MANAGEMENT OF DRIVERS' WORKING HOURS WITH VDO COUNTER

INTRO

Managing drivers' working time is essential for logistics companies as it ensures compliance, boosts safety, improves efficiency, reduces costs, increases customer satisfaction, and contributes to the overall well-being of drivers. Proper management in this area is integral to the success and sustainability of a logistics operation.

CHALLENGE

Driver monitoring is a critical aspect of logistics operations as it helps to ensure safety, compliance and efficiency. However, most logistics companies tend to monitor only aspects related to driving behaviour, neglecting to monitor operational moments such as break/rest time, work before and after rest, weekly/daily working hours, etc. As a result, companies face several challenges in this area.

For example, drivers may unintentionally forget to take a rest break or deliberately violate rest periods. Such violations result in productivity challenges, disrupted work schedules and working hours. In addition, logistics companies may fail to make deliveries on time and to fulfil contracts with partner companies who expect deliveries to be made on the agreed terms. In the case of long-haul journeys, a breach of the work/rest balance can lead to regulatory breaches and, as a result, hefty fines.

To effectively address these challenges, logistics companies should have a well-defined driver monitoring strategy that takes into account legal, technological and human factors. Fortunately, the new functionality of some Teltonika Professional GPS trackers, which are compatible with a digital tachograph, allows for the collection of pivotal drivers working time information, helping to create a more balanced and effective approach to driver monitoring and management.

SOLUTION

To provide comprehensive driver information and make the management process even more convenient for fleet managers and efficient for companies, Teltonika Telematics has introduced a new digital tachograph feature - the VDO Counter - in its FMx6 series of trackers. As an example, we choose FMC650 model with 4G LTE Cat 1 connectivity.

How it works - after installing FMC650 trackers in the fleet of lorries or trucks, the relevant settings need to be configured according to the business needs. For example, the VDO Counter functionality makes it easier to track drivers' driving time information, such as 'Remaining Current Driving Time', which shows the minutes a driver has left on their current driving shift, helping them to plan their route and rest breaks effectively.

'Remaining Driving Time On Current Shift' data indicates the minutes of allowable driving time remaining on the driver's current shift, helping companies track driver performance and compliance with work schedules; 'Remaining Driving Time Of Current Week' provides the remaining driving hours available to the driver within the current week, helping with long-term planning and compliance with weekly driving limits. These three features are critical to managing driver hours and ensuring compliance with driving regulations in the logistics industry.

Insert DTCO® Update card into the card slot of the tachograph

Licence Card VDO

DTCO®
VDO Counter
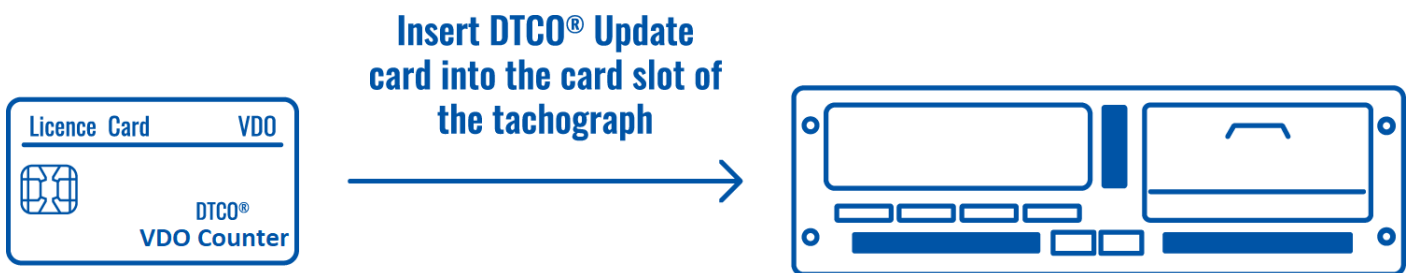
VDO TACHOGRAPH

The VDO Counter also provides additional information on driver card ID, tachograph diagnostic data records, overlapping working time, remaining working time, etc. To elaborate further, the VIN and Driver Card ID information allows fleet managers to know which driver is operating which vehicle live from the fleet management system.

Using tachograph data and the VDO Counter functionality, fleet managers can know the vehicle's speed and when it is exceeded, and also monitor the driver's working state - when the driver is driving or unloading, and receive a notification when the driver's working limit is about to be reached, informing the driver to plan an immediate stop.

