



IMPROVING THE SECURITY OF LEASED VEHICLES WITH GPS TRACKERS

INTRO

The car leasing industry is growing rapidly, with a market size of more than [USD 210 billion](#) in 2022. Regrettably, like other transport sectors, it is affected by car-related crimes too causing significant financial losses and pricey inconvenience. Keeping that in mind, Teltonika came up with a solution that allows not only reduces the risk of theft but also helps businesses and fleet owners to avoid the economic harm it causes.

CHALLENGE

Car leasing, contract hire or finance lease, has become increasingly popular in recent decades, both among businesses and private individuals. The research report on the global car leasing market by [Technavio](#), a leading global technology research and advisory company, predicts the market to post an annual growth rate (CARG) of close to 14% during the period 2019-2023. Furthermore, according to [Statista](#), the number of users in the car rental segment is expected to amount to 588.5 million users worldwide by 2025.

Unfortunately, thefts and car-related crimes remain a major problem including the car leasing segment too. For instance, [Auto Express magazine](#) recently published figures from the Driver and Vehicle Licensing Agency (DVLA) that revealed a whopping 74,769 cars were reported stolen in the UK in 2020. On average, that is 1 vehicle stolen every 7 minutes! In the USA, the [FBI reports](#) that \$7.4 billion was lost to motor vehicle theft in 2020. 810,400 vehicles were stolen, the highest annual number of vehicles stolen since the year 2008. Almost [one in five vehicles](#) is recovered after theft. Sad to say, returned cars do not always come back in one piece causing even greater financial losses.

Yes, [vehicle GPS trackers](#) can help in this regard, but experienced thieves are usually aware of them, deliberately seek and remove, disrupt them or jam signals. So, what can we do to overcome this challenge, prevent car thefts as far as possible and help car leasing companies?



SOLUTION

Anything that makes car thieves or joy-riders spend more time on a vehicle to steal it and get confused in the process makes it a much less tempting target. That is an effective way to prevent carjacking and force criminals to look for another object to steal or drop the idea overall. Begin with, we choose the Teltonika [FMB130](#) model to present our solution - an ADVANCED category GPS tracker with an extensive set of features, 2G network coverage, flexible I/O options and CAN Bus adaptor support for a wide range of vehicle telematics applications.

Like any other Teltonika Telematics tracker, the FMB130 has GSM signal jamming detection, towing detection, unplug detection, and auto geofence scenarios allowing it to initiate preventive actions, such as triggering car alarm system, block its starter or locking all vehicle doors. You can learn more about the anti-theft solution and stolen vehicle recovery use case [here](#).

But if a more cunning and experienced car criminal has managed to find and disrupt, remove or damage the installed GPS tracker, what then? Well, we have developed 2 double security scenarios to solve this situation - with the additional autonomous tracker or vehicle GPS tracker from Teltonika Telematics.

