

ZF Bus Connect Portal

Total Control for Bus Fleet Operators via One Web Based Portal



Live View

Real-time monitoring of fleets, vehicles and driving routes



E-Logbook

Driving history and replay of routes



Consumption Monitor

Overview of fuel consumption for combustion vehicles or SoC for electric



Profi Driver

Real-time feedback to driver and unique grading system of drivers' driving style



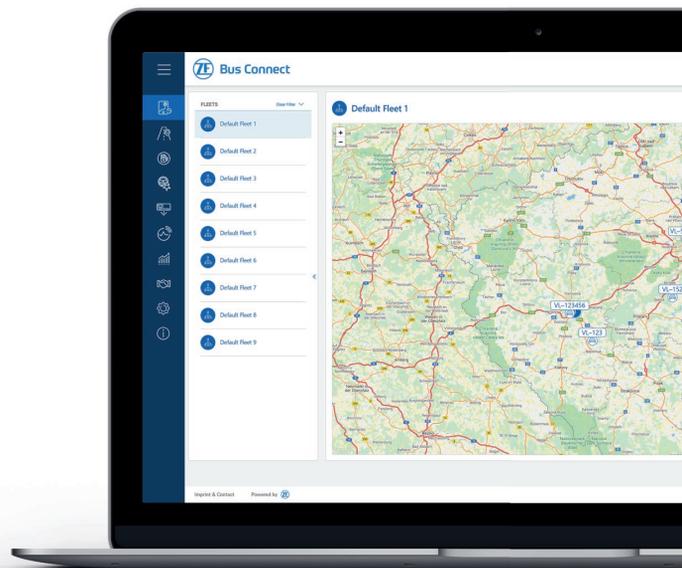
Digitacho Download

Download of driver card and mass memory files (DDD) to ensure working time compliance



Vehicle Inspector

Diagnostics-CAN signals in Live, Telltales, DM1 and Brake Pad Analysis



Pro Analytics

Access to Data Analytics on Power BI



Custom Analytics

Custom reports implemented for a specific customer



Data Link

IoT Data Link to send data directly to customer or 3rd party cloud



Geo Fencer

Alerts and notifications based on defined geo-fenced Zones



Data Logger

Continuous & Event-based data logging and storage



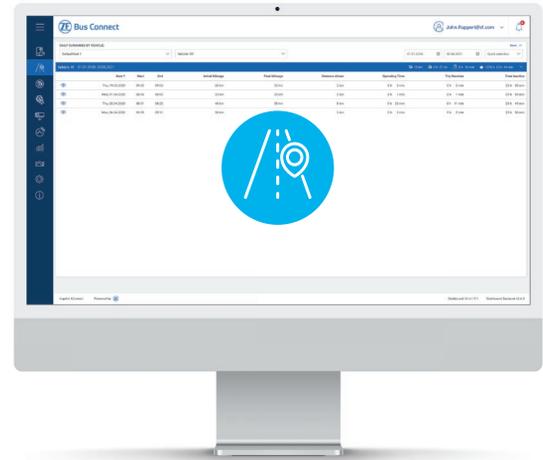
Live View

Features

- View live status and location of fleet vehicles on map display
- Show vehicle performance KPIs (fuel consumption, speed, trip duration etc.) in real time
- Access extended list of vehicle information such as trip line, geocoding, or a list of signals
- Flag critical asset states (defined by configurable thresholds) immediately
- Supports combustion, hybrid and electric vehicles, supports charging stations as well as mixed fleets with various vehicle types and manufacturers
- Dashboard supports multitenancy allowing for assigning one vehicle to multiple clients

Benefits

- Real-time view of all monitoring and diagnostic requirements
- Futureproofed for complex and modernizing fleets
- Trigger timely maintenance for improved fleet upkeep



E-logbook

Features

- Record vehicle information as well as individual vehicle routes with E-logbook app
- AI based advanced algorithm and Trip Model approach is designed to support different vehicle types (Ignition signal, E-drive signal, time-based)
- Configure trip definitions in master data
- Detailed statistics of individual trips such as average fuel consumption, driving speed, distance, and duration of the trip
- Integrated with ITCS (Intermodal transport control system)
- Report on SoC (state of charge)

Benefits

- Quickly and easily access historical trip data of individual vehicles in organized summary online
- Pay drivers according to how much they worked based on their driving activity
- Visualize multiple trips with accompanying data on the map



