



[www.dtco.vdo.com](http://www.dtco.vdo.com)

# Your fleet – leading the way

Digital tachograph solutions and services

## Identify needs – create market-driven solutions

Being mobile means moving with the times. Whether you're a vehicle manufacturer, a fleet operator or a driver, the market continually creates new challenges for you. As part of the Automotive Group of the Continental Corporation, we manufacture advanced digital tachograph solutions to help our partners meet these challenges – today and in the future.

**For the traffic of the future: ITS ready**  
Intelligent Transportation Systems (ITS) ensures the future mobility of our vehicles. ITS interconnects drivers, fleets and other traffic, providing efficient, safe and economic transport of goods and people. The DTCCO® from release 2.0 already incorporates ITS functionality and is therefore the perfect device for future fleet management.

We've been supplying the market with original VDO innovative, sophisticated and quality solutions for more than 90 years. Back then we started with analogue tachographs – and today we offer the DTCCO®, the world's leading digital tachograph. To increase your fleet efficiency even more, we can also provide you with a comprehensive package of services, peripheral devices and software for the digital tachograph.

The requirements of our partners have always been a top priority for us – so we built a tightly-meshed network of more than 9,400 experienced and specially-trained partner workshops to provide support for fleet operators, with maintenance, calibration and the legally prescribed inspection of the device every two years (German legislation).





## Legal requirements

Since May of 2006, all newly registered vehicles used for the transport of goods where the maximum permissible mass, including any trailer or semi-trailer, exceeds 3.5 t and vehicles for the carriage of more than 9 passengers including the driver must be equipped with a digital tachograph, in accordance with Regulation (EC) No. 561/2006.

All vehicle data from digital tachographs and driver data from driver cards must be archived in accordance with legislation. At least one company card must be available per company and every driver who drives a vehicle equipped with a digital tachograph must have his own driver card. Card validity, downloading and archiving requirements are country-specific and must be adhered to accordingly.

§ In accordance with Regulation (EC) No. 561/2006, Regulation (EEC) No. 3821/85 and Regulation (EU) No. 1266/2009 the following specific provisions apply:

- The **vehicle registration numbers** of all newly-licensed vehicles must be **entered in the digital tachographs** either by an authorised workshop or by the vehicle owner using his company card.
- **Driver card data** must be downloaded and electronically **archived** every 28 days\* at the latest.
- The **vehicle data from digital tachographs** must be downloaded and electronically **archived** every 3 months\* at the latest.
- The company transport officer must **check the downloaded data** and ensure that driving times and rest periods are adhered to. If infringements occur, he must **inform the driver** and take appropriate action accordingly.
- In order to ensure a high level of data security, the data archive must be regularly **backed up to a separate data media**.
- All **vehicle and driver data** must be stored **for a period of 2 years\*** and, if necessary, made available to the authorities for inspection.

**Voluntarily retrofitting analogue tachographs to digital devices or upgrading digital tachographs in your vehicles gives you the benefits of the latest functionality (i.e. new one-minute rule) and enables you to further optimise your fleet operation. Your VDO service partner will be pleased to provide assistance should you require it.**

\*Legislation may be country-specific and must be adhered to accordingly.

# Perfectly equipped – solutions for the digital tachograph

## Vehicle

### DTCO® – the digital tachograph by VDO

VDO has been a market leader in the tachograph business for many years – and the company was one of the first to start developing digital tachographs. This R&D resulted in the introduction of the market's first digital tachograph in May of 2006. Since then the DTCO® has been continuously further developed and adapted to match changing market requirements. The DTCO® by VDO sets the standards in performance, user comfort and data security.

