



# HYDRA Data Hub

Harnessing vehicle data to enable optimal and cost-effective resource, maintenance and environmental management.

## Use the power of data

The HYDRA Recorders form the heart of the video and passenger counting system as they can be deployed as a mobile data hub in the vehicle.

They are equipped with considerable processing power and memory as well as algorithms to record and combine data, which can be sent securely via mobile data or Wi-Fi to stationary back-office application. An integrated CAN FMS interface enables the collection of a wide range of vehicle data.

Thanks to the open interfaces, a flexible and cost-effective link to various IT systems is possible, which allows data to flow seamlessly.

- Easy integration into existing network platforms (VDV301 (IBIS-IP), ITxPT, INEO)
- Efficient, data collection, combination and transmission
- Data analysis in back-office applications
- Analyses and reports for depot management
- Statistical and real-time data

# Applications

The collected data can be used for statistical evaluations and real-time analyses

## OPTION 1

### More efficiency thanks to combined data analyses

Through statistical evaluations using back-office applications, valuable insights can be gained. To this end, it is enough for the vehicle, video and counting data saved over the course of the day to be transmitted via Wi-Fi or mobile data once the vehicle returns to the depot.

Crucial added value can be acquired through the integrated analysis of data from various sources (route and stop information, passenger counting data, geolocation, CAN FMS vehicle data and video).

Vehicle-, route- and driver-based data can be combined to gain completely new perspectives. These can be used to derive new measures for more efficient vehicle fleet management.

#### EXAMPLES

- Vehicle- and route-based fuel consumption profiles
- Servicing profiles of system components
- Detection of bottlenecks and/or delays due to traffic, construction and other disturbances
- Efficient depot and garage management
- Optimised procurement processes
- Environmental management (CO<sub>2</sub>)
- Targeted training of drivers

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## OPTION 2

### Real-time analyses for improved fault management

If the HYDRA systems are equipped for mobile data transmission (Wi-Fi or mobile data) or harness existing communication channels, data can additionally be used for real-time analyses.

This way, faults and defined situations can be reacted to quickly and efficiently. If an unexpectedly high volume of passengers is detected, backup vehicles can be sent.

If vehicles send error messages, transit mechanics can respond in a targeted manner.

#### EXAMPLES

- Efficient fault management due to system status transmission
- Appraisal of the situation in the vehicle through live video feed
- Vehicle dispatch upon unexpectedly high passenger volumes
- Operating zone monitoring
- CAN FMS vehicle data, such as fuel level, error messages, temperature