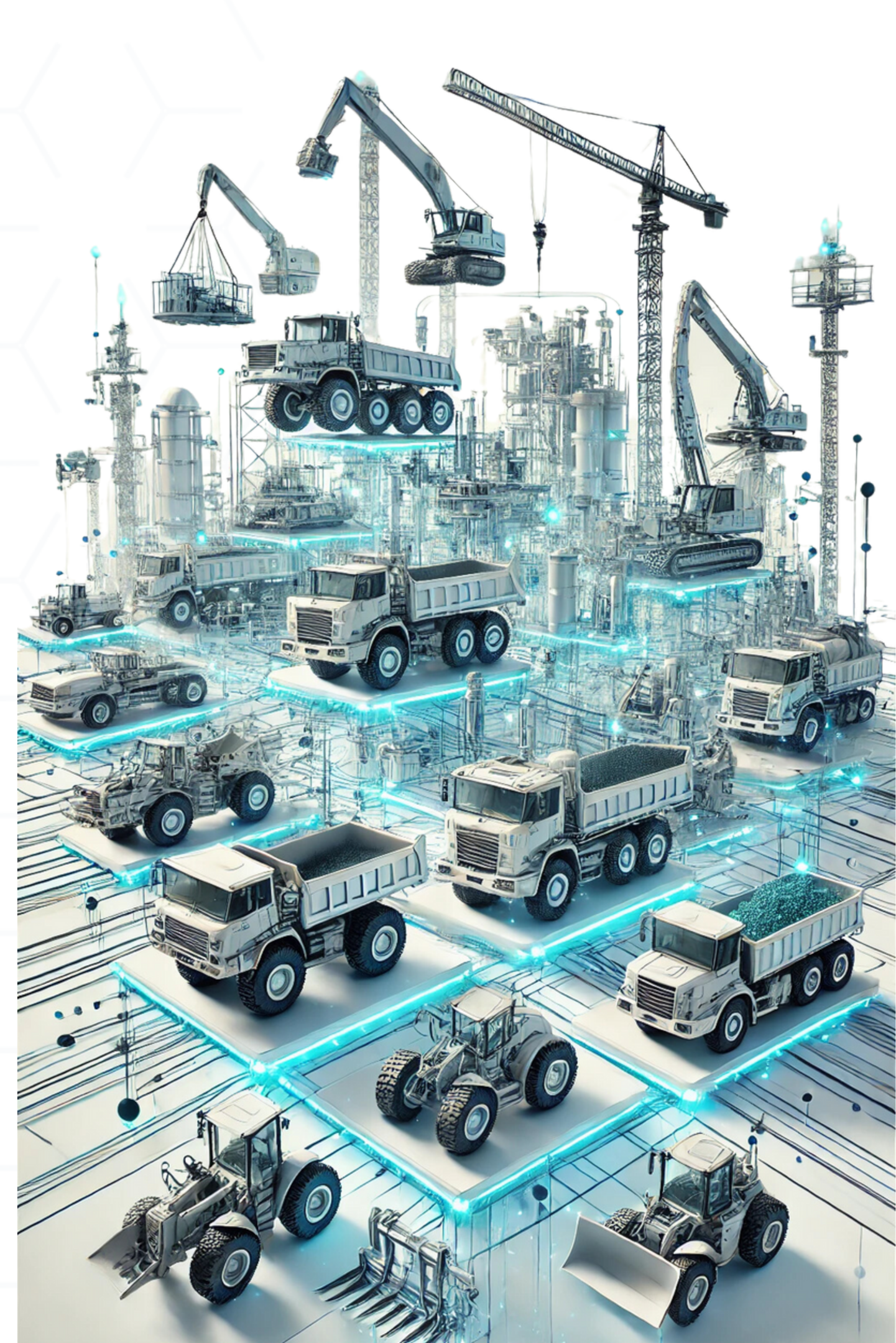


Your
bespoke
mechatronic
partner



Discover our connectable automation systems designed for off-highway vehicles

Unlock digital
transformation for your
machines with ALMEC...