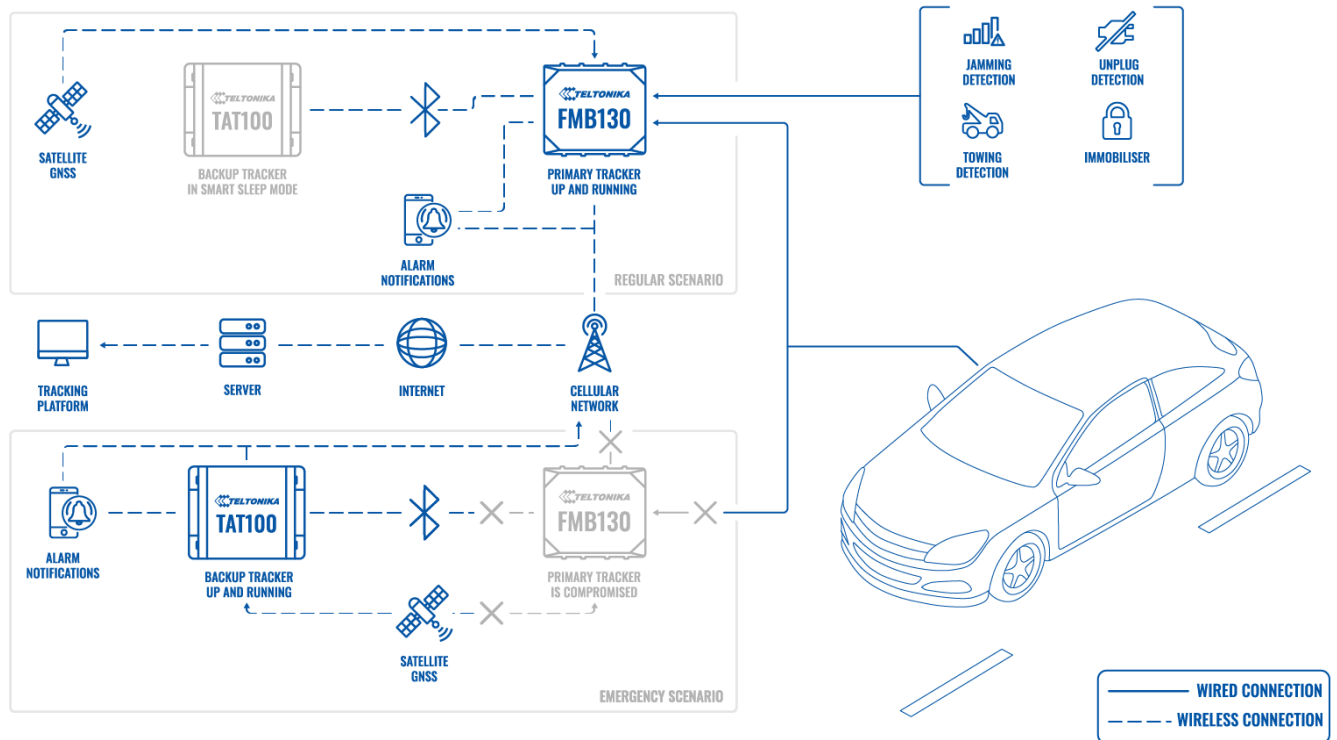
Scenario with an autonomous tracker - as a secondary device, we use here Teltonika [TAT100](#) model - a smart and autonomous GPS tracker with Bluetooth LE connectivity, the perfect choice for monitoring various assets and providing additional protection against vehicle theft.

Both GPS devices must be installed in the same leased or hired car in hidden locations. In this case, the wired FMB130 continuously operates as the primary vehicle tracking device (or master device), monitoring parameters and events of interest to maximise the benefits for fleet management and leasing companies, while the autonomous TAT100 is used only as a backup tracking device.

The latter remains offline in a smart sleep mode and is configured to check periodically that the FMB130 is still connected to the vehicle and working, as both devices are set to communicate with each other via Bluetooth. Should the master tracker be unplugged, removed, or damaged in any way by car thieves, Bluetooth connectivity will be disrupted.

Right away, the TAT100 backup tracker wakes up, takes over GNSS/GSM tracking functions and sends an alarm notification at once to relevant authorities, fleet managers in charge, and the driver of the leased vehicle. Thanks to that, the appropriate actions will be taken immediately, and the stolen vehicle is likely to be recovered and returned undamaged within a few hours.

TOPOLOGY



Scenario with a wired vehicle tracker - here, as a secondary device, we choose the Teltonika FMB920 model - the most popular compact 2G model for basic tracking. In this case, both vehicle trackers must be installed in the same vehicle and connected to an external power supply. It is recommended that the FMB920 is placed in an unconventional hidden spot, such as the boot of a car.

As above, the FMB130 operates continuously as the primary vehicle tracking device (or master device), monitoring parameters and events of interest, while the FMB920 is used only as a backup one. The primary tracker transmits packets via **Bluetooth**, while the backup tracker only scans periodically, and to avoid detection by Radio Frequency (RF) scanners in the event of theft, the backup tracker should not transmit any data via the cellular network.

