechnic University of Milan, The Intelligent Field Robotic Systems (IFRoS) Erasmus Mundus Joint Master's degree

CROSS-BORDER COLLABORATION (EU / GLOBAL)

FER collaborates with many institutions and companies at the EU and global level via EU funded, bilateral and industry projects. The company list includes KU Leuven, EPFL, ETH, ams-OSRAM AG, Infineon Technologies AG, Bosch, the Asahi-KASEI Corporation, ON Semiconductor, and others.

FACULTY / DEPARTMENT / RESEARCH CENTRE NAME

Faculty of Electrical Engineering, Computer Science and Information Technology Osijek

TYPE OF INSTITUTION

Academic institution; faculty

CONTACT

Address Ulica kneza Trpimira 2B, 31000
Osijek, Croatia

Website www.ferit.unios.hr

Social Media Facebook: FERIT Osijek
Instagram: ferit.osijek
LinkedIn: Faculty of Electrical
Engineering, Computer
Science and Information
Technology Osijek

Primary Contact Davor Vinko
Full Professor
Chair of Electronics and
Microelectronics, Department
of Communications
davor.vinko@ferit.hr
+385 31 224 758

ABOUT THE INSTITUTION

The Faculty of Electrical Engineering, Computer Science and Information Technology Osijek (FERIT), part of the Josip Juraj Strossmayer University of Osijek, is a Croatian higher education and research institution established in 1978. It conducts internationally recognised research in electrical engineering, ICT, and related semiconductor technologies, and collaborates closely with the industrial sector through joint projects, technology transfer, and partnerships with leading engineering companies.

TECHNOLOGY READINESS LEVEL (TRL) RANGE

- Basic research
- Prototype validation

SEMICONDUCTOR RESEARCH AREAS

- IC Design
- Embedded Systems & SoC Architecture
- Power Electronics & Energy Conversion
- MEMS / Sensors / Actuators
- Metrology, Testing & Reliability
- EDA / Design Automation Tools

INDUSTRY PARTNERSHIP MODEL

- Contract research
- Joint development agreement
- Sponsored PhDs
- Licensing
- Prototype development
- Testing & validation services
- Consulting

KEY LABORATORIES & INFRASTRUCTURE

FERIT has two main laboratories in the field of electronics, the Laboratory for Electronics and Microelectronics (T3-28) and the Laboratory for Power Electronics (T0-24, T0-30). These laboratories enable the testing of power electronics components and assemblies using hardware-in-a-loop (HIL) systems.

FERIT has the following infrastructure and equipment for testing semiconductor devices, power electronic devices, modules and assemblies to provide the centre's services: the HIL development system Typhoon HIL402 for the development of power control electronic converters and converter simulation, and the Opal system OP5031 OP5600Ex 6xPEB-8024 Imperix-Opal Power for carrying out real-time simulations, rapid prototyping of control structures and HIL tests of semiconductor components, modules and power electronics assemblies.

For tests that do not require a hardware-in-the-loop approach, FERIT uses the following infrastructure and equipment: the InfiniiVision 6000 X-Series oscilloscope with the DSOX6B10T604BW option for measurements up to 6 GHz, and the Keysight CX3324A Current Waveform Analyzer with suitable probes for current measurements in the range from 100pA to 10A, 4 channels, 1GSa/s.

The FieldFox 6.5 GHz N9914A RF Analyzer is a multifunctional device that supports measurement functions as a cable and antenna RF analyser and as a 2-port vector network analyser at frequencies up to 6.5 GHz.

FERIT has the following infrastructure and equipment to implement services for measurement system customisation, rapid prototyping and peripheral device manufacturing for the power electronics component under testing: an automatic pick-and-place machine with accessories (the XYZ SMT-660 pick-and-place device with 6 heads and support for semiconductor components with a size range of 0402-1206).

PARTICIPATION IN CLUSTERS / INDUSTRY ASSOCIATIONS

Croatian Competence
Centre for Semiconductors,
Europractice

CROSS-BORDER COLLABORATION (EU / GLOBAL)

EU: Industry-sponsored PhD
theses in partnership with
Infineon Technologies AG

KEY INDUSTRY PARTNERS

Orqa d.o.o., Infineon
Technologies AG, Soldered
d.o.o., Rimac Technology d.o.o.

NUMBER OF STUDENTS IN SEMICONDUCTOR-RELEVANT PROGRAMMES

50 students annually

PHD CANDIDATES IN MICROELECTRONICS / SEMICONDUCTOR FIELDS

5 students in the last 10 years

ANNUAL GRADUATES (BACHELOR / MASTER / PHD)

30 students annually

TOTAL ACADEMIC & RESEARCH STAFF (IN SEMICONDUCTOR-RELATED ACTIVITIES)

9 members of academic and
research staff

INDUSTRY-INTEGRATED PROGRAMMES

- Internships with
semiconductor companies
- Industry-sponsored theses

FACULTY / DEPARTMENT / RESEARCH CENTRE NAME

University of Split, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture

TYPE OF INSTITUTION

Faculty

CONTACT

Address Ulica Ruđera Boškovića 32,
21000 Split, Croatia

Website www.fesb.unist.hr

Social Media Instagram: fesb_unist
Facebook: FESB
Youtube: @FESBsmotra
LinkedIn: FESB - Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture

Primary Contact Silvestar Šesnić
Vice Dean for Science
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ABOUT THE INSTITUTION

The Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture (FESB) was established in 1960. Since 1974, it has been a constituent of the University of Split. FESB is a modern higher education and scientific research institution dedicated to the development and application of the newest technologies with the strategic goal of attaining the highest international standards in scientific research, higher education and professional activities. Its core activities include higher education, scientific research, development and professional activities in the area of technical sciences – electrical engineering, computer science, mechanical engineering and naval architecture. As an institution providing education to experts in these areas, the Faculty was established with the primary purpose of supporting the development of the economy in the region.

