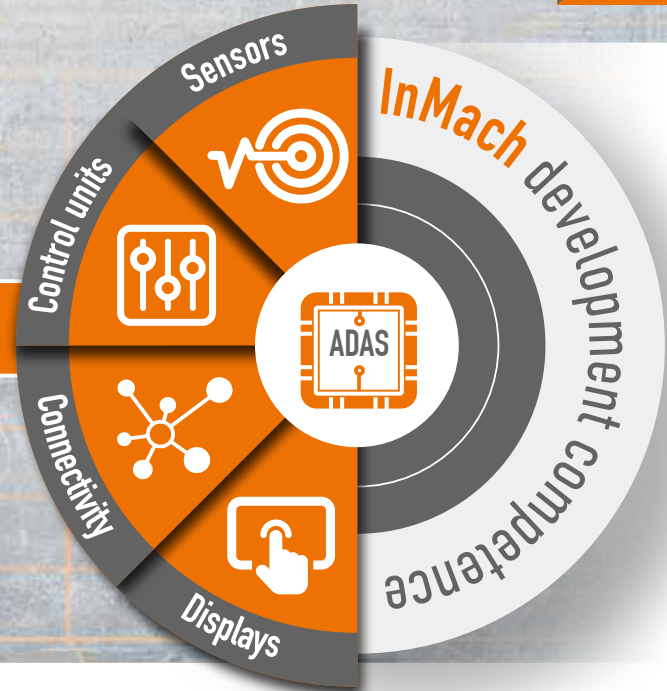


InMach. Control systems
powered by intelligence!



bauma
24.-30. OKTOBER 2022, MÜNCHEN

Visit us at the
Entrance West
Booth: EWE.15

Technical Solution Partner
 **BOSCH**

www.inmach.de





Dr. Boris Kluge CTO Matthias Strobel CEO



Ralf Schrempp
Global Sales Director

InMach Intelligente Maschinen GmbH

We do not make machines – we make your machine more intelligent!

The innovative company InMach from Ulm is a competent partner for driver assistance systems and autonomous machines as well as robots. As a partner for innovative customer-specific solutions, the company focuses on the core competence fields of electronics, sensors, connectivity and displays, from product development and programming to series-ready production. At BAUMA, current developments in the field of control technology in conjunction with software solutions and sensor technology will be presented.

InMach has a history of almost 20 years and originally emerged from a research institute in Ulm. The company is located in Ulm with ideal digital infrastructure, expansion possibilities and optimal public transport connections. The more than forty highly qualified employees are motivated by the unique opportunity to help shape the future of a fast-growing specialist, especially in the field of robotics. The development of novel, intelligent products from customer consulting, analysis, programming and prototype construction to series production tires excites the entire team.

In addition to its own development expertise, InMach is also an official partner of Robert BOSCH GmbH and offers the entire aftermarket product range with a focus on sensor and actuator technology, including support for product integration on request.

We are an innovative...



DEVELOPMENT AND SYSTEM PARTNER

INMACH Intelligente Maschinen GmbH is a development and, above all, system partner for demanding IT and engineering projects.



SERIAL OUTFITTER

We offer intelligent control systems for your series production of commercial vehicles of all kinds. You will encounter our products and developments both in the garden, logistics, on ski slopes, in rescue services, on construction sites, in forests and woodlands and, above all, in agriculture.