#### Short profile – DTCO®

- Smart calculation and display of remaining driving times and rest periods in real time (VDO Counter)
- New 'One-minute Rule' time calculation in compliance with Regulation (EU) No. 1266/2009 to increase fleet efficiency and productivity
- Mass memory for approx. 365 days
- 29 languages available
- Automatic driver warning after 4 hours and 15 minutes of driving time (Regulation (EC) No. 561/2006)
- Display available in diverse colours
- "Fast Download" function
- User-friendly printouts of all vehicle and driver data, plus graphical driving time and rest period profiles, D1/D2 status and speed profiles in UTC and local time
- Simplified process for entering manual entries
- Downloading of data via Download Key (DLKPro) or remote downloading via wireless (DLD®)
- Two fully automatic chip card readers
- Simple paper roll replacement – no tire-some feeding in
- Various interfaces for on-board electronics, instrument cluster, on-board computer and telematic systems; two status inputs
- Recording of additional data (e.g. 168 hours of speed recording, odometer reading when vehicle is stationary)
- Corroboration of motion sensor data via an Independent Motion Signal (IMS)

### The tachograph cards

Four different chip cards specify who can access specific DTCO® digital data.

**Driver cards** record driver activities, events, faults and vehicle changes. The **company card** authorises the fleet operator to access driver and vehicle data in order to download the data from the mass memory. The **control card** enables authorities to access data for legal purposes. The **workshop card** switches on the calibration function of the DTCO® – and it can also be used as a driver card for testing and inspection purposes.

The validity of a card may differ according to the country in which it is being used and any relevant regulation must be adhered to.

### The printer paper

Printer paper is required for checks en route and for daily reports for the driver. According to the law, the paper must be inserted in the tachograph at all times. We recommend that you carry sufficient replacement rolls in the vehicle to create control printouts of the previous 28 days.

The Original VDO Printer Paper has been especially manufactured for use in vehicles – its special coating guarantees excellent legibility and consistency, even with intensive fluctuations in temperature. It is available in authorised service workshops Europe-wide and can also be used in the digital tachographs of other manufacturers.



### VDO Counter functions

Everything your drivers have had to painstakingly note down and calculate so far will now be done fully automatically by the optional VDO Counter\*\* function of the DTCO®. The VDO Counter provides reliable calculation of driving times and rest periods per shift, per week and per fortnight. And even during the trip it informs the driver of upcoming activity changes and activity duration.

#### Benefits of the VDO Counter:

- Your drivers can **optimally plan routes and stops and react to traffic conditions quickly**. Only if they know their current driving times and rest periods can they fully exploit any legal provisions.
- The VDO Counter helps drivers to easily adhere to the legally prescribed driving times and rest periods, **avoiding any fines**.
- Your drivers can **optimise their working time** during the day.
- You can also access VDO Counter information with your smartphone. This means you always know your drivers' remaining driving times and can **optimise resource planning**.



\* Driving times and rest periods can be displayed for the current point in time, the daily shift and week or two-week periods.

\*\* The VDO Counter (from DTCO 2.0) calculates driving times and rest periods based on the rules defined in Regulation (EC) No. 561/2006, except for the provisions for ferry and train journeys in conjunction with the DTCO® version 2.0/2.0a. Country-specific social legislation for driving times and rest periods as well as national working time laws are not taken into account. No claim to any legal interpretation is made through the device. If such a situation arises, a claim must be made by the driver.



Our solution	Your requirement					
	Vehicle	Downloading data	Archiving data	Visualising and checking data	Evaluating and managing data	Fleet management
	Hardware for the recording of driver and vehicle data in compliance with the law	Transfer of tachograph and driver card data	Archiving of legally-required tachograph and driver card data in compliance with the law	Display of tachograph and driver card data graphically and checking the data for gaps and infringements	Business evaluation of tachograph and driver card data	Evaluation of all fleet data for optimising operational procedures, personnel planning, etc.
DTCO® + printer paper (page 6)	✓					
Card Reader (page 14)		✓				
Downloadterminal II (page 14)		✓				
DLKPro Download Key (from page 12)		✓	✓			
DLKPro TIS-Compact (from page 12)		✓	✓	✓	✓	
DLKPro Inspection Key (from page 12)		✓	✓	✓		
DLD® Short Range (from page 11)		✓				
DLD® Wide Range (from page 11)		✓				
TIS-Web® (page 17) + DLD® Wide Range		✓	✓	✓	✓	
VDO DriveTime (page 17) + DLD® Wide Range		✓	✓	✓	✓	✓

### Downloading data

VDO offers a multitude of special download and storage media, all optimised for various company structures and working procedures (*more on this from page 10*).

