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# Everything at a glance.

We support your daily business and increase your efficiency with intelligent solutions.





The Smart Tachograph 4.0 - secure, practical and precise











DSRC ommunication

GNSS position da

ITS standardized

KITAS 4.0 schograph sensor



# The Smart Tachograph 4.0 - secure, practical and precise

The latest-generation digital tachograph from VDO, the DTCO<sup>®</sup> 4.0, ensures that your company is ready for the future.

- The DTCO® 4.0 can be quickly and easily integrated into the existing vehicle environment. No complex network configuration is required.
- The DTCO® 4.0 meets the requirements of the new EU regulation 165/2014.
- The DTCO® 4.0 provides you with additional data to make your fleet even more efficient. Future functions such as the automatic transfer of

the payload or communication with toll infrastructure are possible.

 The DTCO® 4.0 is easy to configure in accordance with your requirements using the DTCO® Configuration app and company card.

# Fast and simple commissioning

The new DTCO® 4.0 can be effortlessly integrated into existing vehicle technology. Even the plug connections are identical to those of previous models. Thanks to the integrated GNSS antenna and DSRC interface, the DTCO® 4.0 does not need any additional electronics nor adjustments to the vehicle CAN bus.

You simply need a passive DSRC antenna to commission the smart tachograph. This simple installation and integration process saves you time, effort and money. An overview of all DTCO 4.0® ready auto repair shops is available at www.fleet.vdo.com

## Convenient configuration via DTCO® Configuration app

Like its predecessors, the DTCO® 4.0 can also be preconfigured via the DTCO® Configuration app and DTCO® SmartLink. For example, you can configure which tachograph activity is to be carried out when the ignition is switched on or off.

You can also configure up to eight CAN messages that are then available on request for the further analysis of vehicle and driver data in the DTCO®. With the DTCO® Configuration app, multiple settings can be configured without having to visit an auto repair shop.

#### New Legal Requirements in 2019

Starting June 15, 2019, newly registered or newly equipped commercial vehicles over 3.5 metric tons that are used for commercial purposes must be fitted with a new-generation digital tachograph.

Proven Design – Latest Technology

# Proven Design – Latest Technology



# Automatic positioning with GNSS

The new DTCO® 4.0 features the legally required GNSS interface and an integrated GNSS antenna offering reliable reception.

This saves you having to go through the time-consuming process of installing an additional external antenna and ensures access to satellite systems such as Galileo, GPS and GLONASS. The DTCO® 4.0 records the vehicle's position data at the start and end of the working period and after three hours of accumulated driving time.



The interaction between the DTCO® 4.0 and the KITAS 4.0 has also been improved cryptographically. A state-of-the-art encryption method and new sealing specifications make the system more robust and secure against manipulation. This means that you can be sure that the digital tachographs will work as intended for your company.

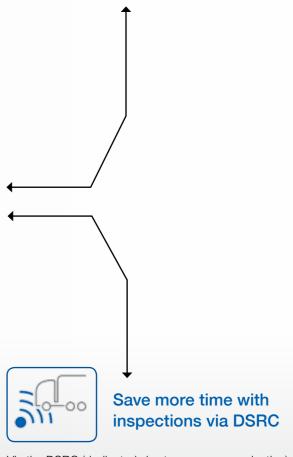
manipulation

protection against



# Secure data transfer for vehicles and drivers

The DTCO® 4.0 enables secure data transfer via the standardized ITS (intelligent transportation system) interface to fleet management systems such as VDO TIS-Web® or VDO FleetVisor. Over 70 different data sets ensure even more efficient fleet management. Whether drivers have given their consent for their personal data to be passed on is also indicated. This facilitates further data protection-compliant processing.



Via the DSRC (dedicated short-range communication) interface of the DTCO® 4.0, regulatory authorities can now retrieve vehicle data and information about security breaches during the journey. Time-consuming inspections are then only carried out in case of suspicion. Personal driver data is not transferred during this process as a general principle.

VDO Fleet - the perfect solution to meet your needs Powerful services for experts



# VDO Fleet – the perfect solution to meet your needs.

Optimising costs, operational processes and personnel planning, fulfilling statutory requirements – the market is constantly imposing new demands on transport and logistics companies. Tailored to meet market demands, our comprehensive product portfolio enables us to help you with the appropriate solutions.



**Effortlessly comply with legislation**We offer numerous products that simplify compliance with statutory requirements and consequently promote an efficient operational process.



