

PRIVATE DRIVING MODE FOR ELECTRIC VEHICLES

INTRO

Electric vehicle popularity is growing pretty promptly over the past decade, with the global stock of electric passenger cars on roads passing over 5 million. Cities, regional and state governments are starting to promote electric cars to curb CO2 emissions by announcing specially designed projects. To assist Telematics Service Providers with these cases, Teltonika Telematics has developed the special GPS tracker mode.

CHALLENGE

Burning fossil fuels like diesel and petrol releases carbon dioxide into the atmosphere, other greenhouse gases are causing the Earth's atmosphere to warm, resulting in changes to the climate we are already clearly seeing today. In most of the countries, these gases emission from transportation accounts for over 20% of total emissions, undoubtedly making it the largest contributor and the source of major concern.

To solve this significant problem, numerous cities, regional and state governments, utilities, and other organisations are starting to promote **electric vehicles** usage and popularity by introducing appreciable financial grants for such car or van buyers and deploy ever more public and residential charging stations for them. For instance, earlier this year the [Estonian government has issued €5,000 grants](#) to companies or individuals who buy electric vehicles from Estonian Vehicle Dealers and Services Association AMTEL certified dealers.

But here comes a twist – in this case, to get this so desirable grant, an electric car owner has to cover at least 80,000 kilometres distance in four years period (on average, 16,000 kilometres per calendar year). To assure compliance and to track the relevant data, the government body has announced a tender for Telematics Service Providers to supply, install, and maintain vehicle GPS trackers in line with the project requirements.



Keeping in mind the fact, that some people consider vehicle tracking devices as something too invasive to their privacy and it may challenge the project success, the Estonian government made a requirement to track the electric car **odometer data only**, and the rest of parameters and GNSS data **should be masked** and not disclosed to anyone. The question is, how can Telematics Service Providers comply and make it work in situations like these?

SOLUTION

To deal with such requirements, here at Teltonika Telematics we have developed a pretty smart solution in our GPS devices firmware called **Private/Business Driving Mode**. At its core, this canny and helpful feature makes it possible to mask vehicle GNSS data. We have implemented this feature as the Teltonika special firmware option, version 03.25.05.Rev.132 or above.

Here, we use Teltonika ADVANCED category GPS tracker FMB130 combined with CAN bus adaptor [LV-CAN200](#) and pre-configured firmware parameters to track and send electric vehicle **odometer data only** from its CAN bus system and the rest to remain masked as required by the Estonian government project mentioned above. Let's go through **Private/Business Mode** Setting key elements and chosen options (see the image below).

For the sake of example, the Private Driving Mode is being turned ON permanently utilising GPS device digital input DIN3 connected to a power source. That is to say, parameters 'Triggers' – 'DIN3' and 'DIN Mode' – 'Button' are selected. As required by the project, the 'Odometer calculation' setting option is 'Enabled', so it is up and running tracking electric car mileage.

In 'GPS Data Masking' section, setting 'Data sent as Zero' has been activated. It means GPS tracker sends GPS data as '0' to a server the following I/O elements: latitude, longitude, altitude, number of satellites, 'GSM Cell ID' and 'GSM Area Code' parameters.

