TVG
The Vehicle Group

OEMTech

Excellence Through Innovation

TVG Expert 2

Product Guide

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Read guide fully before commencing installation.
This guide must be present during time of install.
This guide is to be used in conjunction with training.

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MADE IN BRITAIN

Document Change Control

Date	Version	Author	Approval	Changes
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General Notices

- Before starting installation, please read the documentation fully as the performance of the device is dependent on correct installation.
- This device is designed for automotive use only. It must not be used in situations where human life is dependent on its performance.
- Installation of this device may conflict with some countries regulations, or the vehicle manufacturers instructions. Compliance with these regulations shall solely be the customers responsibility. Improper installation may invalidate the vehicle warranty.
- Prior to the commencement of any work, the correct PPE should be worn and a risk assessment should be conducted in accordance with your company policies.
- Ensure manufacturers guidance is followed during the installation.
- The device must be installed by a suitably qualified and experienced professional skilled in automotive electronics.
- Misuse, physical damage and incorrect installation will invalidate the warranty of this device or systems using this device.
- Following manufacturers guidance, vehicle batteries should be isolated before working on any electrical systems.
- If using the OEM body builders module / FMS connector to gain CANbus information, ensure the module is correctly configured & activated by the manufacturer.
- Do not secure the device in a way where it will interfere with the vehicles control systems. E.g. steering column, brake pedals, control arms, cables etc.
- Other people may install equipment after you, so your work must be firmly secured in place, this includes devices and cabling.
- Connecting the power supply and ground should be done as per OEM specifications. Once any jointing or crimping has been completed, testing should be conducted to ensure the joint is compliant with the crimp specifications and all other relevant standards.
- We do not recommend drilling through vinyl (vehicle decals etc) as this will lead to blistering from the heat generated. Hole should be fitted with a grommet and sealed with appropriate sealant.
- Any alteration to metal must be de-burred and all sharp edges removed. Exposed bare metal must be treated with appropriate anti-corrosion solution in accordance with manufacturers recommendations. Any swarf produced must be collected by placing a magnet or catchment device under the area of modification. No swarf is to be left on or in a vehicle.
- We recommend using flexible polyurethane sealants. Any sealed areas must be sealed to a minimum of IP65 and must comply with the vehicle manufacturers recommendations.
- Any serial / key numbers from the equipment being installed must be logged against the vehicle identity for future reference.

Introduction

The Expert 2 is a state-of-the-art GPS telematics device designed for professional fleet management. It offers high precision and a variety of interfaces for connecting accessories, making it a versatile choice for various telematics needs.

Key Features

- **High Precision Tracking & Telemetry**: Provides real-time GPS and sensor data acquisition and transfer.
- **Connectivity**: Supports 4G networks and includes additional interfaces and BLE (Bluetooth Low Energy) technology.
- **Standalone Mode**: Intelligent memory control ensures data is stored even if the connection to the server is lost.
- **Smart Data Roaming**: Efficient data transfer algorithms for seamless operation across different mobile networks.
- **Vehicle Integration**: Interfaces with vehicle on-board systems and supports integrations with equipment from industry leaders like Carrier, ThermoKing, Axtec, Clayton Power, Victron and most vehicle tacho systems.
- **Advanced Data Management**: Features like remote digital tachograph download, fuel monitoring, and advanced driving behaviour analysis.

General Specifications

Size & Weight

Height: 101mm

Width: 123mm

Depth: 22m

Weight: 154g

Memory

Flash Memory: 64Mbit

Power & Battery

Backup Battery: Li-ion 700mAh

Operating Voltage: 7V to 30V DC

Average Current Consumption: 80mA

Maximum Current Consumption: 2.5A

Environmental

Operating Temperature (with battery): -20°C to +45°C

Relative Humidity: 5% to 95%

NOTE: Expert 2 is NOT waterproof and should be installed

Electronical Specifications

Interfaces

4 x Digital Inputs (max 30V)

4 x Analogue Inputs (0V to 30V)

3 x CAN Interfaces

3 x RS-232

K-Line Interface

RS-485 Interface

1-Wire Input (up to 6 devices)

3 x Digital Outputs

SMA Connector for external GPS Antenna

USB Port

4G LTE CAT 1

LTE FDD: B1 / B3 / B7 / B8 / B20 / B28A

GSM / EDGE: B3 / B8

Location

GPS, GLONASS, Galileo, QZSS

Acquisition: -149dBm

Tracking: -167dBm

Re-acquisition: -161dBm

BLE

BLE 5.2

About Us

The Vehicle Group Limited (TVG) is a leading manufacturer of high quality safety and security systems for commercial vehicles. Our facility in North Yorkshire, where we have circa 100 employees, is home to our design, manufacturing, engineering, and service centre. We are especially proud of our market leading, British engineered and manufactured CCTV solution Oculux®, which is used Worldwide.

Our technology's include:

- Oculux® Cameras.
- Automotive CCTV.
- CANbus Readers.
- Commercial Vehicle Announcement System (CVAS).
- Vehicle Solar Systems.
- Cable Harness Design & Manufacture.
- Electronic Design & Manufacture.
- Systems Development.

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