SEMICONDUCTOR RESEARCH AREAS

- Semiconductor Materials
- Device Physics & Modelling
- Embedded Systems & SoC Architecture
- Metrology, Testing & Reliability
- Other: Consulting

KEY LABORATORIES & INFRASTRUCTURE

Plan to equip laboratories with thermal testing and reliability equipment

TECHNOLOGY READINESS LEVEL (TRL) RANGE

- Basic research

INDUSTRY PARTNERSHIP MODEL		NUMBER OF STUDENTS IN SEMICONDUCTOR-RELEVANT PROGRAMMES
➤ Contract research ➤ Joint development agreements ➤ Consulting		149
PHD CANDIDATES IN MICROELECTRONICS / SEMICONDUCTOR FIELDS	TOTAL ACADEMIC & RESEARCH STAFF (IN SEMICONDUCTOR-RELATED ACTIVITIES)	ANNUAL GRADUATES (BACHELOR / MASTER / PHD)
6	3	244 / 151 / 9
PARTICIPATION IN CLUSTERS / INDUSTRY ASSOCIATIONS		INTERNATIONAL ACADEMIC PARTNERSHIPS
IEEE, SEMI Europe		In academia, FESB works closely with national partners, such as the Faculty of Science of the University of Split, the Faculty of Electrical Engineering and Computing of the University of Zagreb, and the Ruđer Bošković Institute (RBI), as well as international partners including the Technical University of Munich, the Graz University of Technology, the University of Ljubljana, and the Jožef Stefan Institute. These collaborations focus on microelectronics, nanoelectronics, and semiconductor device design.
CROSS-BORDER COLLABORATION (EU / GLOBAL)		
FESB participates in European Union-funded research and innovation programmes, including Horizon Europe and earlier Horizon 2020 projects. Through these initiatives, FESB collaborates with a wide network of academic and industrial partners across Europe, contributing to advancements in semiconductor technologies, embedded systems, and smart electronic devices. These collaborations enable FESB to remain connected to cutting-edge developments in semiconductor technology and to contribute actively to international research and innovation ecosystems.		

FACULTY / DEPARTMENT / RESEARCH CENTRE NAME

Faculty of Science, University of Zagreb

TYPE OF INSTITUTION

Educational and research institution

CONTACT

Address Horvatovac 102 a, 10000
Zagreb, Croatia

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www.pmf.unizg.hr/en

Social Media Instagram: pmf_unizg
Facebook: Prirodoslovno-
matematički fakultet Sveučilišta
u Zagrebu
LinkedIn: University of Zagreb,
Faculty of Science

Primary Contact Dean's Office
dekanat@dekanat.pmf.hr
+385 1 460 6011

SEMICONDUCTOR RESEARCH AREAS

- Semiconductor Materials
- Device Physics & Modelling
- MEMS / Sensors / Actuators
- Photonics & Optoelectronics
- Quantum Technologies

TECHNOLOGY READINESS LEVEL (TRL) RANGE

- Basic research
- Prototype validation

ABOUT THE INSTITUTION

The Faculty of Science of the University of Zagreb (PMF) is an institution with both domestically and internationally recognised education and research excellence. PMF designs and conducts relevant university studies and scientific research programmes which are an integral part of the higher education process in the fields of biology, physics, geophysics, geography, geology, chemistry, and mathematics. It provides high quality, effective university education in these fields at all three levels of university studies.

KEY LABORATORIES & INFRASTRUCTURE

PMF's Physics Department has basic thin film PVD tools (thermal evaporators and DC/RF sputtering), as well as basic photolithography, RIE, basic PLD, a plasma cleaner, spin coating, various furnaces and characterisation methods (semiconductor parameter analyser + probe station, FTIR, UV/VIS, XRD, XRF, ellipsometry, room temperature and cryogenic transport measurements).

INDUSTRY PARTNERSHIP MODEL

- Contract research
- Joint development agreements
- Sponsored PhDs
- Licensing
- Prototype development
- Testing & validation services
- Consulting

**NUMBER OF STUDENTS IN
SEMICONDUCTOR-RELEVANT PROGRAMMES**

30

**PHD CANDIDATES IN MICROELECTRONICS /
SEMICONDUCTOR FIELDS**

5

INTERNATIONAL ACADEMIC PARTNERSHIPS

CEITEC Brno, Czechia, CELIA Bordeaux, France, LNCMI – CNRS, Grenoble, France



FACULTY / DEPARTMENT / RESEARCH CENTRE NAME

Institute of Physics

TYPE OF INSTITUTION

Research institute

CONTACT

Address Bijenička cesta 46, 10000
Zagreb, Croatia

Website <https://ifs.hr/>

Social Media Facebook: Institut za
fiziku Zagreb
Instagram: if_zg
LinkedIn: Institute of
Physics Zagreb

Primary Contact Dr. sc. Mateo Kruljac
Expert Associate for the
valorisation of scientific
results, cross-institutional
collaboration and public
relations
mkruljac@ifs.hr
+385 1 469 8830

SEMICONDUCTOR RESEARCH AREAS

- Semiconductor Materials
- Device Physics & Modelling
- Power Electronics & Energy Conversion
- MEMS / Sensors / Actuators
- Photonics & Optoelectronics
- Quantum Technologies
- Metrology, Testing & Reliability

PHD CANDIDATES IN MICROELECTRONICS / SEMICONDUCTOR FIELDS

ABOUT THE INSTITUTION

The Institute of Physics (IF) was founded in 1960. Through the years, the IF has shown research excellence in solid state and surface physics (material science, including semiconductors). In 2022, IF upgraded its lab spaces with modern equipment through EU funds (the CALT, KaCIF and CEMS projects) which allows advanced synthesis and analysis of various materials (especially 2D semiconductors with applications in (opto) electronics). Various microscopy, spectroscopy and imaging techniques are available for industry partners and collaborators.