As a result, logistics companies improve driver safety and comply with strict driving regulations.
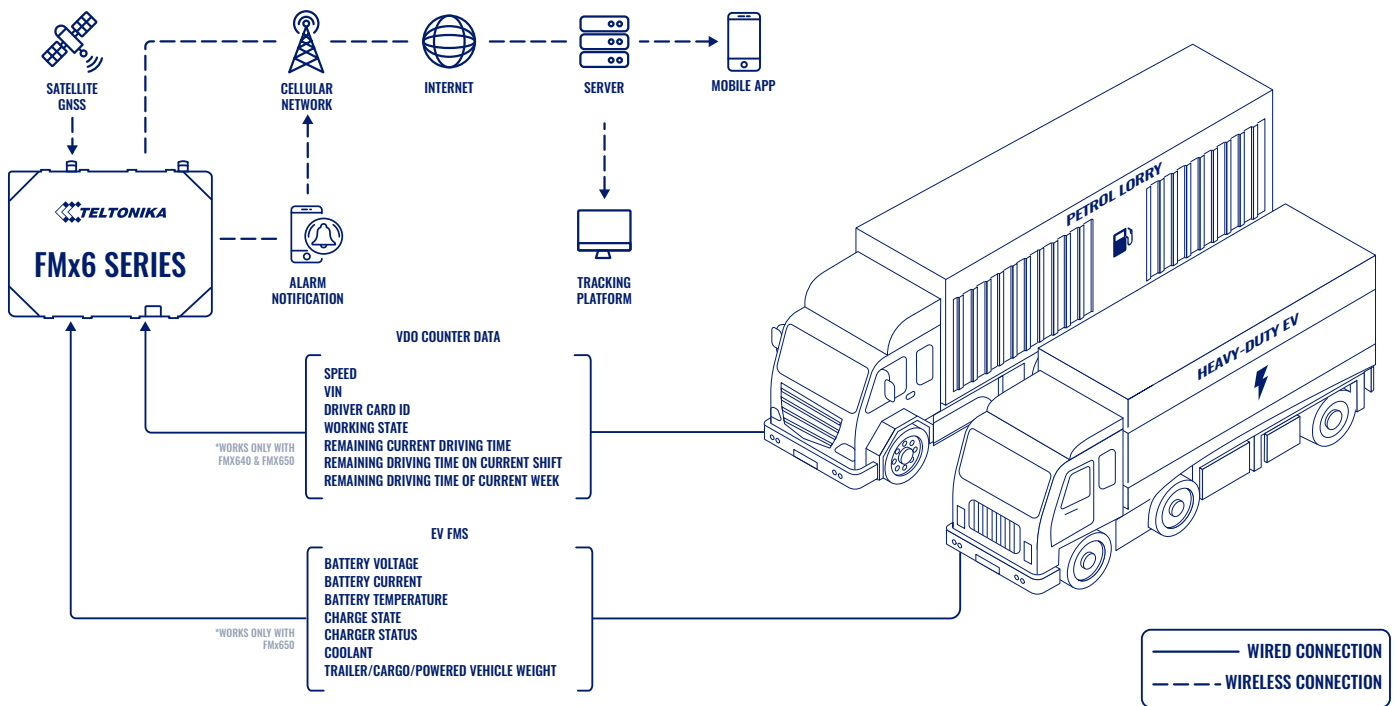
Expanded functionality and vehicle choice - with the growing popularity of electric vehicles, Teltonika Telematics has added another functionality - EV FMS. New parameters have been added to collect data from heavy-duty electric vehicles, opening up new opportunities and challenges for telematics companies. For example, the protocol has been extended to support EV battery information, providing insight into battery life, state of charge, temperature and other relevant data.

Input Name	Units	Priority				Low Level	High Level	Event Only		Operand	
High voltage battery Voltage	mV	None	Low	High	Panic	0	0	Yes	No	Monitoring	
High voltage battery Current	mA	None	Low	High	Panic	0	0	Yes	No	Monitoring	
Internal Charger Status		None	Low	High	Panic			Yes	No	Monitoring	
Generic state of charge		None	Low	High	Panic			Yes	No	Monitoring	
EV Ignition		None	Low	High	Panic			Yes	No	Monitoring	
Ext Energy Src Conn Status		None	Low	High	Panic			Yes	No	On Change	
Seatbelt switch		None	Low	High	Panic			Yes	No	Monitoring	
EVSE1 AC RMS Current	mA	None	Low	High	Panic	0	0	Yes	No	Monitoring	
EVSE1 AC RMS Voltage	mV	None	Low	High	Panic	0	0	Yes	No	On Entrance	
DC Charging State		None	Low	High	Panic			Yes	No	Monitoring	
High Voltage Battery Highest Cell Temp	°C	None	Low	High	Panic	0	0	Yes	No	Monitoring	
High Voltage Battery Lowest Cell Temp	°C	None	Low	High	Panic	0	0	Yes	No	Monitoring	
Motor Coolant Fan1 Control Temp	°C	None	Low	High	Panic	0	0	Yes	No	Monitoring	
Air Conditioner Compressor Status		None	Low	High	Panic			Yes	No	Monitoring	
High Voltage Battery Temp	°C	None	Low	High	Panic	0	0	Yes	No	Monitoring	
HVESS Thermal Management System Heater Status		None	Low	High	Panic			Yes	No	Monitoring	
Fuel Supply Estimated Remaining Dist	km	None	Low	High	Panic	0	0	Yes	No	Monitoring	
Trailer Weight	kg	None	Low	High	Panic	0	0	Yes	No	Monitoring	
Cargo Weight	kg	None	Low	High	Panic	0	0	Yes	No	Monitoring	
Powered Vehicle Weight	kg	None	Low	High	Panic	0	0	Yes	No	Monitoring	
Gross Combination Vehicle Weight	kg	None	Low	High	Panic	0	0	Yes	No	Monitoring	
Highest cell voltage	mV	None	Low	High	Panic	0	0	Yes	No	Monitoring	
Lowest cell voltage	mV	None	Low	High	Panic	0	0	Yes	No	Monitoring	
HVESS State of Health	%	None	Low	High	Panic	0	0	Yes	No	Monitoring	