### Archiving, visualising, checking and evaluating data

VDO offers flexible solutions for archiving, visualising, checking and evaluating data – from legally prescribed archiving to comprehensive data and fleet management (*more on this in the telematics brochure at [www.dtco.vdo.com/downloads](http://www.dtco.vdo.com/downloads)*).

The DLD® Wide Range, for instance, enables you to transfer tachograph and position data to a password-protected server via GSM/GPRS, then display and evaluate this data with TIS-Web®, TIS Track&Trace or VDO DriveTime wherever and whenever you wish and use it to optimise your company operation.



# Data transfer – the perfect solution for every fleet

To comply with the legally-prescribed downloading and archiving regulations, you must regularly download the data from the mass memory of the digital tachograph and driver card (*more on this on page 4*). Many different download solutions by VDO are available for data downloading, all customised for various applications. They are simple and efficient to operate and possess the ultimate in data security systems.

## Wireless solutions

### Remote Download Device (DLD®)

DLD® is the efficient solution for transferring mass memory and driver card data by wireless. The download process is controlled from the office computer, so the company card can remain in the office. Driver and vehicle data can then be downloaded in compliance with the legal deadlines for downloading and transferred directly to TIS-Web®. At no time does a company card have to be inserted in the digital tachograph.



The DLD® is available in two different versions:

### DLD® Short Range – via WLAN on the fleet site

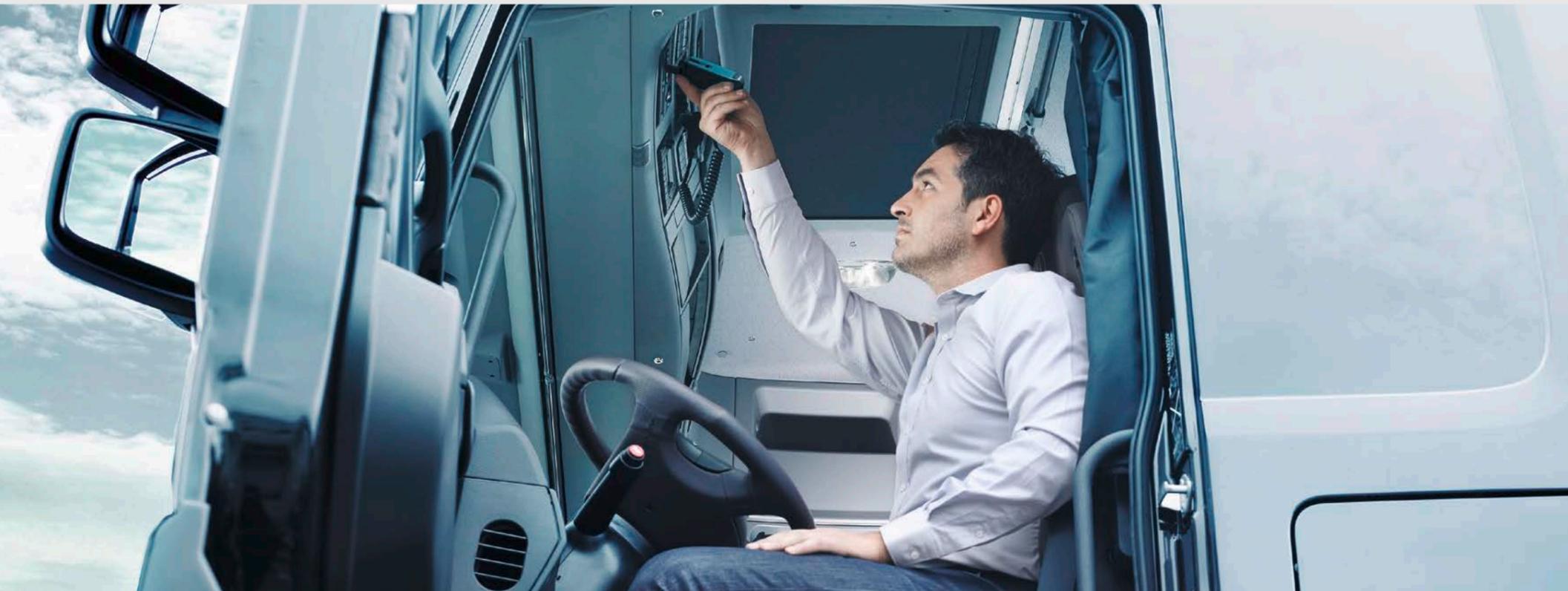
If the vehicle is in a defined area of the fleet site, the DLD® Short Range can be used to transmit data via a wireless local area network (WLAN). No fee is payable for data transfer, because data transfer takes place on the existing company network.