TECHNOLOGY READINESS LEVEL (TRL) RANGE

- Basic research
- Prototype validation

INDUSTRY PARTNERSHIP MODEL

- Contract research
- Joint development agreements
- Prototype development
- Testing & validation services
- Consulting

KEY INDUSTRY PARTNERS

Rimac Group, KONČAR d.d., Orqa d.o.o., Protostar Labs d.o.o., Kurt J. Lesker Company Ltd., Instrumentaria d.d., Diagonal, Rektor LNG d.o.o.

KEY LABORATORIES & INFRASTRUCTURE

The Institute's equipment and expertise are grouped in two departments, funded by corresponding EU projects – the Centre for Advanced Laser Techniques (CALT project, €16 million) and the Department for Investigation of Materials under Extreme Conditions (KaCIF project, €5 million). These departments feature modern equipment – lasers, microscopes, spectrometers, cryogenic facilities, chemical labs, cryostats with strong magnets, and various devices for the analysis of material properties.

The following techniques are supported:

- Fabrication techniques: e-beam lithography, thermal evaporation, photolithography, spin-coating, plasma cleaning, wet etching, 2D material transfer
- Characterisation techniques: AFM (including cAFM, KPFM, PFM, MFM, QI), STM (ambient and UHV), SEM and SEM-EDX, sSNOM/nano-FTIR (FTIR spectra on a nanoscale), Raman and photoluminescence spectroscopy and microscopy, pump-probe spectroscopy, profilometry, transport measurements (conductivity), QD MPMS & PPMS (magnetic and physical properties measurement systems)

The Quantum Technology Group's research uses platforms based on lasers and atomic vapours, as part of the CroQCI project, which develops a quantum communication infrastructure.

CROSS-BORDER COLLABORATION
(EU / GLOBAL)

Participation in EU-funded research and innovation programmes, including Horizon Europe and earlier Horizon 2020 projects.

NUMBER OF STUDENTS IN
SEMICONDUCTOR-RELEVANT PROGRAMMES

IF collaborates with the Faculty of Science to provide resources for a professional practice course. As a result of this collaboration, 3–4 master students per semester do voluntary lab work.

ANNUAL GRADUATES (BACHELOR / MASTER / PHD)

Over the last couple of years (only in semiconductor-related topics): 1-2 master theses, 1-3 PhD theses

TOTAL ACADEMIC & RESEARCH STAFF (IN
SEMICONDUCTOR-RELATED ACTIVITIES)

17 permanent researchers
4 postdoc researchers

PARTICIPATION IN CLUSTERS / INDUSTRY ASSOCIATIONS

CROCCS, CEMS (Center of Excellence for Advanced Materials and Sensing Devices), Laserlab-Europe, CroQCI (Croatia's Quantum Communication Infrastructure)

INTERNATIONAL ACADEMIC PARTNERSHIPS

Collaborations and partnerships via EU-funded, bilateral and industry projects, including MSCA actions under Horizon Europe. Partners include the University of Illinois, the University of Siegen, the Technical University of Vienna, Kyoto University, the Osaka Institute of Technology (Japan), Brookhaven Science Associates, the University of Applied Sciences and Arts Northwestern Switzerland, the Swiss Federal Institute of Technology in Lausanne (EPFL), the Jožef Stefan Institute, the University of Belgrade, and the University of Sarajevo.

FACULTY / DEPARTMENT / RESEARCH CENTRE NAME

The METRIS Research Centre at the Istrian University of Applied Sciences

TYPE OF INSTITUTION

University of applied sciences, research centre

CONTACT

Address Preradovićeve ulica 9D, 52100
Pula, Croatia

Website www.iv.hr/en/metris-centre-2/

Social Media Facebook: Istarsko Veleučilište
- Università Istriana di scienze
applicatae
Instagram: istarskoveleuciliste
LinkedIn: Istarsko Veleučilište
- Università Istriana di scienze
applicatae
Youtube: @istarskoveleuciliste

Primary Contact Assoc. prof. Vedrana Špada,
PhD
Head of the METRIS
Research Centre
metris@iv.hr
+385 99 165 6260

ABOUT THE INSTITUTION

The METRIS Research Centre, founded in 2009, is a research and knowledge dissemination organisation established to support EU and national R&D projects. Its core competencies include materials analysis, quality control, and innovation support for SMEs. It also advances education, supports the scientific community, and promotes STEM. Based in Pula, it connects research institutions with industry.

SEMICONDUCTOR RESEARCH AREAS

- Semiconductor Materials
- Metrology, Testing & Reliability
- Other: R&D, EN ISO 17025 accreditation

KEY LABORATORIES & INFRASTRUCTURE

- Laboratories for testing chemical and mechanical properties and industry 4.0 solutions
- Centre for electron microscopy
- Examples of technological innovations: Autonomous robot boat for microplastic sampling – JADRANKO v1.0 and 2.0, nanocomposite MMC materials for the automotive sector, nanofilm for higher efficiency for solar cells

TECHNOLOGY READINESS LEVEL (TRL) RANGE		KEY INDUSTRY PARTNERS
➤ Basic research ➤ Prototype validation		Automotive, telecom, defence, medical, energy, industrial automation, IoT, robotics
INDUSTRY PARTNERSHIP MODEL		Examples: DOK-ING d.o.o., HS PRODUKT d.o.o., TEVA Group, PLIVA d.o.o., Tehnomont d.d.
➤ Contract research ➤ Joint development agreements ➤ Sponsored PhDs ➤ Prototype development ➤ Testing & validation services ➤ Consulting		CIMOS Award or recognition: Croatian Gamechanger Award 2025.
		TOTAL ACADEMIC & RESEARCH STAFF (IN SEMICONDUCTOR-RELATED ACTIVITIES)
		10
NUMBER OF STUDENTS IN SEMICONDUCTOR-RELEVANT PROGRAMMES	PHD CANDIDATES IN MICROELECTRONICS / SEMICONDUCTOR FIELDS	ANNUAL GRADUATES (BACHELOR / MASTER / PHD)
50	2	50
INDUSTRY-INTEGRATED PROGRAMMES	INTERNATIONAL ACADEMIC PARTNERSHIPS	PARTICIPATION IN CLUSTERS / INDUSTRY ASSOCIATIONS
➤ Internships with semiconductor companies ➤ Industry-sponsored theses	EUMAT, ERASMUS+	Automotive cluster, Croatian defence cluster
CROSS-BORDER COLLABORATION (EU / GLOBAL)		
INTERREG, the Just Transition Fund (JTF), the EU Cohesion Fund, the Industrial Transition Fund		

