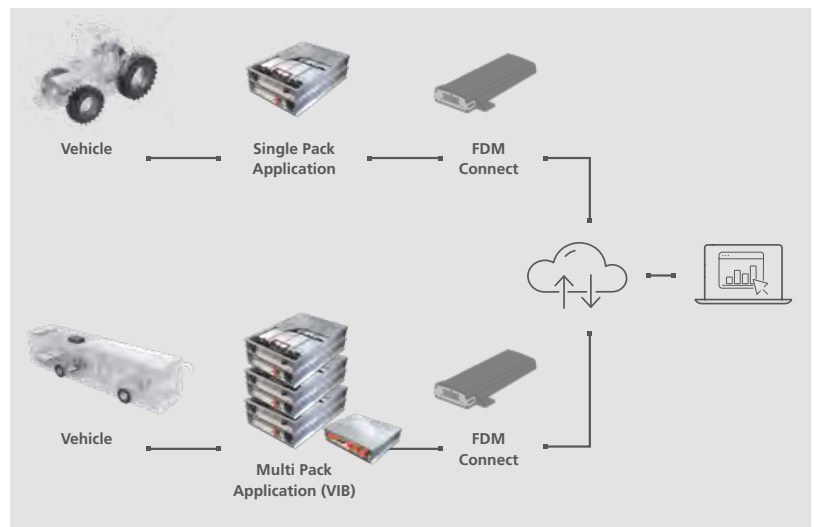
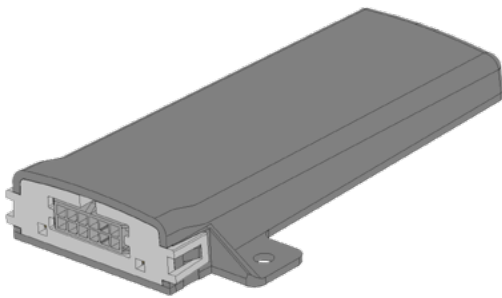


# Field Data Monitoring Connect

Our smart control unit for your battery system



With Field Data Monitoring (FDM) it is possible to collect, transmit, save and visualize data from the Webasto CV battery system. The FDM control unit is acting as the central interface between batteries and the mobile network. The VIB or battery data is transferred via 2G or LTE CAT M1 to a server and visualized by a web frontend.

### Key Benefits at a Glance:

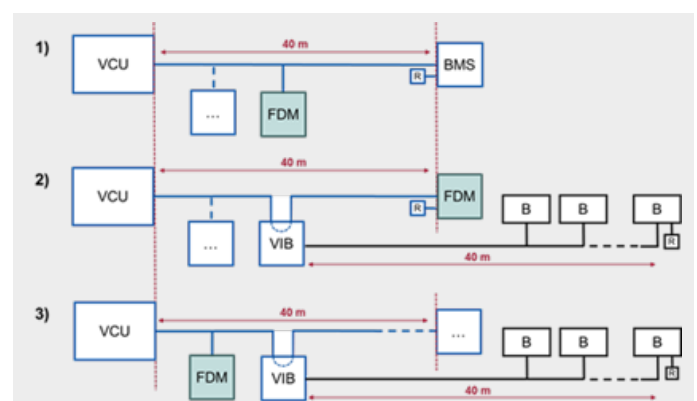
- Over the air updates
- Enabling remote support
- Supporting CAN communication (CAN2.0B and SAE J1939)

FDM Connect is intended for B2B commerce only.

### Installation

Depending on where FDM Connect and VIB or battery are to be integrated in the vehicle CAN, the bus termination must be adapted to the topology.