### DLD® Wide Range – via GPRS on the road

When you use the DLD® Wide Range, data is transferred to a VDO download server via a mobile wireless network (GPRS). You can access the VDO server via a protected Internet access. Mass memory and driver card downloading can take place anywhere and at any time.



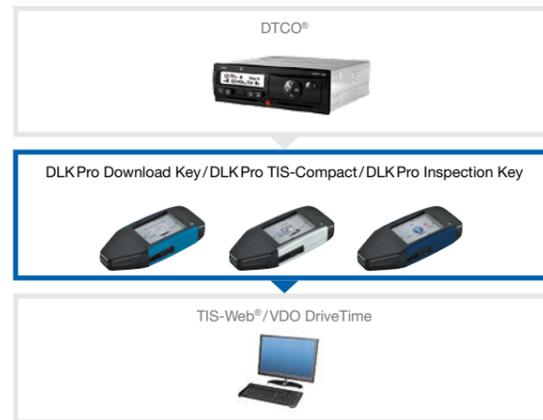


### Mobile solutions

#### DLKPro

The VDO DLKPro is the ideal transport medium for fleets, workshops and authorities – it downloads and transfers mass memory data from digital tachographs and from driver cards inserted in the tachograph. For small fleets and owner-drivers, DLKPro, Download Key, DLKPro TIS-Compact and DLKPro Inspection Key can also be used as archiving tools (*more on the DLKPro TIS-Compact and DLKPro Inspection Key in the DLKPro brochure at [www.dtco.vdo.com/downloads](http://www.dtco.vdo.com/downloads)*).

To protect data from unauthorised access, a company card is required for data download from the digital tachograph.



The chip card reader integrated in the DLKPro lets you download data immediately – easily and efficiently.

Several tasks can then be performed with just one device:

- Downloading of tachograph and driver card data and
- Archiving of legally-required tachograph and driver card data
- Mobile infringement checks (optional)



DLKPro Download Key – the perfect transport medium for downloading mass memory and driver card data



DLKPro TIS-Compact – the all-in-one solution for downloading, archiving and data management



DLKPro Inspection Key – fast mobile checking of driver and vehicle data for infringements and archiving of legally-required data

## Indoor solutions

### Downloadterminal II

The Downloadterminal II by VDO offers drivers the option of downloading driver card data and data from the DLKPro family independently. The Downloadterminal II can be set up anywhere, e.g. in the drivers' rest room – making it accessible around the clock.

The data stored in the Downloadterminal II is easily retrieved and exported into data and fleet management programs (*more on this in the telematics brochure at [www.dtco.vdo.com/downloads](http://www.dtco.vdo.com/downloads)*).

The VDO Downloadterminal II facilitates the downloading and transport of data, especially for larger fleets. It simplifies the handling of large amounts of data and is ideal for drivers who have irregular working hours.