Entrust the automation of your machines to us...

ALMEC

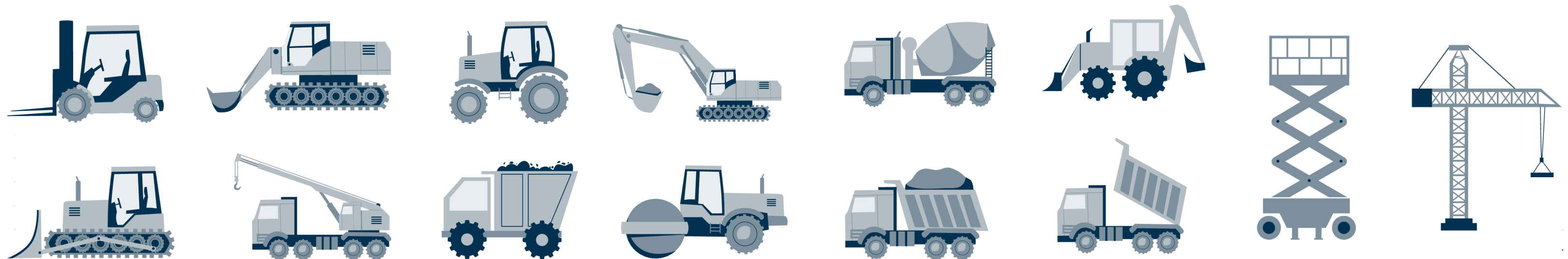
A trusted Digital transformation Partner

We offer cutting-edge mechatronic solutions that integrate your machines into a digital system, enabling smooth communication and optimized control of production processes.



We bring technological innovation to various sectors

For over twenty years, we have been providing reliable, custom solutions for manufacturers and OEMs of special mobile machines across various sectors: lifting and construction, naval, military, mining, road transport, agricultural machinery, environmental vehicles, and vehicles with special outittings...

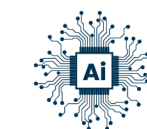


AI and IoT technologies combined with Automation: a **win-to-win** combination

Through the integration of ALMEC products with the **Diaboard** platform, we offer a complete solution for the management and monitoring of your machines. The collected data enables the activation of various custom-made services and applications that allow for smart management of the machine system.

01

AI MONITORING



Maintain real-time control over the operations and status of your entire machine system, promptly organizing any necessary interventions and eliminating downtime.

02

SYSTEM WARRANTY



Thanks to predictive maintenance, the warranty on our products applies to the actual operating time of the machine.

03

EFFICIENCY IMPROVEMENT



Optimize the performance of your machines and reduce operating costs through more efficient consumption management.

Automation systems designed for seamless integration and scalability.

In addition to system diagnostics and remote connectivity, which enable machines to meet the requirements of Industry 4.0-5.0, ALMEC offers solutions characterized by...