#### Efficient vehicle management

Use our efficient vehicle management products to fully exploit your fleet's potential and our innovative solutions to reduce fuel and



#### Efficient driver management

Our efficient driver management products enable you to constantly monitor driving and rest times, clearly plan the assignment of staff and significantly improve internal company communication.



#### Efficient logistics management

Optimise order and route planning and comfortably increase the level of fleet safety - with our powerful and efficient logistic management



#### Efficient trailer management

With our trailer management solutions, you will always know where your trailers are at any time, what their technical condition is and what their current cargo is. That allows you to optimise the utilisation of your fleet and to be able to quickly react to technical defects.

# Powerful services for experts.

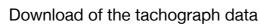
Now more than ever, optimal planning is a decisive factor when it comes to the profitability of logistics and transport companies. That is why, with our fleet management portal TIS-Web®, we offer pioneering, customised fleet management solutions to meet diverse, company-specific requirements.

Effortlessly comply with legislation	Download of the tachograph data	Archiving the tachograph data	Analysis of tachograph data	Analysis of speed limit violations
	Working time directives	Vehicle check	Display of violations	Evaluation of driving and rest times
	Manual amendments and apps	TIS-Web® Connect (Third party interface services/provider)		
Driver management	Driver scorecards using individual criteria	Downloading and archiving of driver card data	Communication Driver – Fleet manager	Parking space management
Vehicle management	Vehicle check	Fuel and route profiles	Analysis of vehicle data	PAYD/insurance services
	Vehicle utilisation and analyses	Tyre management	Cargo management	
Logistics management	Positioning, route tracking and geofencing	Communications service	Freight and order management	
Trailer management	Cargo management	Trailer check	Route tracking	

# The optimal system for every fleet.

With a wide range of products and services, we offer the right system for any requirement and fleet size. The option of supplementing our solutions with additional functions ensures that you maintain the required flexibility, competitiveness and future security over the long term.



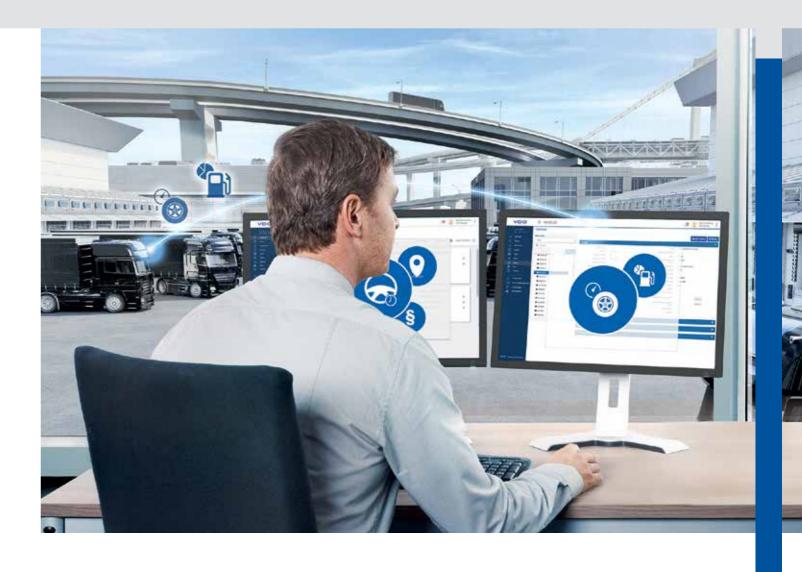


Tailored to various types of applications, a variety of innovative download solutions are available for the legally mandated downloading of tachograph data, which are all notable for their user-friendliness and high level of data security. In addition to manual products, we also offer particularly efficient and time-saving automatic wireless solutions.



# Archiving the tachograph data

The data of the digital tachograph must be kept for a period of one year\* and traceable backup copies must be created. With the solutions from VDO, you are on the safe side and have complete mass storage data.





## S Analysis of tachograph data

With our fleet management solutions, you benefit from the professional analysis of your tachograph data. They enable you to establish at an early stage whether all the downloads have been carried out without fail and to react quickly if any legal provisions have not been complied with.



## Analysis of speed limit violations

Speed limit violations can also be analysed simply and quickly. That allows you to quickly talk to your drivers about violations and improve their driving behaviour.

\* German legislation



## Working time directives

Information regarding completed and remaining driving and rest times, including warnings, prevents infringements against working time regulations and can be used to optimise personnel planning.



