

PRESS INFORMATION

Remote updates now for off-highway control units from other manufacturers too

Manuela Kessler | 26.09.2023 | Lohr am Main / Germany | PI 030/23

Bosch Rexroth launches FOTA service for standardized over-the-air updates for control units from other manufacturers too



Universal solution for firmware updates over the air: The BODAS Connect Universal Flasher from Bosch Rexroth can update a wide range of control units in off-highway vehicles. This saves time as well as developing, operating and servicing costs. (Image source: Bosch Rexroth AG)

Bosch Rexroth now provides a universal service for the remote updating of third-party control units and other CAN bus devices in off-highway vehicles. With the new BODAS Connect Universal Flasher, OEMs, fleet operators and system integrators can update firmware over the air (FOTA) in order to transfer new functions or parameters in a cost-effective manner. It no longer matters whether control units from Bosch Rexroth or other manufacturers are to be updated. The standardization of the remote update process via the proven BODAS Connect Device Portal reduces development, operating and servicing costs. The Universal Flasher allows further efficiency increases in combination with the campaign management for mass updates, which will also be extended to third-party devices by the end of the year.

With the universal FOTA service, Bosch Rexroth is helping to achieve permanent time and cost reductions against the backdrop of increasingly software-based vehicles with partially automated or autonomous functions. The service is aimed at anyone who wants to transfer new functions or parameters to electronic vehicle architectures regardless of location, for example as part of pilot projects, pre-production or mixed fleets.

The Universal Flasher for Rexroth and third-party devices is available as part of device management for the BODAS Connectivity telematics package. Bosch Rexroth obtains no information regarding applications, IP addresses or flashing processes when the service is used. Such information remains with customers at all times.

Compatible with all CAN bus devices

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Over-the-air flashing is simple and secure via the Rexroth RCU telematics unit and a pre-integrated software stack with relevant services based on the UDS (Unified Diagnostic Services) CAN bus protocol. All UDS-compliant third-party devices that are connected to the RCU via CAN bus such as ECUs (Electronic Control Units) for engine control or displays are now automatically displayed alongside the Rexroth control units in the web-based front end of the BODAS Connect Device Portal.

The flash sequence is created in an abstracted manner using a patented process. Instead of programming algorithms, prepared functions are simply provided with parameters and listed in the appropriate order for machine processing with no need for in-depth programming knowledge.

Complies with sector-specific security requirements

Compliance with the UDS CAN bus protocol ensures that the sequences executed correspond to the current security mechanisms. The RCU functions as a secure gateway between the cloud and the vehicle. To ensure seamless machine availability, the new firmware is first transferred in full to the robust RCU telematics unit. Following authorization, the target device is then updated in the vehicle via the CAN bus using a wired connection. The update process is therefore as stable and secure as the traditional update method using hardware such as a laptop and a diagnostics tool.

The new universal FOTA service uses the proven BODAS Connect flasher interface. Through the connection to the open telematics ecosystem, Bosch Rexroth is gradually extending the benefits of the previous OTA services to third-party devices. The flasher for third-party devices will soon be integrated into the campaign management of BODAS Connect for this purpose. This way, manufacturers, OEMs and service providers can reduce economic risks such as recalls and unplanned call-outs and permanently reduce the operational and administrative burden on their personnel.

As an open telematics ecosystem, BODAS Connect offers the technical requirements for flashing even for ECUs that are not UDS-compliant.

Bosch Rexroth at Agritechnica: Hall 16, Booth A08.

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 and Industrial Applications as well as Factory Automation. With its intelligent components, customized system solutions, engineering 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 32,000 associates generated sales revenue of around 7.0 billion euros in 2022.

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Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 421,000 associates worldwide (as of December 31, 2022). The company generated sales of 88.2 billion euros in 2022. Its operations are divided into four business sectors: Mobility, 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 470 subsidiary and regional companies in over 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. The basis for the company's future growth is its innovative strength. At 136 locations across the globe, Bosch employs some 85,500 associates in research and development, of which nearly 44,000 are software engineers.

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