When the vehicle GPS tracker is used as a backup, data transmission is disabled. In addition, to save the power of it, FMB920 can be set to one of the following sleep modes when Bluetooth is active - GPS Sleep, Deep Sleep, or Online Deep Sleep. In addition, the backup device may have configured the **Delay timeout** option in the Configurator (the time after which the backup tracker starts sending records after an alarm occurs), which further helps to avoid detection. The FMB920 will only start transmitting data if the master GPS tracker is compromised (not detected) and after a pre-configured time.

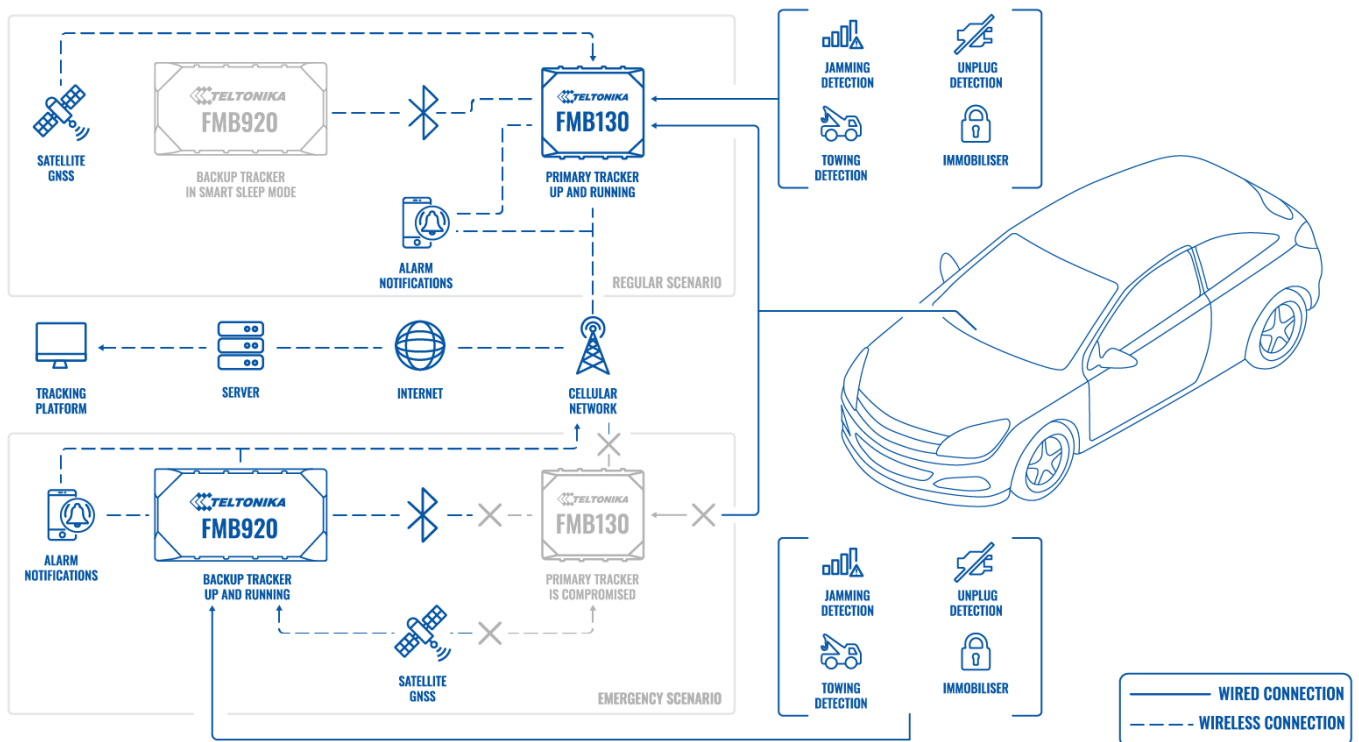
This means that if the master tracker FMB130 is disabled or damaged, the backup one will only activate and start working after a set period of time. This is a significant advantage because in many cases, more sophisticated car thieves will also be looking for another tracking device using scanning equipment, RF scanners, etc. As a

result, when the FMB130 is fully operational, the FMB920 is not visible to jammers. However, if the FMB130 is compromised, the backup FMB920 will identify the event and immediately generate an alarm event record, which is sent after a set delay to avoid detection.