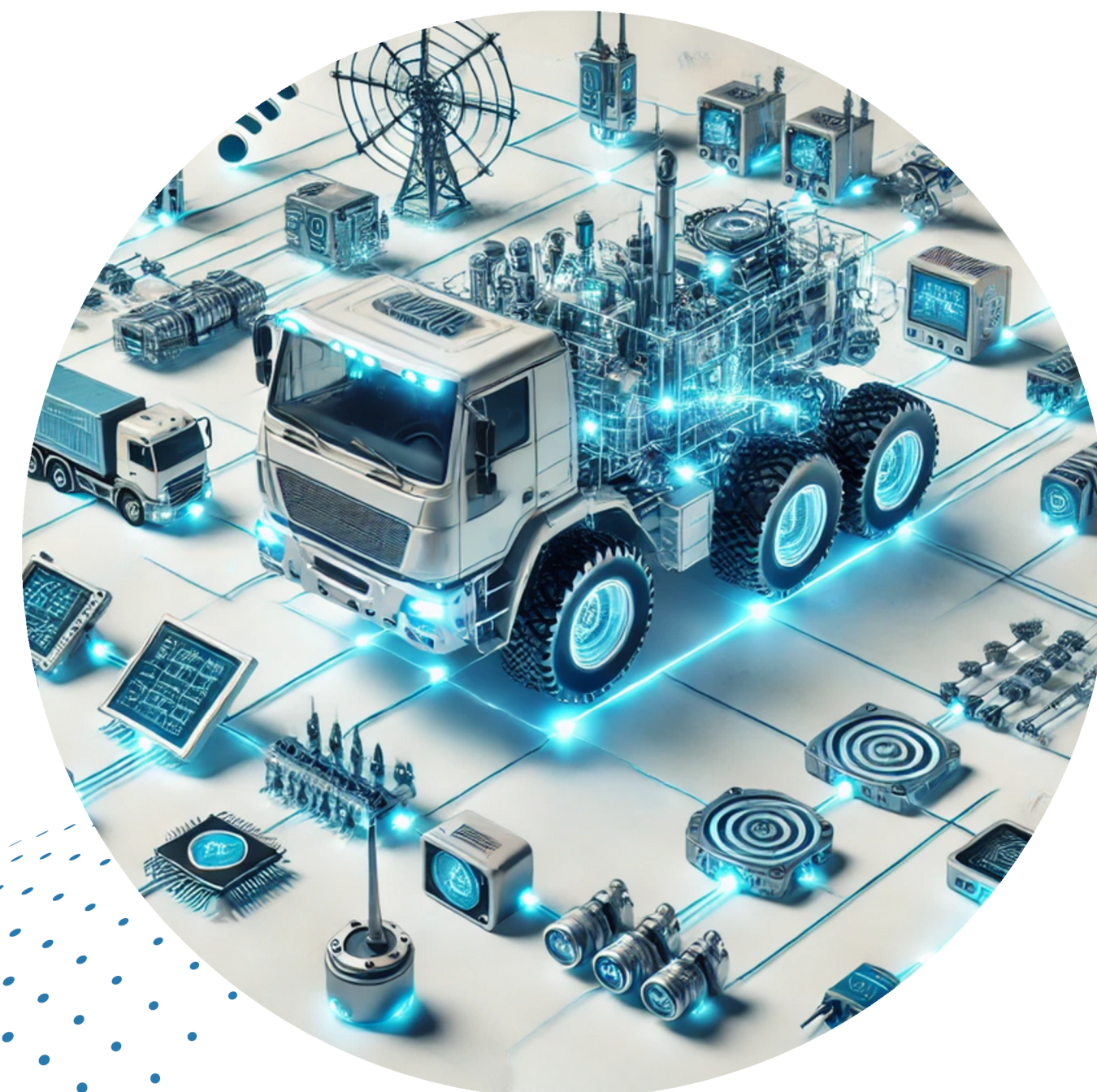
High level of safety

All components of ALMEC systems are CE certified, comply with safety standards, and conform to the latest **cybersecurity regulations (NIS2)**.



Simple Integration

The use of the **CAN-Open** protocol for module communication enables the creation of a scalable system with easy integration of new elements.



How we define the new generation of mobile machines

We leverage electronics, technology, and our expertise to provide cutting-edge solutions, helping manufacturers and OEMs stay competitive in the rapidly evolving digital landscape.



AUTOMOTIVE- GRADE PRODUCTS

-
- PLC Modules
 - DC Motor Controllers
 - IoT Modules
 - HMI
 - CAN Wired Controllers
 - CAN I/O Expansions
 - Electropneumatic Modules
 - Radio Transmitters/Receivers
 - Angular Sensors
 - Accessories (TPMS Sensors)



CUSTOM-MADE SOLUTIONS

We offer fast-developing hardware and software solutions that form reliable electronic control systems, tailored to the specific needs of our customers.