Side menu: Security, System, GPRS, Data Acquisition, SMS \ Call Settings, SMS Events, GSM Operators, Features, Accelerometer Features, Auto Geofence, Manual Geofence Settings, Manual Geofence Zones, Trip \ Odometer, Bluetooth 4.0, Beacon List, Authorization ID List, I/O, LVCAN, FMS IO, EV FMS IO, Manual CAN IO, Manual CAN Requests, Manual CAN Commands, Tachograph Data, RS232 \ RS485, CAN \ Tachograph, ContiPressureCheck, Custom Scenarios, Mobileye

It helps e-fleet managers to always be aware of the operating status of electric vehicles and to assign drivers accordingly, to detect battery problems at an early stage and to initiate predictive maintenance. Even more, the newly added parameters help logistics companies create a modern, balanced, and effective approach to driver monitoring for their electric fleets too.

In summary, the Teltonika Telematics PROFESSIONAL range of GPS devices can collect important tachograph data such as driver activities, card ID information, daily/weekly working time, etc. to help logistics companies ensure smooth operations in large fleets. In addition, some newly added functionalities allow the reading of even more parameters to ensure easier management of drivers' working hours and operations in general.

TOPOLOGY

SATELLITE GNSS
CELLULAR NETWORK
INTERNET
SERVER
MOBILE APP

FMx6 SERIES

ALARM NOTIFICATION

TRACKING PLATFORM

VDO COUNTER DATA

SPEED
VIN
DRIVER CARD ID
WORKING STATE
REMAINING CURRENT DRIVING TIME
REMAINING DRIVING TIME ON CURRENT SHIFT
REMAINING DRIVING TIME OF CURRENT WEEK

*WORKS ONLY WITH FMX640 & FMX650

EV FMS

BATTERY VOLTAGE
BATTERY CURRENT
BATTERY TEMPERATURE
CHARGE STATE
CHARGER STATUS
COOLANT
TRAILER/CARGO/POWERED VEHICLE WEIGHT

*WORKS ONLY WITH FMx650

PETROL LORRY

HEAVY-DUTY EV

——— WIRED CONNECTION
– – – – WIRELESS CONNECTION

BENEFITS

- **Effortless compliance management** - ensure smooth compliance with international driving regulations by automating the extraction of critical data from the tachograph, thereby mitigating compliance risks.

- **Optimised fleet utilisation** - obtain insightful tachograph data that enables optimal vehicles and drivers' management, ensuring that no resource is under- or over-utilised.

- **Improved driver safety** - by monitoring driver behaviour and ensuring rest and driving times are adhered to, you can protect not only the shipment but, more importantly, the driver.

- **Real-time monitoring** - vigilant real-time monitoring of every trip ensures that any discrepancies or emergencies are identified and addressed immediately, increasing the reliability of your services.

- **In-depth data analysis** - harnesses the power of meticulous data, from routes taken to driving patterns, to make informed decisions that increase operational efficiency.

- **Sustainable operations** - by helping to optimise routes and monitor fuel consumption, these trackers not only make operations more efficient but also demonstrate a commitment to sustainability.

- **Improved driver training and feedback** - the VDO Counter provides detailed and meaningful feedback to train drivers based on the insights gained from monitoring.

WHY TELTONIKA?

Teltonika Telematics offers a range of tracking devices suitable for various applications, from vehicle tracking to asset tracking and personal tracking. This versatility allows our customers to find the right tracker for their specific needs and IoT projects.

In addition, we are constantly working to develop the latest and most advanced functionalities and features to provide customers with valuable insight into their assets or vehicles. Teltonika Telematics has a reputation for producing reliable and durable tracking devices - so customers can be confident that the trackers they purchase will consistently provide accurate data and best-in-class performance.

FEATURED PRODUCT

FMC650

RELATED PRODUCTS

FMB641, FMM650