FACULTY / DEPARTMENT / RESEARCH CENTRE NAME

Josip Juraj Strossmayer University of Osijek, Department of Physics

TYPE OF INSTITUTION

University

CONTACT

Address Trg Ljudevita Gaja 6, 31000
Osijek, Croatia

Website www.fizika.unios.hr

Social Media Facebook: Odjel za fiziku,
Osijek
Instagram: [odjel.za.fiziku.osijek](https://www.instagram.com/odjel.za.fiziku.osijek)

Primary Contact Igor Lukačević
Deputy Head of Department
ilukacevic@fizika.unios.hr
+385 31 232 713

SEMICONDUCTOR RESEARCH AREAS

- Semiconductor Materials
- Device Physics & Modelling
- MEMS / Sensors / Actuators
- Other: Semiconductor detectors
for ionising radiation

ABOUT THE INSTITUTION

The Department of Physics is a scientific and educational component of the Josip Juraj Strossmayer University in Osijek, established on 13 December 2004. Its activities include the implementation of university undergraduate and graduate studies and the development of scientific and professional work in the field of physics.

The Department of Physics organises an undergraduate programme in Physics and a graduate programme in Physics and Informatics for teachers.

The Department of Physics has 34 full-time employees, of which 22 are teachers and associates.

TECHNOLOGY READINESS LEVEL (TRL) RANGE

- Basic research
- Prototype validation

INDUSTRY PARTNERSHIP MODEL

- Joint development agreements

KEY LABORATORIES & INFRASTRUCTURE

- Indoor and outdoor measurements of radiation levels in air, soil and water using semiconductor detectors: neutron dosimeter, radon detector, scintillation counter, in-situ soil permeability measurement.
- Electron microscope (SEM) characterisation of semiconductor surfaces and interfaces. Determination of surface profiles and I/V characteristics.
- Determination of sensing properties with respect to moisture and common gasses: flow-cell system coupled with data acquisition assembly and spectrometer.
- Ab initio modelling of semiconductor surfaces and interfaces. Determination of structural, electronic, elastic, thermal and optical properties.
- University-grade spectrometer laboratory: UV-Vis reflectance/transmission/absorption, fluorescence, colourimetry, irradiation measurements.

KEY INDUSTRY PARTNERS

- State Office for Radiological and Nuclear Safety
- Ministry of the Interior: Civil Protection Directorate
- Radiological and Nuclear Safety Sector
- Orqa d.o.o.

CROSS-BORDER COLLABORATION (EU / GLOBAL)

Member of the COLOURS European University Alliance

NUMBER OF STUDENTS IN**SEMICONDUCTOR-RELEVANT PROGRAMMES**

5

PHD CANDIDATES IN MICROELECTRONICS /**SEMICONDUCTOR FIELDS**

1

ANNUAL GRADUATES (BACHELOR / MASTER / PHD)

10

TOTAL ACADEMIC & RESEARCH STAFF (IN**SEMICONDUCTOR-RELATED ACTIVITIES)**

7

INTERNATIONAL ACADEMIC PARTNERSHIPS

- Member of the COLOURS European University Alliance
- European Research Infrastructure Consortium (ERIC)
- Joint Research Centre – European Commission

PARTICIPATION IN CLUSTERS / INDUSTRY ASSOCIATIONS

- Regional Value Chains – Pannonian Croatia
- The National Institute for Radiological and Nuclear Safety
- The International Atomic Energy Agency (IAEA)

FACULTY / DEPARTMENT / RESEARCH CENTRE NAME

University of Rijeka, Faculty of Engineering, Department of Automation and Electronics

TYPE OF INSTITUTION

Public university

CONTACT

Address Vukovarska ulica 58, 51000
Rijeka, Croatia

Website riteh.uniri.hr/en/organisation/departments/zae/

Primary Contact Prof. dr.sc. Neven Bulić
Professor, Department of
Automation and Electronics,
Laboratory for Automation and
Robotics
Neven.bulic@uniri.hr
+385 51 651 413

ABOUT THE INSTITUTION

The Faculty of Engineering of the University of Rijeka was established in 1960. The Faculty encompasses 11 departments, which include 38 sections and 50 laboratories. Its Department of Automation and Electronics hosts a small and flexible team with advanced knowledge in low and medium voltage electrical drive application, digital control systems development and power electronics converter design. Its R&D group is focused on lectures on the topics of electrical drive control, digital control systems and control theory; R&D for industrial partners in the field of electrical drives and digital control systems; consulting activities for complex drive systems; medium voltage drive firmware algorithm development; development of complex control structures for specific drive applications; tailor-made solutions for special industrial electric drive system applications; special drive development (active magnetic bearings, magnetic gears); advanced active front end control structures with selective harmonic elimination; and complete drive construction processes from idea to prototype.

SEMICONDUCTOR RESEARCH AREAS

- Device Physics & Modelling
- Embedded Systems & SoC Architecture
- Power Electronics & Energy Conversion
- MEMS / Sensors / Actuators
- Cybersecurity for Semiconductor/
Embedded Systems

KEY LABORATORIES & INFRASTRUCTURE

The Laboratory for Automation and Robotics, one of the largest laboratories featuring modern equipment at the Faculty of Engineering, is a major R&D facility used for research and development activities.