But there is more to this scenario - in the event of a theft, if a jamming detection or immobiliser scenario is configured and enabled, a fuel pump can be safely disconnected using the backup GPS tracker via DOUT and the vehicle will not start.

And here is the best part - the idea of a combo of two tracking devices or double security, a main and a backup GPS device, is primarily designed to help car leasing businesses and rental companies to minimise their financial losses to the greatest extent possible. But both scenarios could be very effective and of great help to passenger fleets of any size in any market niche in any country. The merger of both sets of features makes the solution quite unique and, above all, effective. Please note, this combination only works with GPS trackers manufactured by Teltonika Telematics.

TOPOLOGY



BENEFITS

- **Double layer of vehicle security** - using a dual GPS tracker system provides double the protection for your vehicles. While one tracker provides real-time location data and vehicle-related details, the backup tracker acts as an additional safety net. Even if criminals attempt to disrupt the primary tracker, the backup will continue to operate, ensuring continuous monitoring and reducing the risk of vehicle theft.
- **Signal jamming countermeasure** - signal jamming, a common tactic used by thieves, is effectively countered by using two GPS trackers. If one device is jammed, the other remains unaffected and continues to provide accurate location data, keeping your fleet safe.

- **Fewer losses, higher profits** - improved security of leased vehicles ensures a lower rate of car theft. And when it does happen, there is a much greater chance that a car will be recovered and returned in one piece or undamaged within a matter of hours, saving leasing companies and the police significant time and financial resources.
- **Optimised fleet management** - the integration of two GPS tracking devices provides a granular view of your fleet's performance and status. This accurate tracking enables optimal resource allocation, cost efficiency, and routine maintenance scheduling, improving the overall performance of your fleet operations.
- **Continuous data tracking** - the double security method ensures high-quality data collection. Even if the primary unit is compromised, the backup tracker continues to record and store critical data. This redundancy ensures that critical information is never lost, facilitating rapid decision-making and resolution in the event of an incident.
- **Scalable and adaptable solution** - the dual GPS Tracker system is not only efficient but also versatile. Easily integrated into existing systems, it is suitable for businesses of all sizes. Its scalability makes it a cost-effective solution for tracking and monitoring leased vehicle fleets, accommodating growth and changes in your business needs.
- **Affordable solution** - even though the method requires the installation of two tracking devices and slightly higher investment, it pays for itself many times over for leasing companies.
- **Easy installation and hassle-free configuration** - for greater convenience and practicality, firmware updates and configuration changes of Teltonika vehicle trackers can be swiftly made remotely for any size fleet using the [FOTA WEB](#) tool.

WHY TELTONIKA?

We have a unique and indispensable solution that can support car leasing companies, reduce car-related crime and save resources. By leveraging a two GPS tracker combo, businesses can enjoy multiple benefits, leading to improved operational efficiency, enhanced security, and better customer satisfaction. Such a solution includes a range of high-quality vehicle trackers and autonomous GPS devices from Teltonika Telematics for various IoT projects and different operating scenarios.

Our company offers a comprehensive range of certified GPS trackers, accessories and advanced vehicle telematics solutions, ensuring that our clients have access to everything they need to succeed. Teltonika has been successfully developing and manufacturing IoT devices for 25 years and has helped thousands of business partners and customers in over 160 countries worldwide.

FEATURED PRODUCT

FMB130

RELATED PRODUCTS

TAT100, TAT140, FMC130, FMM130, FMB920, FMC920, FMM920

