

# Your Benefits



## ONE STOP SHOP

BODAS is a holistic ecosystem – from IoT solutions to software and electronic hardware for the off-highway market – available off the shelf, to cover your drive and control needs all from one source.



## OPENNESS AND MODULARITY

Take it all or pick what you need – you can integrate our entire BODAS ecosystem or choose only parts of it. Combine BODAS products according to your needs and requirements.



## FUNCTIONAL SAFETY

With a high degree of flexibility and ease of use, the BODAS ecosystem design is ready to meet state of the art functionality regarding machinery directives and functional safety up to PL\_d according to ISO 13849 and ISO 19014, as well as AgPL\_d according to ISO 25119.



## CYBER SECURITY

The BODAS ecosystem, through integration and use of automotive based security solutions, addresses all relevant layers to reach a secure mobile machine control and is robust against cyber attacks.



## READY FOR AUTOMATION

Enabling advanced assistance functions by combining automotive proven surround sensing components with matching software features.



## BOSCH FACTOR

Using Bosch automotive leading edge quality and technology, BODAS offers an outstanding portfolio designed and specified by Bosch Rexroth to fulfill the mobile market requirements.

## Bosch Rexroth Digital Application Solutions

### Our DNA



Open



Scalable



Easy Access

## Bosch Rexroth Digital Application Solutions BODAS



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RE98232/2021-08-27  
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Explore more intelligence!



## ACCESS THE DIGITAL TRANSFORMATION

Get easy access to more productivity, more efficiency, more automation with the BODAS ecosystem.



**We look at the entire data stream: From the source of the data, to turning it into action. We know vehicles and their data streams, as we have been designing drive and implement control software for decades. This is why we know which data is available and can be re-used for other purposes far beyond the initial purpose.**

**Our software solutions cover a wide range to optimize your machine: Standard, configurable, off-the-shelf application solutions for machine functions, software libraries and modules as well as an integrated software development architecture. BODAS Software includes tools for programming, parameterization and diagnosis of BODAS Hardware and systems. Perfectly harmonizing with Rexroth hydraulics, BODAS Software enables ideal machine control.**

**Our mobile electronics platform is open, scalable and freely accessible. It covers control units, connectivity devices, sensors and human machine interfaces for mobile machines. BODAS Hardware is either freely programmable or comes with a holistic control software. Both options are ready for BODAS Connect. Start your journey towards the digital transformation with state of the art hardware.**

## INTERNET-OF-THINGS SOLUTIONS

1.

### Connectivity devices

A robust, open and Linux-based gateway to your machine: safe, secure, configurable and scalable connectivity hardware plus a comprehensive and user-friendly device management service.

2.

### IT Infrastructure

Our entire BODAS Connect infrastructure is open and modular. Device management and data management are distinctly separated and individually bookable at different scales.

3.

### Apps

Analyze and visualize your collected data the way you need it. Choose from a vast selection of off-highway specific apps covering fleet management, vehicle health, remote R&D services and vehicle operations workflows. You can also integrate your own data analyzing algorithms on the edge or in the cloud.

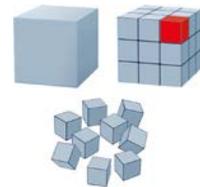
4.

### Over-the-air software maintenance

Profession remote campaign management not only at single vehicles, but at entire fleets.



## SOFTWARE PORTFOLIO & TOOLS



### Standard application software

We offer a wide range of off-the-shelf standard application software modules for different functions. These can be embedded flexibly into your application. We also offer comprehensive engineering service for your customized solutions based on your requirements.



### Software architecture

The integrated development environment based on MASAR "Mobile Application Software Architecture" supports you in software management, reusability and the integration of model based software development using tools such as MATLAB®/Simulink®.



### Tools

We supply tools for state of the art machine updates with configuration, calibration and diagnostics as well as tools for efficient and user-friendly programming. This also includes professional over-the-air (OTA) services for software maintenance and updates within your vehicle network via BODAS Connect.

## HARDWARE PORTFOLIO



### Controllers

The controllers are state of the art, automotive technology based scalable and pin for pin compatible controller platform, ready to be programmed with your application solution.



### Sensors

We provide a comprehensive sensor family, offering an innovative portfolio with the highest accuracy over the lifetime of your machine and ready to be used in various safety applications.



### Human-machine interfaces

Our HMI portfolio includes displays, EH-joysticks and pedals. All components are harmonized with the BODAS ecosystem to ease the integration in your machine.



### Telematic Control Unit

Connect your machines to the Bosch (or any other) IoT infrastructure. They are based on a micro-processor technology with a Linux operating system, ensuring flexibility and readiness for future requirements.



### Surround sensing

Offers you sensor supported control of the environment for assisted vehicle movement and operations based on Rexroth know how and Bosch quality.