Mobile automation
Easy automation for machines on the move
The demands placed on modern mobile machinery have evolved dramatically over the years. With new functions being added all the time and requirements for operating efficiency and quality higher than ever, these vehicles need an automation system that is both powerful and scalable. B&R makes it easier than ever to implement automation solutions for construction equipment and municipal vehicles as well as for agriculture and forestry applications.
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Four challenges

Digitalization
To succeed at digital transformation, you need a solution partner with a clear vision, a broad portfolio and strong local support.

Complexity
To survive, you need to master a growing array of custom machines and variants with integrated safety technology, robotics and telemetry.

Lifecycles
To keep up with fast moving market demands, you need to shorten innovation cycles for new functions.

Markets
To win in global markets, you need to tame a jungle of local standards and certifications.
One solution

Understanding your requirements and working together to implement solutions – that is our mission.

At B&R, we put all of our knowledge, experience and creativity into developing technology that shapes the future of manufacturing. Together, we will set trends and shape the future.

Our motto “Perfection in Automation” goes hand-in-hand with carrying out our everyday tasks. To us, that vision means providing a complete automation solution that gives you maximum flexibility and economic efficiency.

It also means cultivating long-term relationships based on trust. We’ll accompany you from start to finish – from conceptual design to development and through to after-sales service. With B&R at your side, you can count on a solution-oriented partner that always keeps the bigger picture in mind.

As your technology partner, B&R will provide you with the support you need every step of the way – We combine hardware, software and expertise to create future-proof solutions for the international market.
Easy automation

- Automated guided vehicles
- Construction equipment
- Municipal vehicles
- Agriculture and forestry industry

Mobile Automation: Easy automation for machines on the move
Mobile automation

The mobile automation lineup
B&R continues to open up new possibilities in mobile automation with its innovative X90 product line for mastering mobile control and I/O tasks. The comprehensive set of standardized components is perfect for implementing flexible automation concepts.

The heart of the X90 system is a controller with a powerful ARM processor and up to 48 multifunction I/O channels. Basic features include interfaces for CAN, USB, Ethernet and the real-time POWERLINK bus system.

To control remote sensors and actuators on mobile equipment, B&R offers module X90BC124.32-00. It can be connected to the X90 controller via CANopen and has 32 multifunction inputs and outputs.

With openSAFETY, the bus-independent safety protocol, the safe X90 system offers the option of connecting decentralized safe I/Os or sensors. The communication corresponds to SIL 3 and is also secured using non-safe modems wirelessly via UDP.

B&R also offers its X90 control system with integrated safety technology. Intelligent safety functions and extremely short response times are the key to a whole new realm of possibilities for the safe operation of outdoor equipment and mobile machinery.

The control system meets the ISO 13849 mobile machinery requirements up to PL d as well as the ISO 25119 requirements up to A2PL d. All 48 of the I/O channels on the X90 controller can be used where appropriate for safe or non-safe functions or combinations of the two.

B&R provides a variety of TÜV-certified safety functions. The task of safety programming itself involves little more than simply configuring and linking the safe software blocks via ladder diagram. This reduces the complexity, workload and time required for certification.

X90BC124.32-00 is a configurable CANopen slave module for sensor and actuator management. 32 multifunction inputs and outputs are available for a wide range of tasks. The robust die-cast aluminum housing enables use in harsh ambient conditions.

B&R offers a variety of option boards to allow flexible adaptation of the X90 control system to different needs. These include a strain gauge module for force measurement or electrically isolated relay outputs. This way, users can perfectly tailor the hardware to meet their requirements without losing the advantages of a standardized product. The range of available functions is being expanded all the time.

The standardized CANopen interface and multifunction I/O channels make the X90 bus controller extremely versatile.

A variant of the X90 controller is available with an integrated B&R SafeLOGIC safety controller.

The X90 system has a modular structure that can be adapted with option boards.
With its built-in IP69K protection, the powerful PC is ideally suited for use in harsh environments. The PC is equipped with an Intel Core-i processor that is scalable over a wide range from the Celeron with 2.2 GHz up to the Core i7 with 2.8 GHz.

Option boards
Option boards for the PC add interfaces for connecting external I/Os like CAN or POWERLINK.

Real-time control
Automation Runtime embedded turns the PC into a high-performance real-time capable controller. B&R Hypervisor allows multiple operating systems to be used on one computer simultaneously.

Edge computing
B&R offers tools for implementing PC-based tasks like predictive maintenance, big data analytics for machine optimization or security gateways.
Reliable operation
The Power Panel features die-cast aluminum housing for mechanical stability and a multi-touch display that can even be used in the rain. The readability of the display can even withstand direct sunlight.

Many possible uses
The robust panel is ideal for indoor and outdoor HMI applications, such as those used in truck cabs or on machines for road construction, field work and earthmoving operations. The panel is available in 5”, 7” and 10.1” diagonals.

Flexible HMI
The web-based Power Panel features the platform- and operating system-independent HMI solution, mapp View. Create modern HTML5 applications with ready-made widgets.

Practical accessories
Available mounting types include standard brackets, panel mounting or front plate mounting. A variety of cables and connectors are also available.
Engineering tools for all tasks

Automation Studio

Automation Studio is B&R’s integrated software development environment with tools for all phases of a project. Controllers, drives, communication and HMI devices can all be configured in one environment. That reduces both integration time and maintenance costs when developing new mobile machinery.

mapp Technology

Modular mapp software components simplify development of new programs and accelerate development time for machine software by a factor of three. This lets programmers focus on their main task: Implementing automation processes in the application software.

Simulation

B&R provides the necessary tools for modeling and simulation in MATLAB/Simulink and MapleSim. Each developer can work in their preferred language, allowing for faster and easier development of mobile machines.

Software stacks

B&R offers a certified ISOBUS stack and corresponding toolchain for connecting tractors and implements. The ISOBUS stack covers all the relevant aspects of the ISOBUS standard.
Contact

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Follow us!
Integrated automation
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