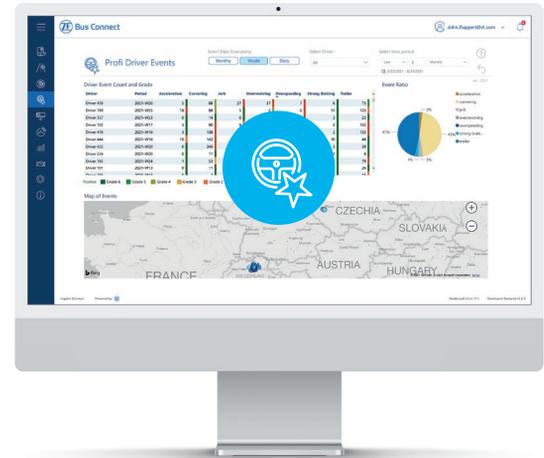
Consumption Monitor

Features

- Detailed overview of fuel consumption in various driving situations for different vehicle types (combustion, electric, hybrid)
- Precise information about current and historical consumption metrics of single vehicle or fleet (identification of both positive and negative trends)
- Adjustable thresholds for refueling or unexpected fuel level drops
- Definable alerts can be sent via sms or email

Benefits

- Improves transparency and reduces admin burden
- Efficient fuel theft protection – possibility to identify sudden high fuel consumption in context of the fleet
- Enables comprehensive vehicle management along with other vehicle KPIs and measures (financials, eco driving etc)



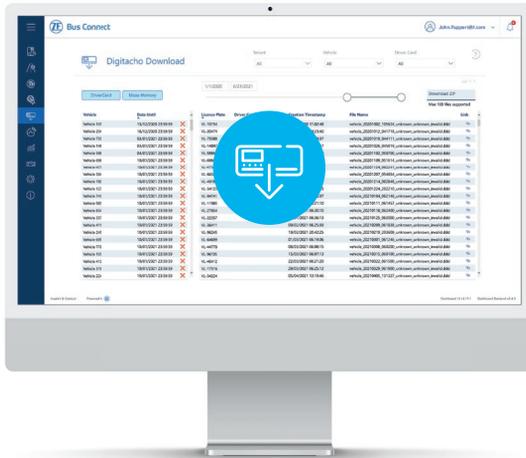
Profi Driver

Features

- Live feedback to driver if an event appears or monitored thresholds have been exceeded
- Regular scoring reports of drivers (daily, weekly, monthly) based on a grading system
- Controlled by the VCU Pro, configurable
- Event types – harsh braking/acceleration, overspeeding, overrevolving, cornering, trailer cornering, jerk
- Detailed report of events in Microsoft PowerBI Benefits
- Complete drivers scoring tool for fleet managers
- Data input for further analysis in ECO Scoring

Benefits

- Identify dangerous and unfavorable driving style to prevent accidents
- Improve passenger safety
- Reduce wear and tear on fleet vehicles from aggressive driving



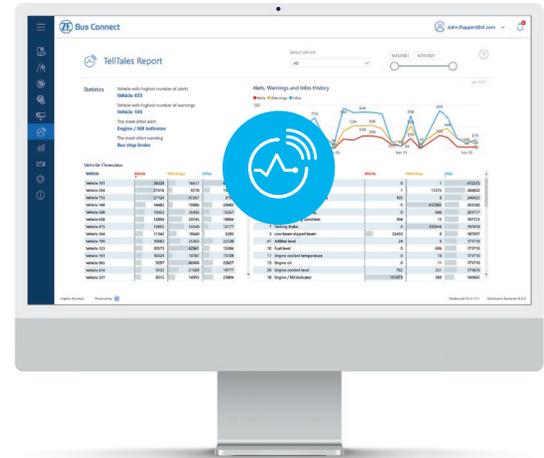
DigiTacho Download

Features

- Gathers information on the driver's resting and driving times in DDD file formats
- Download data automatically from the mass storage and the driver card
- VCU Pro reads DDD files from all tachograph standards incl. DTCO 4.0 (Conformity EU 561/2006)
- Alarm raised if data not available
- Batch interface from the command line is supported
- Frequency of downloads is configurable with many options
- All data can be browsed and downloaded (individually as DDD or grouped as ZIP) from the data storage via DigiTacho Report

Benefits

- Ensures regular data storage compliance meets regulations
- Take immediate action during suspected manipulation attempts
- Easily view, search, and analyze downloaded data