Downloadterminal II



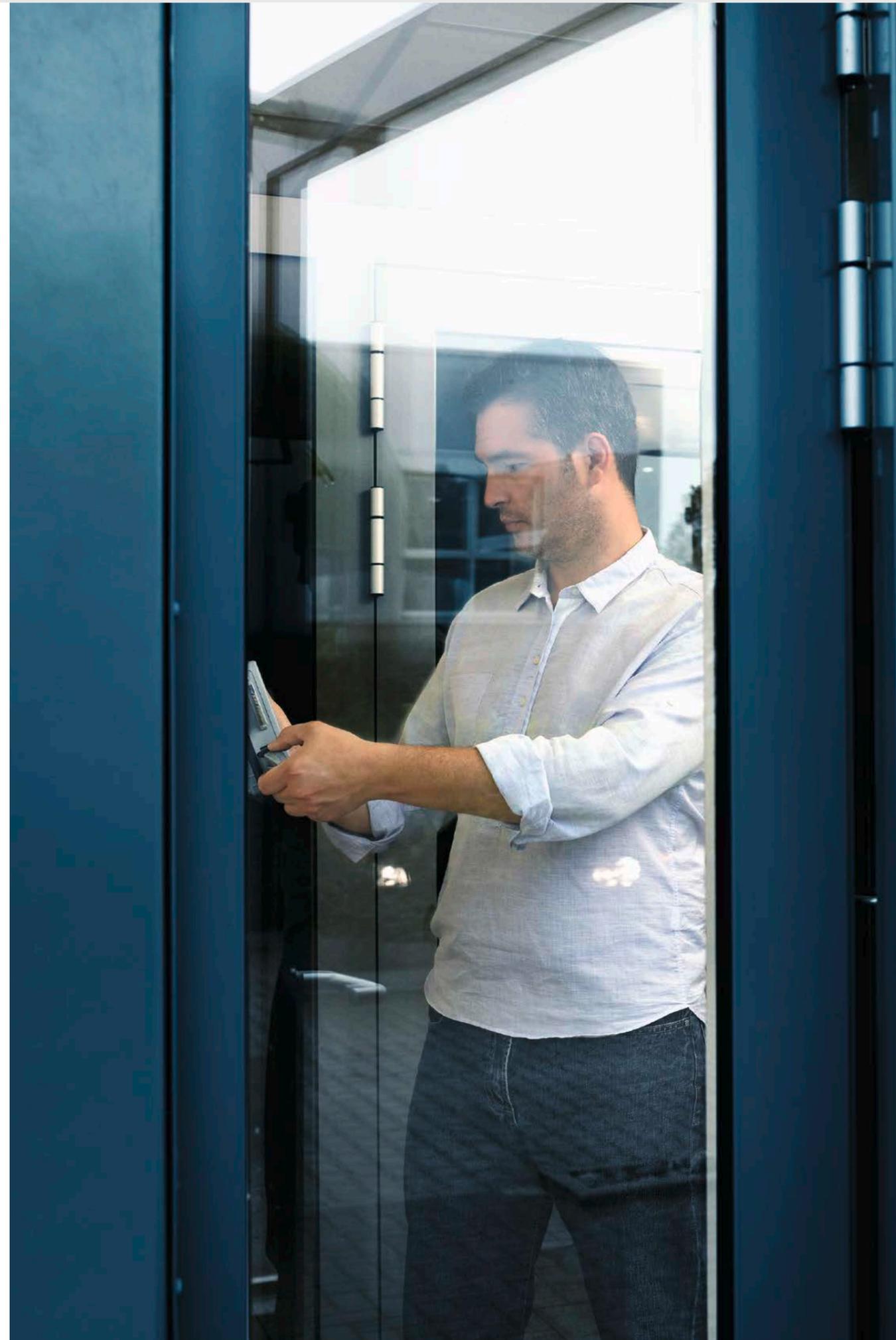
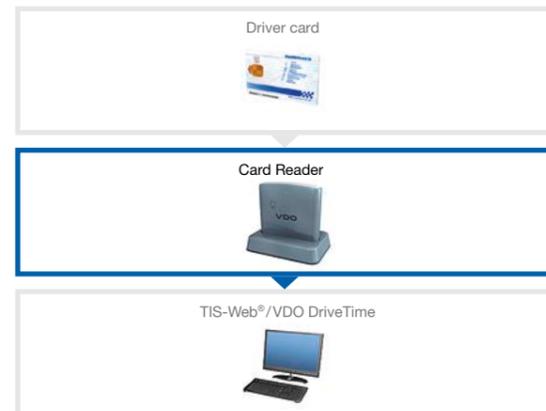
### Card Reader

The VDO Card Reader is connected to a computer by means of a USB cable. A specially-designed software solution (*more on this in the telematics brochure at [www.dtco.vdo.com/downloads](http://www.dtco.vdo.com/downloads)*) downloads digital driver card data and stores it for archiving and evaluation.

The VDO Card Reader is suitable for all fleet sizes.