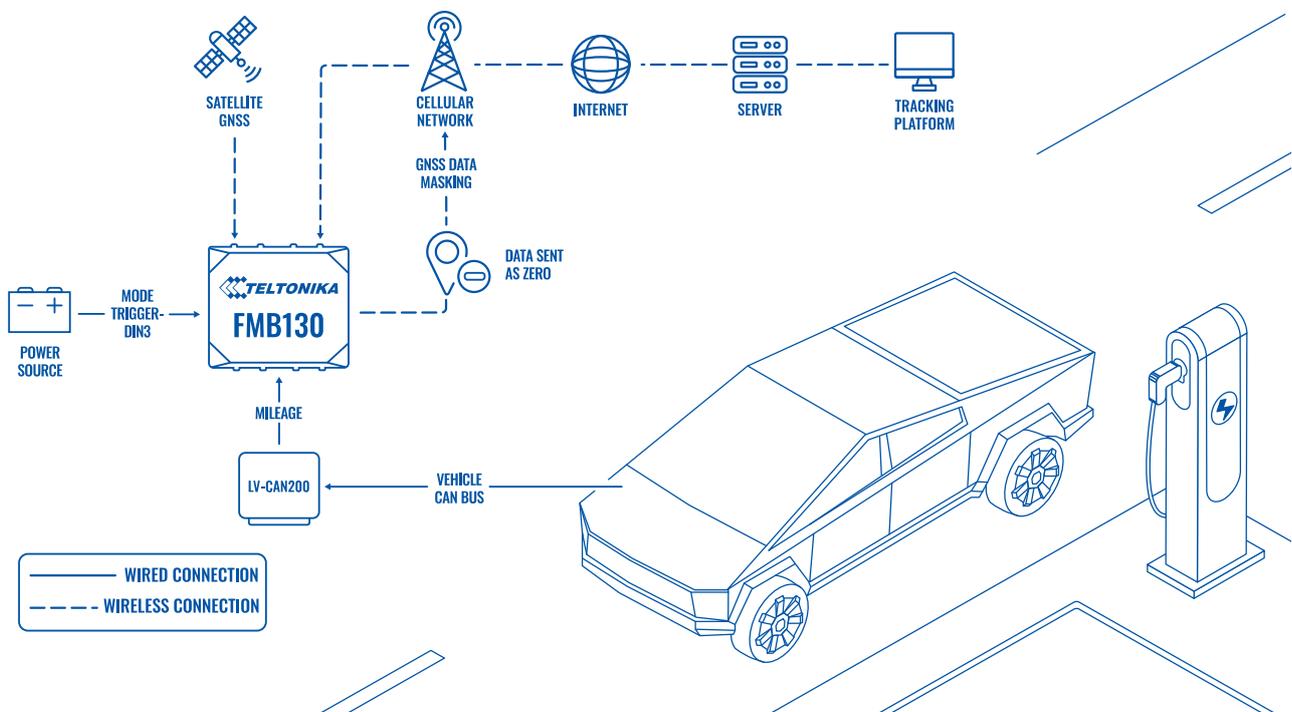
As a result, we have met all the project requirements with our GPS tracker Teltonika FMB130 model and firmware settings in no time and without any hassle. You can learn more about [Private/Business Driving Mode functionality](#), its usage scenarios, and benefits.

Triggers		GPS Data Masking	
DIN1	DIN2/Ground sense	Normal	Data sent as Zero
DIN3	BTAApp	Last good know position	
NBL-1 Button1	NBL-1 Button2	Odometer calculation	
DIN Mode		Disable	Enable
Button	Switch		

What is more, Teltonika GPS tracker and the access to CAN bus data combo allows Telematic Service Providers and fleet operators to gather a wide range of accurate information in real-time and swiftly identify areas of improvement within their vehicle operation to minimise overheads and environmental vehicle impact.

It precisely tracks not only odometer as required in this project but also can monitor many essential parameters such as vehicle speed, engine speed (RPM), vehicle mileage, accelerator pedal position, oil pressure/level status, engine temperature, door/bonnet/boot status, etc. The exact number of parameters depend on vehicle model, its production date and equipment set.

TOPOLOGY



BENEFITS

- **Easy to configure and use Teltonika GPS tracker Private Driving Mode functionality** - thanks to well-developed and rigorously tested special firmware, it can be set up with minimum efforts to comply with various projects and their requirements.
- **Opens the newly emerging markets and business opportunities** - it allows to utilise and profit on the fast-rising electric vehicle popularity and relevant regional and/or state government projects.
- **Promotes alternative energy technology and lessens the greenhouse effect** - the Private Driving Mode contributes to tackling the Earth's atmosphere warming and reducing the carbon dioxide emission problem.
- **Versatile, multipurpose and valuable functionality for many company and organisation fleets** - when used right, it may boost drivers' discipline, encourage desirable vehicle usage habits, and/or keep companies compliant to local tax laws and regulations, including EU General Data Protection Regulations. All fleet drivers kept accountable, no vehicle misuse or guesswork anymore.

WHY TELTONIKA?

Efficient, versatile and configurable, hassle-free Private/Business Driving Mode and a wide range of unquestionable quality GPS devices to choose from Teltonika Telematics catalogue will undoubtedly benefit Telematics Service Providers taking part in electric vehicle projects in any country across the world dealing with the fossil fuel gases emission.

Teltonika is the right place to get all you need to succeed - an impressive variety of GPS trackers, accessories and solutions. Our over 20 years expertise and innovative approach, extensive global market knowledge, exemplary product quality, state-of-the-art production facilities with automated robotic assembly lines and customer support meeting your expectations give us a competitive edge and make Teltonika Telematics a business partner of choice.

FEATURED PRODUCT

FMB130

RECOMMENDED PRODUCTS

FMC125, FMC130, FMM125, FMM130, FMU125, FMU126, FMU130, FMB122, FMB125, FMB110, FMB120, FMB140