## Vehicle check

Intelligent solutions make it easier for your drivers to conduct their daily vehicle checks. That means, for example, that results can be recorded with smartphones, comments on defects can be added and transmitted to the office with up to two photos. This allows for planning to fix any defects even before the vehicle returns to its location.





## Display of violations

Violations of individual drivers will be clearly displayed graphically, which allows tendencies to be identified at a glance. Violation reports can be created with the system and then sent to the respective driver. That creates awareness for the issue of fines and, using specific data, you can discuss with your drivers how violations can be avoided in the future.



# Evaluation of driving and rest times

Thanks to VDO solutions, driving and rest times required by law can be easily adhered to and fines avoided. The VDO Counter function notifies drivers about upcoming breaks and their duration even during their trip and reliably calculates driving and rest times per shift, week or fortnight. Even ferry and train routes are reliably taken into account.



## Manual amendments and apps

Drivers are able to quickly and easily amend working times offline and quickly record them with a smartphone app. The next time the driver card is inserted, the data is automatically and reliably transferred to the DTCO®.



## TIS-Web® Connect and Extract

(Third party interface services/provider)

If your telematics solution does not have the option of archiving or evaluating tachograph data in a legally compliant manner, you can benefit from the fully automatic data transmission to the high-performance TIS-Web® Cloud with TIS-Web® Connect. That allows your data to be securely archived. Using TIS-Web® Extract, analysed data/reports can be transferred to other service providers (e. g. for payroll accounting).





#### Driver scorecards using individual criteria

Supported by the driver scorecard, vehicle performance and driving behaviour can be compared at a glance on the basis of self-defined criteria (fuel consumption, mileage, violations of the legally mandated driving and rest times etc.). Driver scorecards provide a good basis for individual driver evaluations and analyses.







# Downloading and archiving of driver card data

VDO also offers different solutions for the legally mandated download of driver card data – manual, fully automatic, stationary and mobile download solutions provide drivers with greater flexibility. The result is always the professional and secure archiving of your driver card data.





### Communication Driver - Fleet manager

With quick communication, you ensure that your operational process runs smoothly. Targeted messages and automated reminders help simplify the communication between driver and office, and reduce communication costs in the process.





#### Vehicle check

With the right fleet management solutions, you can detect vehicle defects early and, as a result, schedule maintenance better. For example, the results of the daily vehicle checks can be recorded on a smartphone and transferred directly to the fleet management office. Well-structured graphics also provide you with an overview of all upcoming maintenance work.





## Fuel and route profiles

Maintain a digital overview of your fleet's entire fuel costs and analyse fuel consumption and route profiles on a daily, weekly or monthly basis. This allows you to quickly and easily reduce costs.





#### Analysis of vehicle data

Well-structured reports on fuel consumption, speed, rpm, number of stops, number of braking manoeuvres and much more, allow for a detailed driver analysis. This allows you to extend both the operational and service life of vehicles and to better plan maintenance work.





#### PAYD/insurance service

Good driving behaviour will be rewarded – with insurance costs that are calculated on the basis of driving behaviour, your costs can be reduced greatly. We are already working with insurance companies to get better rates for our customers as a result of the data captured with our telematics solutions.

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## Vehicle utilisation and analyses

The clear display of driving and idle times shows the degree of vehicle utilisation and provides important indices for vehicle scheduling.





## Tyre management

For added safety, the condition of tyres is continuously monitored and real-time warnings are provided when the tyre pressure drops or the temperature rises. The tyre service life is prolonged and fuel costs are reduced at the same time.





### Cargo management



Always keep an eye on your cargo. Information on the location and status of cargo allows you to predict the anticipated delivery times and to document the transfer of goods. You will also see an improved rate of utilisation of your vehicles and trailers.





## Positioning, route tracking and geofencing

Always know where your vehicles are and track their routes in real-time. This enables additional loads to be picked up quickly and flexibly, thereby significantly improving fleet capacities. With the mobile VDO solutions, this is even possible while on the road. Driving areas can also be defined with the right solution (geofencing) and allow the control of planned routes, e.g. in case of the security-relevant transport of valuable goods.





# Freight and order management

Pre-defined order forms can be created in the office and digitally transmitted to the driver. Destinations can be transferred straight to the GPS. Messages regarding the order status are possible.





#### Trailer check

React quickly when trailer defects have to be fixed and before the next truck wants to pick up the trailer. It's possible with the check list of the mobile trailer check.