Card Reader



# VDO Download solutions

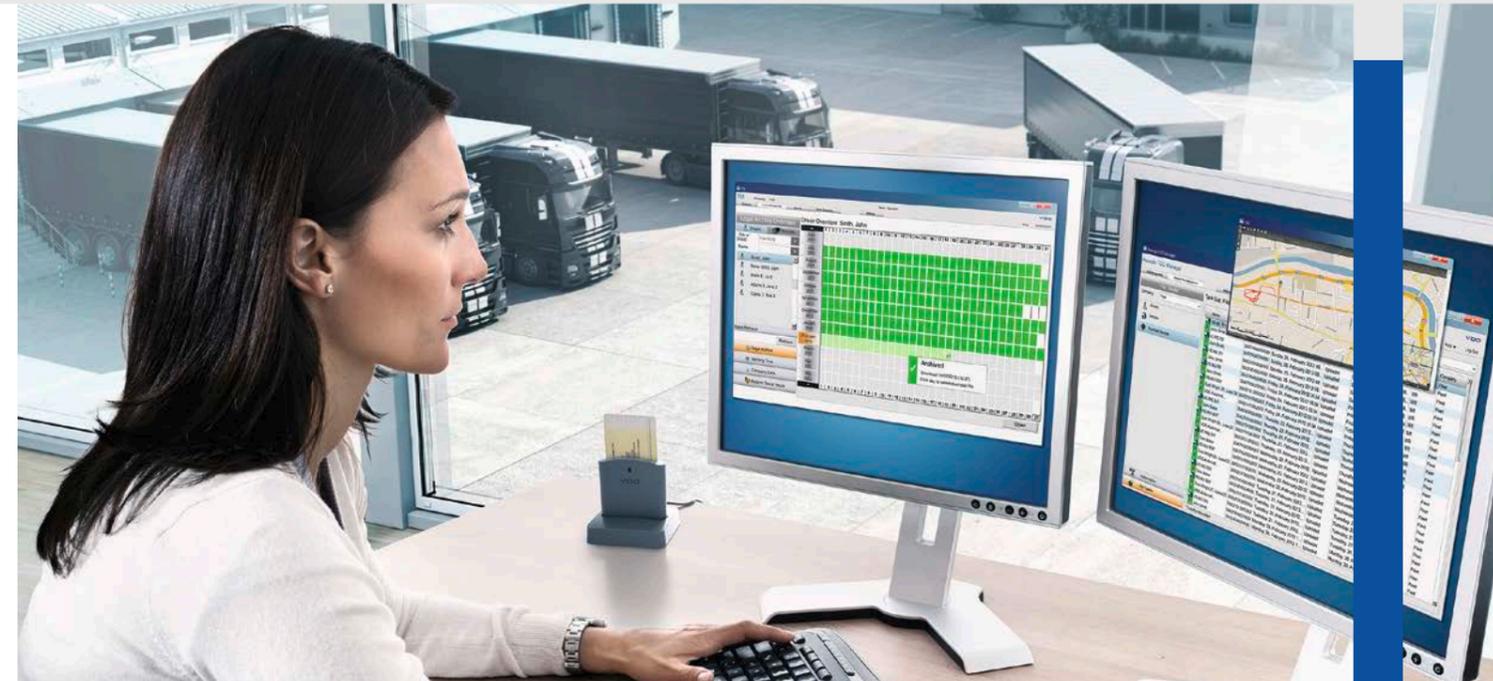
	Card Reader	Download-terminal II	DLD® Short Range	DLD® Wide Range	DLKPro Download Key	DLKPro TIS-Compact	DLKPro Inspection Key
<b>Downloading data</b>							
Downloading of mass memory data from digital tachographs		• <sup>1)</sup>	•	•	• <sup>2)</sup>	• <sup>2)</sup>	• <sup>2)</sup>
Downloading of driver card data	•	•	•	•	• <sup>3)</sup>	• <sup>3)</sup>	•
<b>Transfer of data to a computer</b>							
Connection to a computer by USB cable	•	•					
Connection to a computer by network cable		•					
Direct connection to computer's USB port					•	•	•
Data transfer by USB stick		•					
Wireless transfer by WLAN			•				
Wireless transfer by GPRS				•			
<b>Installation</b>							
Can be used as a stand-alone solution		•			•	•	•
External power supply required		•	•	•			
Internal memory available		•	• <sup>4)</sup>	• <sup>4)</sup>	•	•	•
<b>Interfaces</b>							
USB port		•	•	•	•	•	•
RJ 45 interface (Ethernet connection)		•					
Special DLKPro Download Key / DLKPro TIS-Compact interface		•					
<b>Status indicators (Display/LEDs)</b>							
Download status on the display		•			•	•	•
LED for displaying download status			•	•	•	•	•
Memory capacity on the display					•	•	•
Battery charge status: LED and on the display					•	•	•
Infringement: LED and on the display							•