ONGOING SUPPORT

For our solutions, we offer implementation support, maintenance services, and timely updates, ensuring clients receive ongoing assistance and maximize the value and performance of their machines.

The synergy of two brands leading to a single guarantee of results



With hardware and software design and development backed by ALMEC's decades of experience, and customer-oriented digital services enabled by Diaboard, we bring technological innovation to every type of machine.



Since 2001, ALMEC has been providing cutting-edge electronic and mechatronic solutions to meet the technological needs of companies.

We offer tailor-made solutions that deliver measurable results, with the goal of being a trusted long-term partner for our clients.



Diaboard is an IoT platform for telemetry and advanced monitoring, developed by ALMEC for the remote diagnostics of ALMEC-designed electronic systems.

The collected data enables the activation of various custom-made services and applications, allowing clients to fully leverage the benefits of digital transformation.



Reliability, safety, and usability: ALMEC products and software-defined system design

The robustness and durability of ALMEC products are the result of careful design and high-quality materials. The design of software-defined systems enables immediate interventions in case of anomalies, while making special mobile machines flexible and adaptable.



scopri i nostri prodotti





CAN Wired Controllers

They have all the necessary features for controlling cranes, aerial platforms, compactors, skip loaders, etc. They can also operate under harsh mechanical conditions and withstand the toughest atmospheric and environmental conditions. The wired controllers have an extended power range of 9-36 VDC and can be integrated into CAN networks or serial connections.



Radio Controls

The ALMEC range of radio controls includes a series of transmitter units (handheld push-button units and waist consoles) and a receiver unit, with customizable operating radio frequencies, making them suitable for use in all European and non-European countries.

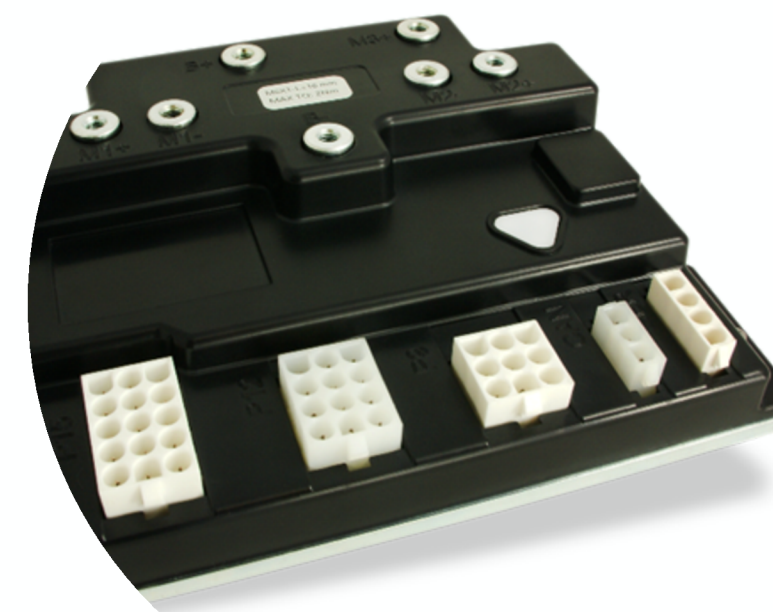
CAN I/O Expansions

ALMEC I/O expansion modules are CANOpen®-based solutions that are cost-effective, modular, and quick to use, allowing for an easy increase in a system's input and output capacity. The variants available in our product portfolio are adaptable to a wide range of applications.



DC Motor Controllers

ECUs designed for dual DC motor drive systems and vehicle management. These devices feature two proportional power channels for traction and steering control. The onboard electronics include a redundant microcontroller to ensure fail-safe operation, along with an integrated and configurable tilt sensor to limit or disable selected functions when the vehicle is tilted.





PLC

Designed to connect to a CAN-Bus network or other serial protocols, these PLCs are controllers for DIN rail installations, ideal for applications where system flexibility and reliability are essential. The PLCs feature an extended power range of 9-36 VDC and comply with PLd and SIL2 standards.