### Example topologies:





Truck



Light Vehicles



Bus



Off-Highway



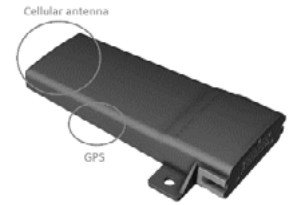
Special Vehicles

## Supported Countries

Countries of European Union, Switzerland, United Kingdom, Norway, Iceland, Liechtenstein

## FDM Installation:

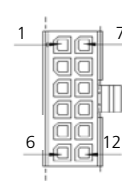
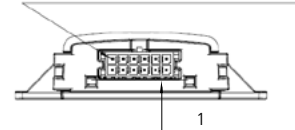
Cellular and GPS antennas are integrated in the FDM Connect. For best connectivity the device should be installed in a location with a good sky view (thru plastics and glasses). Metal objects like chassis, cables, fixing plates etc. must be at least 3 cm away from the FDM housing.



## Pinout & Connector

| Pin | Name     | Function                  | Min. Voltage | Max. Voltage | Max. Current |
|-----|----------|---------------------------|--------------|--------------|--------------|
| 1   | OUTPUT1  | (Reserved for future use) | -            | -            |              |
| 2   | GND      | Ground, battery minus     | -            | -            | 1A           |
| 3   | IN1      | (Reserved for future use) | -            | -            | -            |
| 4   | EXT_TEMP | (Reserved for future use) | -            | -            | -            |
| 5   | Reserved | (Reserved for future use) | -            | -            | -            |
| 6   | CAN_HI   | CAN bus high signal       | 2,5 V        | 3,5 V        | 3 mA         |
| 7   | VS+      | Power supply $V_{bb}$     | 9 VDC        | 32 VDC       | 2 A*         |
| 8   | BTN_GND  | (Reserved for future use) | -            | -            | -            |
| 9   | BTN_LED  | (Reserved for future use) | -            | -            | -            |
| 10  | BTN_SW   | (Reserved for future use) | -            | -            | -            |
| 11  | LIN/WBUS | (Reserved for future use) | -            | -            | -            |
| 12  | CAN_LO   | CAN bus low               | 1,5 V        | 2,5 V        | -            |

MATCHING COUNTERPART  
SOCKET HOUSING MOLEX 43025-1200  
SOCKET CONTACT  
MOLEX 43030-0002



|    |                |
|----|----------------|
| 1  | OUTPUT1        |
| 2  | GND            |
| 3  | 1WIRE / INPUT2 |
| 4  | BTN_TEMP       |
| 5  | INPUT1         |
| 6  | CAN1HI         |
| 7  | VS+            |
| 8  | BTN_GND        |
| 9  | BTN_LED        |
| 10 | BTN_SW         |
| 11 | LIN/WBUS       |
| 12 | CAN1_LO        |

\* VS+ = 12 V, peak overcurrent at OUTPUT1 and same time modem TX at 2G network with maximum RF TX peak power.

## Technical Specifications

| Features   |                                      |         |         |  |
|--|--------------------------------------|---------|---------|--|
| Network module   | Quad-band GSM, LTE CAT M1            |         |         |  |
| GNSS module*   | BeiDou, Galileo, GLONASS, GPS / QZSS |         |         |  |
| CAN  | 2.0B, J1939                          |         |         |  |
| * Geopositioning functionality is currently disabled by default in FDM firmware. |                                      |         |         |  |
| Body   |                                      |         |         |  |
| Weight (g)   | 53                                   |         |         |  |
| Material   | LUPOY GN5007FH PC/ABS                |         |         |  |
| Power  | Minimum                              | Typical | Maximum |  |
| Voltage ( $V_{bb}$ , V+)   | 9 VDC                                | -       | 32 VDC  |  |
| Power consumption ( $I_{bb}$ average at 24 VDC)                                  | 10 mADC                              | 12 mADC | 60 mADC |  |
| Environment  | Minimum                              | Typical | Maximum |  |
| Moisture (% RH)  | -                                    | -       | 95      |  |
| Operating temperature (C°)   | -40                                  | -       | +80     |  |
| IP classification*   | -                                    | IP42    | -       |  |
| * Device should be installed so that connector side is pointing downwards.       |                                      |         |         |  |
| Certifications and approvals   |                                      |         |         |  |
| CE, ECE-R10, FCC   |                                      |         |         |  |