<https://riteh.uniri.hr/en/organisation/departments/zae/laboratory-automation-and-robotics/>

INDUSTRY PARTNERSHIP MODEL

- Contract research
- Joint development agreements
- Prototype development
- Testing & validation services
- Consulting

TECHNOLOGY READINESS LEVEL (TRL) RANGE

- Basic research
- Prototype validation
- Industry-ready solutions

KEY INDUSTRY PARTNERS

Danieli Systec d.o.o., Linz Center of Mechatronics GmbH

NUMBER OF STUDENTS IN SEMICONDUCTOR-RELEVANT PROGRAMMES

10

PHD CANDIDATES IN MICROELECTRONICS / SEMICONDUCTOR FIELDS

3

ANNUAL GRADUATES (BACHELOR / MASTER / PHD)

10

INDUSTRY-INTEGRATED PROGRAMMES

- Industry-sponsored theses

INTERNATIONAL ACADEMIC PARTNERSHIPS

Johannes Kepler University Linz

CROSS-BORDER COLLABORATION (EU / GLOBAL)

Danieli & C. S.p.A., BySTORM & CO. Srl

FACULTY / DEPARTMENT / RESEARCH CENTRE NAME

Ruđer Bošković Institute

TYPE OF INSTITUTION

Public

CONTACT

Address Bijenička cesta 54, 10000
Zagreb, Croatia

Website www.irb.hr

Social Media Facebook: Institut Ruđer
Bošković

Primary Contact Dr. Mile Ivanda
Senior Researcher, Department
of Material Physics
Head of the New Functional
Materials CoRE Research Unit
ivanda@irb.hr
+385 1 456 0928

ABOUT THE INSTITUTION

The RBI is regarded as Croatia's leading scientific institute in the natural and biomedical sciences, as well as marine and environmental research, owing to its size, scientific productivity, international reputation in research, and the quality of its scientific personnel and research facilities. Research on semiconductors is concentrated at the Center of Excellence for Advanced Materials and Sensors (CEMS) established in 2017. As a unified centre of excellence consisting of 4 different experimental physics units, CoRE CEMS has evolved into an internationally recognised platform of interdisciplinary connected research groups, equipped with a wide range of techniques and other experimental capabilities for the synthesis and characterisation of materials. These are relevant to technology transfer solutions within the fields of energy conversion and storage, sensing, cybersecurity and in long term scale quantum technology developments. The institute has a 120 m² cleanroom, comprising an area for depositions (Class 10,000 / ISO 7) and an area for photolithography (Class 1,000 / ISO 6).

SEMICONDUCTOR RESEARCH AREAS

- Semiconductor Materials
- MEMS / Sensors / Actuators
- Photonics & Optoelectronics
- Quantum Technologies
- Semiconductor Manufacturing Processes
- Metrology, Testing & Reliability

TECHNOLOGY READINESS LEVEL (TRL) RANGE

- Basic research
- Prototype validation

INDUSTRY PARTNERSHIP MODEL

- Contract research
- Joint development agreements
- Sponsored PhDs
- Prototype development
- Testing & validation services
- Consulting

KEY INDUSTRY PARTNERS	NUMBER OF STUDENTS IN SEMICONDUCTOR-RELEVANT PROGRAMMES	PHD CANDIDATES IN MICROELECTRONICS / SEMICONDUCTOR FIELDS
10	15	15
TOTAL ACADEMIC & RESEARCH STAFF (IN SEMICONDUCTOR-RELATED ACTIVITIES)	INDUSTRY-INTEGRATED PROGRAMMES	
60	➤ Internships with semiconductor companies ➤ Industry-sponsored theses	

FACULTY / DEPARTMENT / RESEARCH CENTRE NAME

University of Split, Faculty of Science

TYPE OF INSTITUTION

Higher education and research institution

CONTACT

Address Ruđera Boškovića 33,
21000 Split, Croatia

Website www.pmfst.unist.hr

Social Media Facebook: pmfst
Instagram: pmfsplit
TikTok: pmfsplit
X: PmfSplit

Primary Contact Professor Ana Maravić
Dean of the University of Split,
Faculty of Science
dekanat@pmfst.hr
+385 98 511 370

ABOUT THE INSTITUTION

Established in 2008, the Faculty of Science traces its origins to the Pedagogical Academy founded in 1945. It is a pivotal institution of the University of Split, conducting research and delivering study programmes in the natural sciences, information technology and polytechnics, including the education of future STEM teachers. It successfully undertakes basic and applied research, as well as collaborative projects with industry, including those related to semiconductor technology.

TECHNOLOGY READINESS LEVEL (TRL) RANGE

- Basic research
- Prototype validation

INDUSTRY PARTNERSHIP MODEL

- Contract research
- Joint development agreements
- Sponsored PhDs
- Licensing
- Prototype development
- Testing & validation services
- Consulting

SEMICONDUCTOR RESEARCH AREAS

- Semiconductor Materials
- Device Physics & Modelling
- MEMS / Sensors / Actuators
- Quantum Technologies
- AI/ML Hardware & Neuromorphic Computing
- Metrology, Testing & Reliability
- Other: Neuroelectronic interfaces

KEY INDUSTRY PARTNERS

Institute of Nuclear Technology Ltd, Cochlear Ltd.

KEY LABORATORIES & INFRASTRUCTURE

The Faculty of Science at the University of Split operates infrastructure supporting semiconductor research, device fabrication and characterisation, and offers related expertise and services to industry within the Croatian Competence Centre for Semiconductors (CROCCS).

Microfabrication & thin films: a cleanroom hosting an EVG 610 mask aligner for single- and multi-layer optical microstructuring, and a Pfeiffer Vacuum Classic 250 magnetron sputtering system for thin-film deposition on wafers.

Device contacting & testing: an MPI TS150 probe station for on-wafer electrical testing and a MicroPoint Pro IBOND 5000 wedge wire bonder for chip-to-package interconnection.