SUCCESS BRINGER

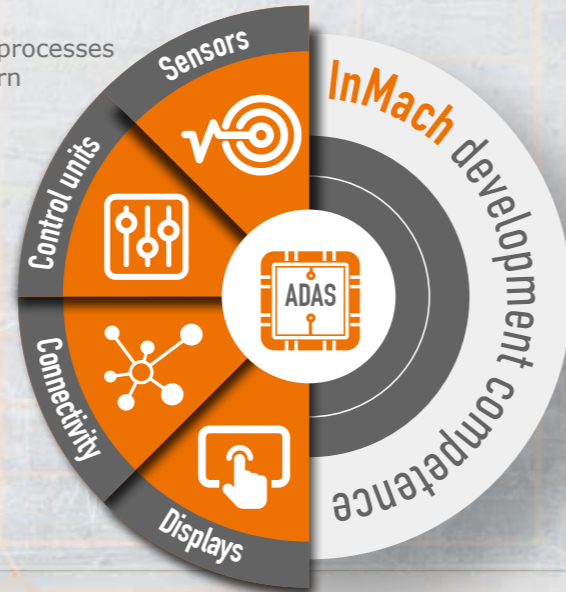
With the help of our solutions, machines can be used more effectively. Driver assistance systems relieve the burden and help with the really important work tasks. Artificial intelligence and environment sensing makes daily work even easier and safer.



InMach ISY Discover our smart products

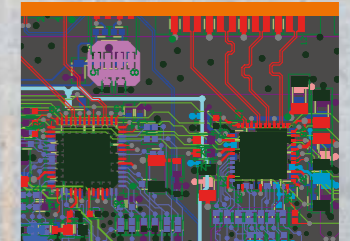
InMach's control systems for autonomy, driver assistance and application technology in combination with proven sensor and actuator technology from the automotive and industrial sectors open up unimagined new possibilities.

Development standards and processes are based on the most modern software and hardware. Functional safety takes a high priority.



InMach ISY Intelligent electronic components and programming

- Standard electronics
- High-end electronics
- Power electronics
- Special electronics with sensors
- Telematics and connectivity



InMach ISY – The InMach ISY product range makes your machine smarter

Standard electronics

ISY **NetIO/L** – Performance computer with standard interfaces

Existing I/Os are controlled and read in real time via an automotive Ethernet connection. Use of Cortex-M7-based microcontrollers. Different configuration levels (S, M or L) are available.



High-end electronics

ISY **ADAS** – Modular system for driving assistance and automation

This embedded PC consists of an ARM Cortex A8 processor for visualization tasks and connectivity via CAN and Ethernet. Up to two COM Express processor modules can be installed.



ISY **SPU** – Modular system for driving assistance safety ready

The SPU is a first generation Safe Processing Unit with four main CPU cores and one embedded core, two Gigabit Ethernet ports with passive PoE and three CANFD interfaces.



Power electronics

ISY **MC 201** – High power and compact for drive technology

This multi-controller is suitable for controlling two Bosch ECA S2 motors.



ISY **MC 401** – High power and versatile for drive technology

This multi-controller is suitable for controlling four BLDC motors up to 30 A each. Additional sensor technology (3-axis gyroscope, ultrasound) is possible.



Special electronics with sensors

ISY **UM 2** – Powerful control unit for ultrasonic sensors

With the ISY UM 2 up to twelve Bosch ultrasonic sensors can be evaluated individually.



Telematics and connectivity

ISY **CAN-Gateway** – Reliable CAN-BUS to ethernet interface

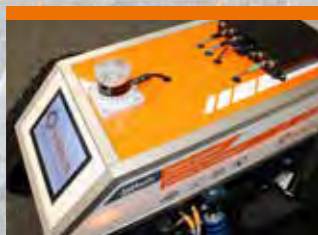
This gateway can forward up to six CAN buses.



ISY **Ethernet-Gateway** – Highly flexibel broadband interface

Up to four automotive Ethernet devices (for example ECU, cameras, sensors) can be connected here.





InMach Robo on the bauma 2022

The company's high level of expertise can be experienced live through the InMach Robo. We develop and manufacture your „Control System“ for your commercial vehicle.

The project shows our innovative customer-specific solutions in the core competence fields of **electronics**, **sensors** and **connectivity**. By means of environment sensing our InMach Robo observes the trade fair booth. It reacts to people on the booth and can understand and classify gestures. At the same time, the display visualizes the perception of the InMach Robo.

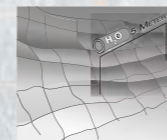
Driving assistance systems, **autonomous working machines** as well as **robotics** are particular specialties of InMach Intelligente Maschinen GmbH.