#### VanLinc

The VanLinc solution is particularly suitable for mixed fleets, which are currently using FleetVisor for Heavy Goods Vehicles (HGV), to cover the entire vehicles category from trucks, to vans and even passenger



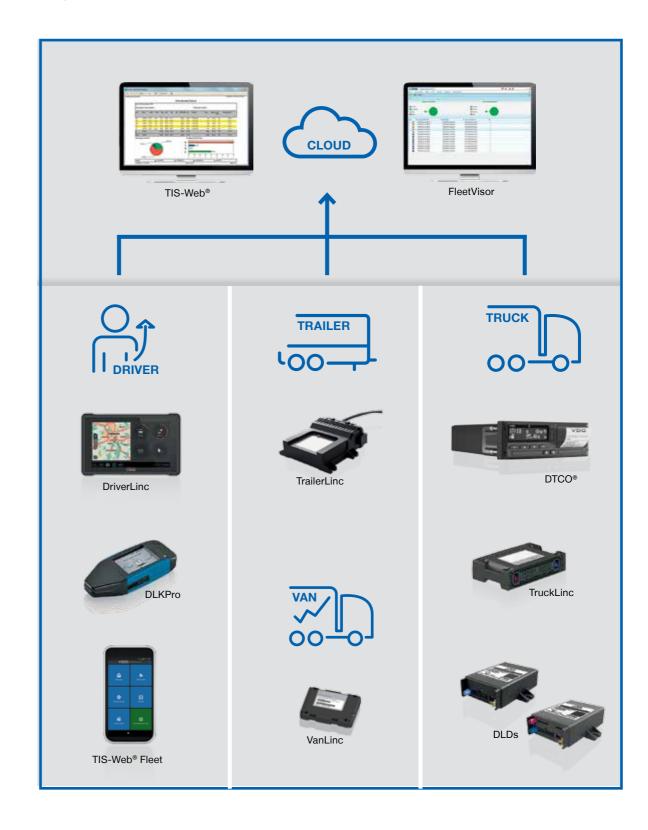
At a glance System overview

# At a glance.

SW solution, fleet office		TIS-V	FleetVisor		
Transfer medium	Download Tools	SmartLink / Fleet App	DLD® Short Range II	DLD® Wide Range II	DriverLinc / TruckLinc / TrailerLinc / VanLinc
Data download	•	•	•	•	•
Data archiving	•	•	•	•	•
Data evaluation	•	•	•	•	•
Vehicle check		•			•
Vehicle data	•	•	•	•	•
Fuel consumption		•	•	•	•
Driving and rest times	•	•	•	•	•
Display of violations	•	•	•	•	•
Personnel and process planning	•	•	•	•	•
Optimise driving behaviour		•	•	•	•
Communications		•			•
Freight status and document workflow					•
Transport management systems					•
Route planning					•
Route tracking		•		•	•
Positioning		•		•	•
Geofencing				•	•
Truck Navigation					•
Trailer check		•			•
Vehicle check		•			•
Tyre management		•			•

Prerequisite: DTCO® Frontal interface is unlocked!

# System overview.



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# Simply clever.

Equipped with DTCO® SmartLink connected to the frontal interface of the digital tachograph (DTCO®), DTCO® data serves as a basis for our practical driving and fleet management optimisation apps.

The TIS-Web® Fleet app forms an interface between the office and drivers that considerably simplifies everyday transport operations thanks to its many diverse functions. Installed on a driver's smartphone, the app sends DTCO® data from the driver card as well as any information manually entered by the driver to TIS-Web® via the Internet and therefore compliments the fleet management perfectly.

The VDO Driver app enables the DTCO® to be viewed and operated conveniently via a smartphone. In addition to the DTCO® screen, the smartphone can also display the VDO Counter data, driving and rest times as well as driver card details.

More flexibility with Configuration app. Several configurations of not legally relevant parameters are now possible without going into an approved tachograph centre. This saves inconvenience, costs and time and makes it possible to align functions with your own requirements.











**DTCO Configuration** 



# Be on the safe side with VDO.

As an experienced partner, VDO furnishes you with reliable consulting and individual support in terms of selecting and implementing the right telematics solution for your fleet.

#### Extensive know-how.

With around 10,000 VDO service partners in over 30 countries, you always have the specialists at your side. Our experienced and qualified service partners can advise you on any aspect of telematics and will maintain, calibrate and service your devices.

#### Greater support.

To ensure optimal preparation for working with your telematics solution, VDO has joined forces with various partners to develop training concepts for specific target groups. The training seminars will help you learn how to use the units and programmes, thus guaranteeing you get the best out of your investment.