Structural & chemical analysis: a JEOL JSM-7610F Plus Schottky field-emission SEM with an Oxford AZtec UltimMax 65 EDS detector and a JEOL IB-19530CP cross-section polisher, a Bruker JPK NanoWizard 4 atomic force microscope, and a Zeiss Axio Imager M.2 optical microscope.

Electrical & thermal characterisation: a cryogen-free system operating from 2 K to 400 K in magnetic fields up to 12.5 T, and a purpose-built high-temperature setup (300–600 K), enabling current–voltage, magnetoresistance, Hall-coefficient and thermal-conductivity measurements of semiconductors and dielectrics.

Neuroelectronic interfaces / medical bionics: electrophysiology and imaging facilities including Zeiss Axio Examiner A1/Z1 upright microscopes with a Colibri 7 LED source, an Intan RHS 2116 high-density stimulation/recording system (384 channels) and an imec Neuropixels 1.0 neural probe, complemented by in-vitro neural culturing and computer modelling (COMSOL Multiphysics, MATLAB, LabVIEW).

These facilities support basic research and prototype validation, and are available to companies for contract research, testing & characterisation, and joint development.

**NUMBER OF STUDENTS IN
SEMICONDUCTOR-RELEVANT PROGRAMMES**

~20 including students of master programmes in physics, informatics and technics, and biology/chemistry

**PHD CANDIDATES IN MICROELECTRONICS /
SEMICONDUCTOR FIELDS**

4

ANNUAL GRADUATES (BACHELOR / MASTER / PHD)

130 / 90 / 5

**TOTAL ACADEMIC & RESEARCH STAFF (IN
SEMICONDUCTOR-RELATED ACTIVITIES)**

10

INDUSTRY-INTEGRATED PROGRAMMES

- Internships with semiconductor companies
- Industry-sponsored theses

PARTICIPATION IN CLUSTERS / INDUSTRY ASSOCIATIONS

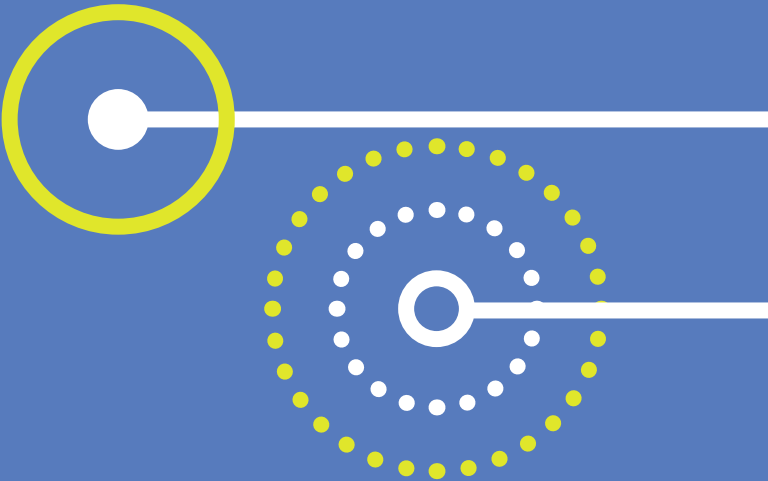
Cluster of Excellence Hearing4All, Germany

INTERNATIONAL ACADEMIC PARTNERSHIPS (EU NETWORKS, JOINT DEGREES, EXCHANGE PROGRAMMES)

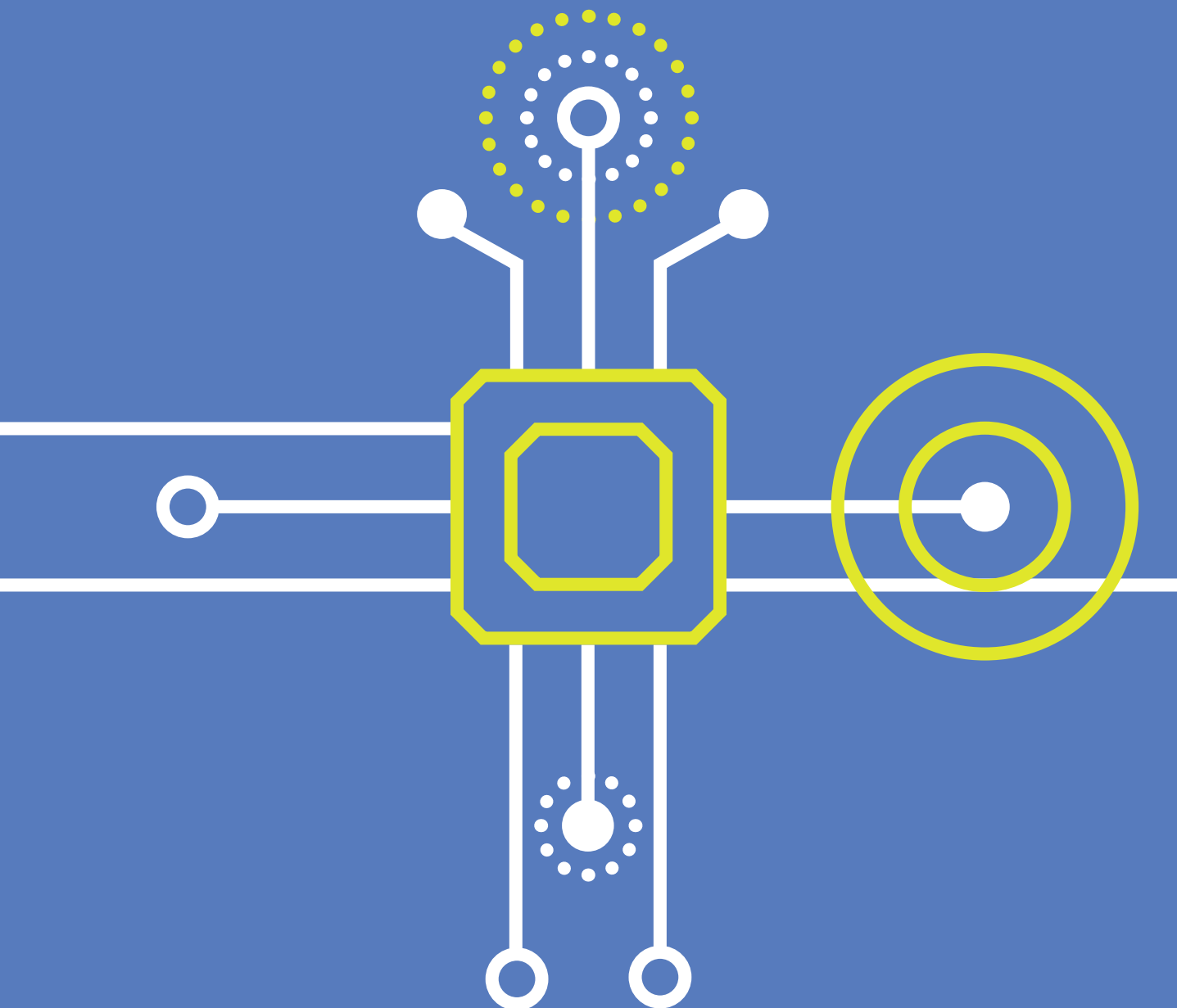
Erasmus+ student and staff mobility, CEEPUS, European Integrated Center for the Development of New Metallic Alloys and Compounds (ECMetAC)

