

PRESS INFORMATION

Secure Over-the-Air Updates Save Users Time and Money

Manuela Kessler | 21.06.2022 | Lohr am Main | PI 014/22

Bosch Rexroth enables large-scale remote updating of off-highway machines – this will also be rolled out for third-party controllers in the future



Progressive off-highway automation requires large-scale remote updates to be enabled: The new BODAS Connect campaign management is taking care of that right now. (Image source: Bosch Rexroth AG)

Bosch Rexroth will be showcasing a solution for remotely updating off-highway machines at bauma 2022: The new BODAS Connect module enables secure over-the-air updates of control units, regardless of the size of the vehicle fleet or how it is spread out. Manufacturers can now roll out new features, amend important parameters and ensure compatibility with new attachments across the board. The new OTA service works with all Rexroth controllers and in the future will also work with third-party devices where implemented by partners. Bosch Rexroth is therefore significantly helping to reduce the time and costs involved in the case of increasingly software-based vehicles with semi-automated and autonomous functions.

Manufacturers keen to swiftly roll out innovative functions require secure over-the-air services for the electric/electronic vehicle architecture. The new campaign management for blanket OTA updates reduces economic risks for manufacturers, OEMs and service providers. Ensuring that software is always up-to-date prevents the need for expensive recalls and field work, and lightens the operational and administrative load of service personnel.

Bosch Rexroth's OTA mechanisms have been tried and tested over many years and ensure complete and continuous machine availability. The processor-based Rexroth Connectivity Unit (RCU) functions as a secure connection between the cloud and the vehicle. The robust telematics unit which features multiple safeguards first of all ensures a full file transfer, after which the corresponding authorization is provided before the target device is then updated in the vehicle via the CAN bus using a wired connection. This update process is therefore as stable and secure as the traditional update method using hardware such as a laptop and a diagnostics tool.

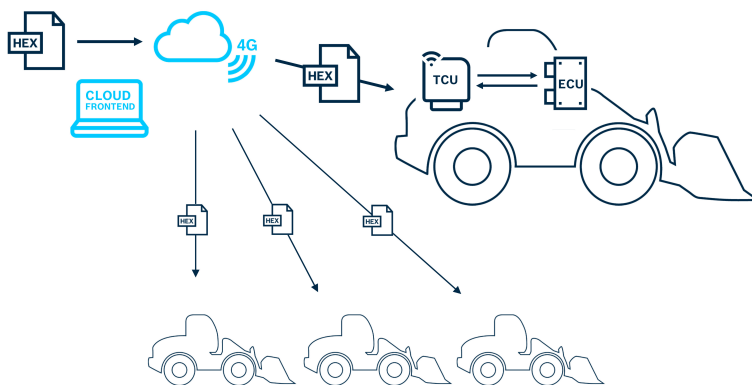
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The BODAS Connect modular telematics architecture enables an asynchronous and parallel approach and therefore meets two other basic requirements for large-scale OTA updates. Firstly, update managers and machine operators can carry out the update independently of each other. Secondly, blanket updates can also be triggered simultaneously from a single location.

The new campaign management with its integrated version control enables users to always have an overview of the current software status of their vehicle fleet. As the size of the fleet increases, they benefit from significant time and cost savings. There are also other advantages linked to the reduced complexity in heterogeneous device environments. This is because the modular, open and scalable BODAS Connect architecture can be used not only to update Rexroth controllers over the air but also third-party control units too.

Essentially, BODAS Connect creates the technological basis for large-scale flashing of a wide range of different control unit versions and models – including third-party controllers. In the case of the latter, Bosch Rexroth will play the role of a neutral technology partner, while the relevant partners add the individual flash sequences. Relevant pilot projects with international manufacturers are already under way.

Bosch Rexroth will also be showcasing two other OTA services at bauma 2022. The Diagnostics Over the Air and Parameter Over the Air services expand the range of available functions by adding remote diagnostics and targeted remote parameter adjustments. All OTA modules are displayed via a user-friendly common front end with uniform cloud management, enabling users to benefit from additional time and cost advantages.



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Basic Information Bosch Rexroth

As one of the world's leading suppliers of drive and control technologies, Bosch Rexroth ensures efficient, powerful and safe movement in machines and systems of any size. The company bundles global application experience in the market segments of Mobile Applications, Machinery Applications and Engineering, and Factory Automation. With its intelligent components,

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customized system solutions and services, Bosch Rexroth is creating the necessary environment for fully connected applications. Bosch Rexroth offers its customers hydraulics, electric drive and control technology, gear technology and linear motion and assembly technology, including software and interfaces to the Internet of Things. With locations in over 80 countries, more than 31,000 associates generated sales revenue of around 6.2 billion euros in 2021.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 402,600 associates worldwide (as of December 31, 2021). The company generated sales of 78.7 billion euros in 2021. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to facilitate connected living with products and solutions that either contain artificial intelligence (AI) or have been developed or manufactured with its help. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first quarter of 2020. The basis for the company's future growth is its innovative strength. At 128 locations across the globe, Bosch employs some 76,100 associates in research and development, of which more than 38,000 are software engineers.

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