In addition to software- and customer-specific electronics, we are also happy to advise you on sensor technology and environment sensing depending on your exact task.

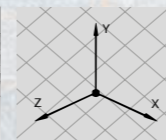
Versatile fields of application

The fields of application for InMach solutions are surprisingly diverse. In addition to applications for **logistics**, **slope maintenance**, **cleaning machines** or **municipal vehicles**, the focus is on **agricultural and forestry machinery** and, above all, **construction machines**.

The hardware solutions used here are the InMach ISY modules, which have a perfect balance of performance and economy and, in combination with coordinated software modules, ensure maximum efficiency.



Augmented Reality
3D Modelling



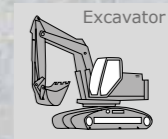
Cartesian
Controller



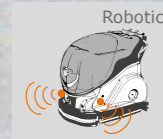
Truck



Snow groomer



Excavator



Robotic



Field sprayers

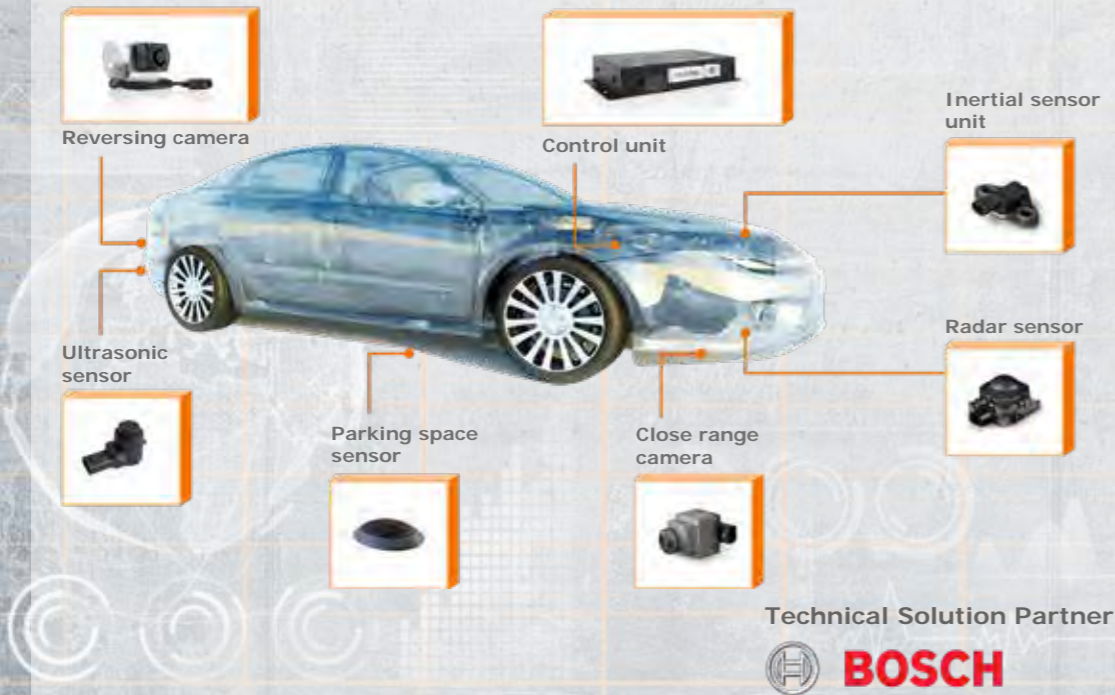


Tractor+trailer



Your
machine

We are official BOSCH Technical Solution Partner



Extract from our references



HORSCH

InMach products used:
Special customer specific Product development Boom Control
Extremely smooth boom position even on very uneven terrain and at high working speeds (Boom Control).



GEA Engineering for a better world.

InMach products used:
Electronics for environment sensing with corresponding navigation software (ISY UM 2)
Automatic feeding robot with good feed mix and precise control.



AQLATUS

InMach products used:
Special customized control electronics with corresponding navigation software
Fully autonomous cleaning robot with reliable navigation and environment sensing. Additionally with fully autonomous service station.



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Technical Solution Partner



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