CROSS-BORDER COLLABORATION (EU / GLOBAL)

European Consortium “Inner-Ear-on-a-Chip”, Advanced Center for Electrical Engineering and Electronics (Valparaiso, Chile)



Support



Ministry of Economy

As the key governmental body responsible for economic development, industrial policy, and investment facilitation, the Ministry of Economy plays a central role in shaping Croatia's business environment and fostering the growth of high-technology industries, including semiconductors, electronics, and advanced manufacturing.

Recognising the strategic importance of semiconductors for economic resilience and technological sovereignty, the Ministry actively works to attract foreign direct investment (FDI) while strengthening the capabilities of domestic enterprises across the semiconductor value chain.

Its support framework includes:

Investment Incentives: A range of tax reliefs and financial grants are available for companies investing in strategic, knowledge-intensive sectors such as chip design, embedded electronics, FPGA development, wide-bandgap power semiconductor technologies, system integration, and advanced R&D. These measures are designed to lower entry barriers and enhance the competitiveness of high-tech investments in Croatia.

Regulatory and Administrative Support: The Ministry provides guidance and operational support to investors navigating Croatia's legal and administrative framework, ensuring a streamlined and efficient investment process. As a member of the European Union, Eurozone, and Schengen Area, Croatia offers a fully harmonised regulatory environment aligned with EU standards, ensuring predictability, transparency, and legal certainty.

Infrastructure and Ecosystem Development: The Ministry supports the development of industrial zones, technology parks, innovation hubs, and specialised research infrastructure. These initiatives are aimed at creating a supportive ecosystem for semiconductor and electronics companies – from startups and SMEs to established international players – facilitating collaboration between industry and academia.

Through a combination of targeted incentives, ecosystem development, and proactive investment support, the Ministry of Economy serves as a key partner for both domestic and international stakeholders seeking to establish or expand operations within Croatia's growing semiconductor and electronics sector.

CONTACT DETAILS:

Ministry of Economy
A Ulica grada Vukovara 78, 10000 Zagreb, Croatia
E invest@mingo.hr
W investcroatia.gov.hr

RTL8100BL
3437011
325E TAIWAN

BC133 BC131

BC14

BC57

BC132

BC127
BC130
BC126

FB2

CS15 CS14 Y3

S1RQ

BC63

BC61

BC66

N67

R427

BC106
R707

R708
BC197

BC211
L26

R691
R693

D26

H24.576F3

35058T1 326D

Ministry of Regional Development and EU Funds

The Ministry of Regional Development and EU Funds serves as Croatia's Coordination Body for EU funds and is responsible for the strategic coordination of EU-funded programmes implemented under shared management. In this role, the Ministry coordinates the preparation and implementation of the Partnership Agreement and relevant programme documents, monitors their progress, promotes coherence between different EU funding instruments, and provides information and guidance to stakeholders regarding EU funding opportunities.

For the semiconductor and electronics sector, the Ministry is particularly relevant in two respects. First, through its coordination role in relation to programmes financed by the European Regional Development Fund and other Cohesion policy funds and instruments, as well as in the role of the Managing Authority for PCC 2021-2027 and ITP 2021-2027, it contributes to the strategic framework supporting investments in research and innovation, technology infrastructure, digitalisation, and industrial competitiveness,

including activities relevant to the semiconductor value chain.

Second, the Ministry acts as Croatia's National Contact Point for the Strategic Technologies for Europe Platform (STEP). STEP is an EU initiative aimed at strengthening the development and manufacturing of critical technologies in the fields of digital technologies and deep tech, clean and resource-efficient technologies, and biotechnologies. Semiconductors are explicitly covered under the digital technologies and deep tech pillar. As a National Contact Point, the Ministry coordinates, informs, and monitors STEP implementation at the national level, serving as the primary interface between Croatian stakeholders and the European Commission.