<sup>1)</sup> Mass memory data is downloaded from the DTCO® with the DLKPro Download Key, then transferred from the Key to the Downloadterminal II.

<sup>2)</sup> A company card must be inserted in the DTCO®.

<sup>3)</sup> Licence required

<sup>4)</sup> DLD® data buffer



## Secure archiving and professional evaluation

To comply with your legal obligations, you must archive the downloaded data and make it available to the relevant authorities upon demand. To optimise your operational procedures and increase your fleet efficiency at the same time, you can use an appropriate data management solution for data visualisation and evaluation.

VDO offers its customers tailor-made data and fleet management solutions for their company-specific requirements. These solutions can be expanded at any time by additional functions – and this not only provides necessary flexibility for your company – it means you can face the future with confidence.

- **VDO DriveTime** is an online fleet management solution for visualising working time data, vehicle locations, route information and much more – in real time.
- With the modular **TIS-Web®** web-based solution, you have all the advantages of an efficient data management solution – without having to invest in an IT infrastructure.

The additional **TIS Track&Trace** module lets you keep an eye on locations and route movements. The **TIS-Web® Messaging** module makes communication between the office and your drivers easy and efficient.

Ask your **VDO service partner** for more **product information** about individual solutions – or visit our website at [www.dtco.vdo.com](http://www.dtco.vdo.com).

You'll find understandable product brochures for data management solutions at [www.dtco.vdo.com/downloads](http://www.dtco.vdo.com/downloads)

# Mobile applications – smart solutions “on tour”

To make operating the DTCO® even more straightforward and to keep you always up-to-date when you're on the road yourself, VDO offers several smart-phone apps.

## DTCO® SmartLink and VDO Driver App

The VDO Driver App for the DTCO® SmartLink offers you a host of functions that make daily driving operations much easier, especially when the DTCO® is not installed in the driver's direct field of vision. Your drivers can operate the DTCO® with a smartphone – and they can retrieve many different items of information. In addition to the DTCO® display, the smartphone also shows VDO Counter data, driver times and rest periods and driver card data. This means your drivers can always keep track of things and plan upcoming breaks in the best possible way. All you need is an up-to-date Android phone or iPhone (VDO Driver App in preparation), an Internet connection and the DTCO® SmartLink.

VDO will continue to develop exciting apps (like the Parking App), so your fleet will always “lead the way” – giving you a decisive competitive advantage.



## TIS Track&Trace App

TIS Track&Trace (in combination with TIS-Web®) gives you up-to-date information about vehicle positions, routes and driver availability. Routes taken can also be called up at any time to optimise route planning. The only condition is that your HGVs must be equipped with a DLD® Wide Range for the automatic download of mass memory and driver card data.

## TIS-Web® Messaging

The TIS-Web® Messaging service makes communication between the office and your drivers easy and helps you to save telephone costs. All your drivers need is a smartphone (Android, iPhone in preparation). Users of the TIS-Web® data management solution can also send automatically-created messages to their drivers, like driver card download reminders, for instance.

## VDO DriveTime App

When you're on the road yourself, you'll always know where your vehicles and drivers are with the DLD® Wide Range and the mobile VDO DriveTime application. The app also displays routes taken and driver availability on your iPhone, iPad, mobile Android phone or Blackberry.



VDO Counter



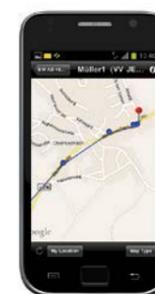
Reminder



Remote Control



Parking App



TIS Track&Trace App



TIS-Web® Messaging



VDO DriveTime App



VDO DriveTime App



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