Angular and Tilt Sensors

The ALMEC range of angular sensors includes devices with safety ratings of PLd and SIL2 (dual-channel, redundant) as well as devices with safety ratings of PLc and SIL1 (single-channel), characterized by measurement precision and stability. Using the ALTILTconfig configuration tool, measurement functionalities are customizable directly from a PC. All sensors can be integrated into a CAN-Bus network, and some models are equipped with analog or digital outputs.



Pannelli operatore

ALMEC HMI devices are extremely versatile, installable in the cab, outside the machine, or within control panels. The variants in our product portfolio cover a wide range of applications, from simple display systems to full management centers. Graphics, functionalities, and button configurations are fully customizable, ensuring maximum adaptation to the needs of both the customer and the machine.

IoT Gateway

ALMECdiag Device and Nexus are tele-diagnostic, interconnection, and satellite geolocation gateways designed to connect machines and equipment for diagnostics and control through the Diaboard web platform (formerly ALMECdiag Portal). They can be implemented in a SERIAL or CAN network. The waterproof casing makes these devices suitable for use on machines operating in challenging work environments.



The team

We strongly believe in fostering long-term partnerships with our clients, working closely with them to understand their specific challenges and provide tailored solutions that lead to measurable results. Our team is made up of technicians and industry experts, led by a certified innovation manager, who are dedicated to delivering top-notch service and support throughout the client's digital journey.

Our Divisions:

Hardware Design

Software Design

Firmware Design

Mechanical Design/Integration

System Design/Wiring

Technical-Commercial Support

After-Sales Support

Production



ISO 9001 : 2015

UNI 11814:2021



Certified quality

We are committed to providing solutions that are always of high quality, reliable, and efficient. The certifications and recognitions we have received are tangible proof of our dedication to excellence.



Mesap Member

ALMEC is a member of MESAP – the Innovation Cluster for Mechatronics and Advanced Manufacturing Systems, which brings together the most important and dynamic companies in Piedmont operating in mechatronics. The cluster aims to transfer new knowledge, enhance technological skills, and increase competitiveness.



bioPmed Member

BIOPMED is an innovation cluster dedicated to healthcare, bringing together over 90 members representing the healthcare value chain, including universities, research centers, startups, SMEs, and large multinational corporations.



CiA Member

Since 2006, ALMEC has been a member of CiA – CAN in Automation, the international organization based in Nuremberg that develops and supports higher-level communication protocols based on CAN, such as CANopen and J1939.

Business timeline



Foundation

With expertise and passion for developing innovative, high-value-added electronic systems dedicated to the special machinery equipment sector, **AL.MEC srl** was founded.

2001



Divisions

AL.MEC services, a division dedicated to the mechanical equipment of vehicles, as well as mechanical and hydraulic repairs;

AL.MEC engineering, a division focused on the electronic design of products and systems in the field of special machine outfitting.

2004



Mechatronics

By combining electronics with mechanics to create complex systems for machine control, the **MECHATRONICS** division was born.

The first prototype of the **SPIDER NODE** was developed. This electronic node is pre-wired, programmable, and available in various configurations, housed in a resin-coated casing.

2011



New vision

The evolution towards **smart solutions** is intertwined with ideas and investments focused on the digital realm.

To understand and showcase the potential of **Industry 4.0**, at the threshold of the new industrial model, the startup **ORCHESTRA srl** was established within the Politecnico di Torino's incubator.

2019



Turning point

Two platforms related to the world of programming, Industry 4.0, and IoT come to life:

ALMEClab and **ALMECdiag**, which become a point of reference for customers.

Contestualmente ALMEC acquisisce parzialmente **EUROGI srl**, con l'obiettivo di accelerare la crescita dell'azienda e nel 2023 apre una sede di trasferimento tecnologico in India: **ALMECHATRONICS INDIA**.



2023
EUROGI



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