Companies, research organisations, and other stakeholders interested in EU funding opportunities related to semiconductors, advanced electronics, digital technologies, or STEP may obtain information through the central EU funds information portal at <https://eufondovi.gov.hr/>

CONTACT DETAILS:

Ministry of Regional Development and EU Funds
A Miramarska cesta 22, 10000 Zagreb, Croatia
E kabinet@mrrfeu.hr
W razvoj.gov.hr / eufondovi.gov.hr



Croatian Competence Centre for Semiconductors (CROCCS)

Established as Croatia's contribution to the European Chips Act framework and funded through the Digital Europe Programme, CROCCS (Croatian Competence Centre for Semiconductors) represents a pivotal step in Croatia's semiconductor journey. Launched on 1 January 2026 and running until December 2029, the project has a total value of approximately €2.5 million. It is coordinated by the University of Zagreb Faculty of Electrical Engineering and Computing (FER) and brings together a consortium of leading Croatian academic and research institutions, including the Ruđer Bošković Institute (IRB), the Faculty of Electrical Engineering, Computer Science and Information Technology Osijek (FERIT), the Faculty of Science Split (PMFST), the Institute of Physics Zagreb (IF) and the KONČAR – Electrical Engineering Institute (KEEI). CROCCS is part of the European aCCcess network of national Chips Competence Centres, connecting Croatia to semiconductor ecosystems across all EU member states.

CROCCS bridges the gap between strong academic expertise in integrated circuit (IC) design and limited industrial uptake. It establishes a complete education–design–processing–characterisation chain, enabling companies to experience the full chip development cycle from concept to tested demonstrator. The Centre's objectives are both strategic and practical: to make chip design activities viable for Croatian SMEs by providing access to the European design platform and pilot lines; to offer specialised training in analogue, digital, and mixed-signal chip design; to build an advanced chip characterisation facility that gives SMEs access to measurement equipment they could not otherwise afford; to link university students and companies in joint pre-competitive chip design projects; and to reskill and upskill engineers, creating new jobs in Croatian chip design. In doing so, CROCCS aims to grow Croatia's contribution to European semiconductor value chains – not through mass-scale fabrication, but through high-quality design, advanced research, and deep industry-academia linkages.

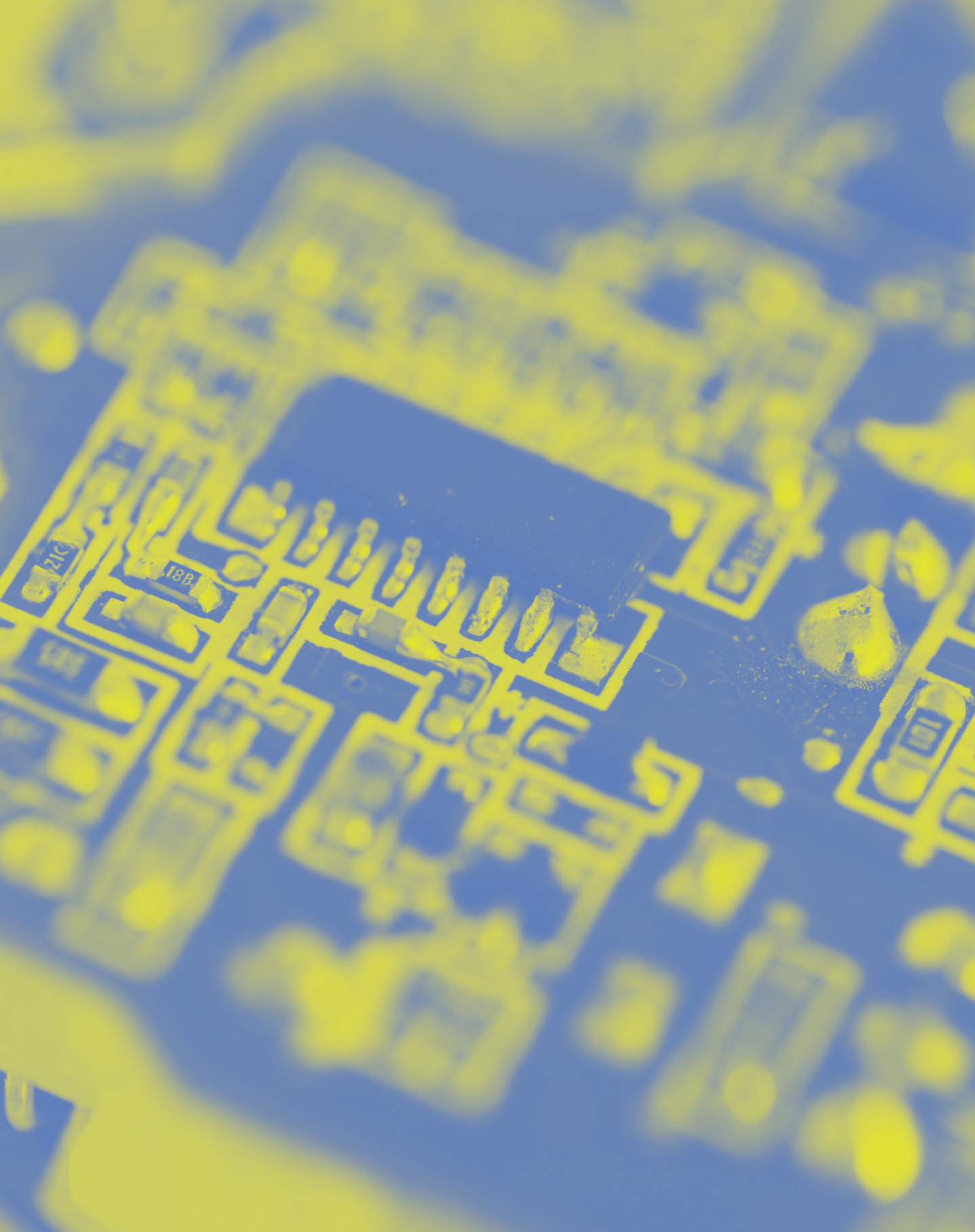
CONTACT DETAILS:

CROCCS – Croatian Competence Centre for Semiconductors

A: Unska ulica 3, 10 000 Zagreb

E: croccs@fer.hr

W: croccs.fer.hr



investcroatia.gov.hr

Company and institution data presented in this publication were provided and authorised by the featured organisations, as of June 2026. The Ministry of Economy and CROCCS accept no liability for the accuracy or completeness of the information. The selection of featured organisations is illustrative, and inclusion does not imply endorsement.

