Well equipped for Europe: AUMOVIO introduces the smart tachograph VDO DTCO 4.1a

* **Updated version of the DTCO 4.1 offers all the functions specified in the EU Mobility Package, including OSNMA-certified position data**
* **Multi-stage retrofit of the European commercial vehicle fleet in full swing**
* **Dirk Gandras, head of Tachograph Program Management at AUMOVIO: “The DTCO4.1a is the first industrial application to offer secure GNSS functionality from a European source”**

Villingen-Schwenningen, Germany, March 26, 2025. AUMOVIO has received type approval for an updated version of the smart tachograph (V2) VDO DTCO 4.1 and has started its roll-out. The DTCO 4.1a meets all the requirements of the updated EU Regulation No. 2016/799, both technologically and functionally. It provides reliable data for more efficient controls in international freight transport and for many other applications in optimized fleet management. “The updated version of the smart tachograph comes at just the right time, even before the EU officially launches the OSNMA certified Galileo authentication service,” says Dirk Gandras, head of Tachograph Program Management at AUMOVIO. ”The DTCO 4.1a is the first industrial application to offer secure GNSS functionality from a European source.” The DTCO 4.1a is available now as a new device and from this summer as a software update for the DTCO 4.1.

More transparency in international freight transport through trusted data

Like its predecessor, the DTCO 4.1a is essential for improved documentation of driver postings and cabotage journeys. To do this, it uses data from the European satellite navigation system Galileo, with which the vehicle position and border crossings are automatically detected via an enhanced GNSS module (Global Navigation Satellite System) and recorded in the mass memory. The official authentication of this data via OSNMA (Open Service Navigation Message Authentication) will make this data even more secure and reliable in the future. “This technology further increases and improves the security of the tachograph system,” explains Egon Warkentin, Manager Legal Requirements Commercial and Special Vehicles at AUMOVIO. In addition, the vehicle's position data is recorded at the beginning and end of the daily working hours, after every three hours of total driving time, and during loading and unloading. “We expect the EU authorities to officially authorize the OSNMA service for the system in the near future. Thus, the transition phase for the DTCO 4.1 will be over five months after its introduction.”

Connectivity enables a wide range of applications

In addition to data security, connectivity is also a top priority for the DTCO 4.1a. Like all smart tachographs, it is equipped with an external DSRC (Dedicated Short-Range Communication) antenna. Since mid-2019, this has allowed law enforcement authorities to retrieve vehicle data and information throughout Europe using a DSRC reader (so-called beacon) and thus carry out targeted vehicle checks in suspicious cases. Via an integrated Bluetooth interface, the DTCO 4.1a tachograph can be conveniently monitored and controlled using external devices such as smartphones. AUMOVIO offers the VDO Fleet app for this purpose, which is available for both iOS and Android. The app is linked to the in-house fleet management platform VDO Fleet, so that, for example, the legally required data downloads as well as manual supplementary entries can be carried out easily and efficiently. In addition, an ITS interface (Intelligent Transportation Systems) will enable many more use cases in the future. Based on the reliable, secure, and clearly attributable data from the tachograph, applications will be possible that go far beyond legal and regulatory requirements and can make work easier for commercial vehicle fleet operators. One example of this is the integration of tolling services, known as tachograph tolling.

Multi-stage retrofitting in full swing

The provisions of the EU Mobility Package have been implemented since 2022. The aim is to ensure better working conditions, fairer competition, and greater road safety. In accordance with Implementing Regulation EU 2021/1228, this also includes the gradual introduction of the second version of the smart tachograph for various commercial vehicle classes. Since August 2023, newly registered commercial vehicles with a permissible total weight of more than 3.5 tons have been equipped with the DTCO 4.1 ex works. In 2024, the first wave of retrofitting followed for all vehicles that previously had an older analog or a digital tachograph of the first generation (up to DTCO3.0a) and were used in cross-border traffic. By August 19, 2025, all other vehicles over 3.5 tons in international transport must also have their smart tachographs of the first version (such as the DTCO 4.0) replaced with a new device. AUMOVIO recommends that the retrofit be carried out as part of the mandatory periodic tachograph inspection to reduce downtime due to unscheduled visits to the workshop. From summer 2025, when the first DTCO 4.1 devices return to the workshop for the mandatory bi-annual calibration, a software update will also be available. The update will then make the new functions of the DTCO 4.1a available for these devices as well.

AUMOVIO continues the business of the former Continental group sector Automotive as an independent company with its spin-off in September 2025. The technology and electronics company offers a wide-ranging portfolio that makes mobility safe, exciting, connected, and autonomous. This includes sensor solutions, displays, braking and comfort systems as well as comprehensive expertise in software, architecture platforms, and assistance systems for software-defined vehicles. In the fiscal year 2024 the business areas, which now belong to AUMOVIO, generated sales of 19.6 billion Euro. The company is headquartered in Frankfurt, Germany and has about 87.000 employees in more than 100 locations worldwide.

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Images and captions

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| AUMOVIO\_PP\_DTCO4.1a | At AUMOVIO, the current version of the 2nd generation smart tachograph is called DTCO 4.1a. |
| AUMOVIO\_PP\_DTCO4.1a\_Truck | The DTCO 4.1a offers all the functions specified in the EU Mobility Package. |
| AUMOVIO\_PP\_DTCO4.1a\_Infographic | Overview of the DTCO 4.1a’s main functions. |