Vehicle Inspector

Features

- Live statistics and alerts for electric and diesel vehicles in the fleet
- Analysis of brake lining remaining (BLR) for each wheel with configurable threshold levels
- Difference between brake lining thickness both on front and rear axles
- Active error codes in vehicles
- Overview of indicator lamps in vehiclecockpit
- FMS based diagnostics
- Transmits active error codes by all vehicle components that support J1939 Diagnostics
- Early warning with 75 indicators of vehicle component malfunction

Benefits

- Proactively monitor brake health
- Optimize maintenance and replacement schedules
- Improved vehicle, driver, and passenger safety

Another functions

Smart App with smart functions



Pro Analytics

- Pre-Defined Data Sets
- Self-Service Report Creation
- Select Thresholds and Alerts
- Export of Reports to XLSX, PDF
- Paginated Reports



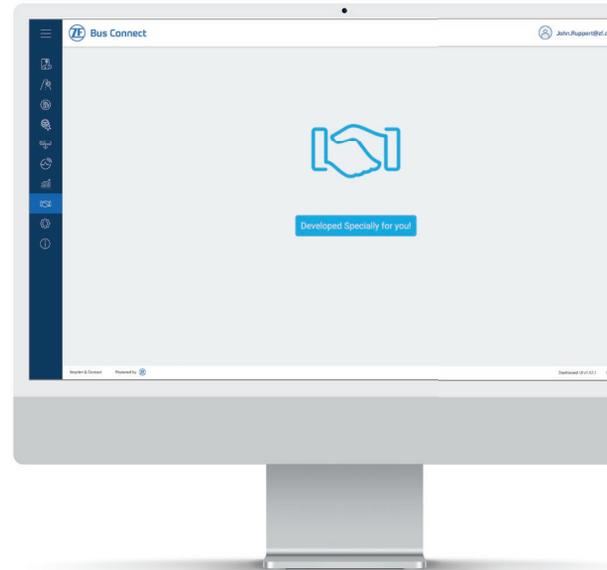
Custom Analytics

- Raw Data Sets
- Custom Report Design and Implementation
- Customise Thresholds and Alert Definition
- Export of Reports to XLSX, PDF
- Paginated Reports



Data Link

- Live Vehicle Data Transmission from your Fleet to any Cloud
- Rich Data Sources
- Configurable Data Clusters
- Conditional Data Collection and Configurable Transmission
- Multiple Data Formats



Data Logger

- Continuous logging mode for long term data acquisition
- Event-based logging enabling high frequency data recording with customizable pre- and post-trigger periods
- Black box functionality to store the defined data set directly on the device with the copy on server side for accidents investigation and reporting

VCU – Vehicle Communication Unit

Smart hardware,
simple process



Next-generation telematics interface

With the VCU Pro Onboard Unit, ZF offers fleet operators a new generation of progressive and robust telematics hardware.

VCU Pro is the advanced on-board unit from the Vehicle Connectivity Unit series. With 4 CAN interfaces (2 standard CAN and 2 CAN FD), 4 analog inputs and 4 digital outputs VCU Pro is a professional and robust vehicle gateway. Two independent processors ensure both a safe and secure connection to the vehicle network and also provide a universal communication capability.



Advantages

- Supports Bluetooth 4.2 and WiFi as well as all popular GNSS
- Two independent processors guarantee stable and secure connections to the vehicle's network
- Secure over-the-air updates
- Regionally adaptable LTE Cat4 versions
- Compatible with all popular commercial vehicle brands and thus ideal for mixed fleets
- Track multiple vehicle, route and driving behavior parameters in real time via the cloud



Technical Overview

- New generation of communication gateways by ZF
- Interfaces and functions for various application areas
- AI capable
- Secure connectivity with HSM
- VCU's Aurix extension module (safe data exchange)
- GNSS, 4×CAN(FD), GPIOs, Serial, Bluetooth, WIFI, Ethernet (1+2×BroadR)
- Compliant with IBIS and IBIS-IP

VCU Pro Onboard Unit

Dimensions (l × w × h)	200 mm × 122 mm × 40 mm
Operating temperature	-40 °C to +85 °C
Power supply	9 to 36 V DC
Internal memory	4 GB Flash
Sensors	3D accelerometer, 3D gyroscope
GNSS	uBlox NEO-M8L with Dead Reckoning