



E-SCOOTER AND E-BIKE TRACKING SOLUTION WITH TFT100 FOR DELIVERY SERVICES

INTRO

Delivery companies are switching to electric scooters and bikes because of their many benefits, including lower operating costs, reduced emissions, and greater flexibility. The global market for e-bikes and e-scooters is expected to grow from \$23.38 billion in 2022 to [\\$25.94 billion in 2023](#). Yet, certain challenges need to be addressed, and Teltonika Telematics is ready to offer a practical solution.

CHALLENGE

Electric bikes and scooters are gaining popularity as a means of transportation in delivery service fleets due to their environmental benefits, low operating costs, and flexibility. For instance, the [Zero Emissions Urban Fleets \(ZEUF\)](#) network, an urban fleet electrification initiative, aims to put European urban stakeholders on the path to achieving 50% and 100% electrification of urban fleets by 2025 and 2030, respectively.

According to the [market report](#), Asia Pacific will dominate the global e-scooter sharing industry in 2022, accounting for the largest share of over 74.85% of the total revenue. To date, this region has the highest market volume for e-scooter sharing.

A major challenge for delivery electric fleets is the limited range of these vehicles. Unlike diesel-powered vehicles, electric bikes and scooters have a limited one and may not be suitable for longer deliveries or in areas with limited charging infrastructure.

[Battery fires](#) and even explosions are also a significant challenge for delivery fleets of electric bikes and scooters. In addition, the high cost of lithium-ion batteries can be a significant barrier to their adoption in delivery fleets. Further, according to the [research](#), thieves are more likely to target electric bikes due to their higher value. Studies have shown that e-bikes are three times more likely to be stolen.

So, it is fair to say that the environment for smart delivery solutions is moving forward, but the industry needs a quality tracking solution with all the benefits it can bring to keep the business in good order with minimum cost. Fortunately, Teltonika Telematics has come up with one that can be integrated into a wide range of e-scooters or e-bikes, offering a variety of significant advantages.



SOLUTION

To demonstrate the solution, we choose the Teltonika [TFT100](#) tracker with high voltage support and designed for the e-mobility market. It is a compact, dust and waterproof [IP67-rated](#) GPS tracker with internal high gain GNSS and GSM antennas, Bluetooth LE connectivity, high-capacity 1,800 mAh internal battery, 10-97 V power supply range and a variety of interfaces including 1-Wire, RS232, RS485, CAN, [UART](#).

The TFT100 model is highly versatile and can be used with a range of electric vehicles. For example, the tracking device can be conveniently mounted on e-bikes, e-cargo bikes, and e-scooters to collect information on distance travelled, speed, exact location, and time spent on the vehicle. All data can be displayed in real-time on a dedicated software application to monitor a delivery fleet.

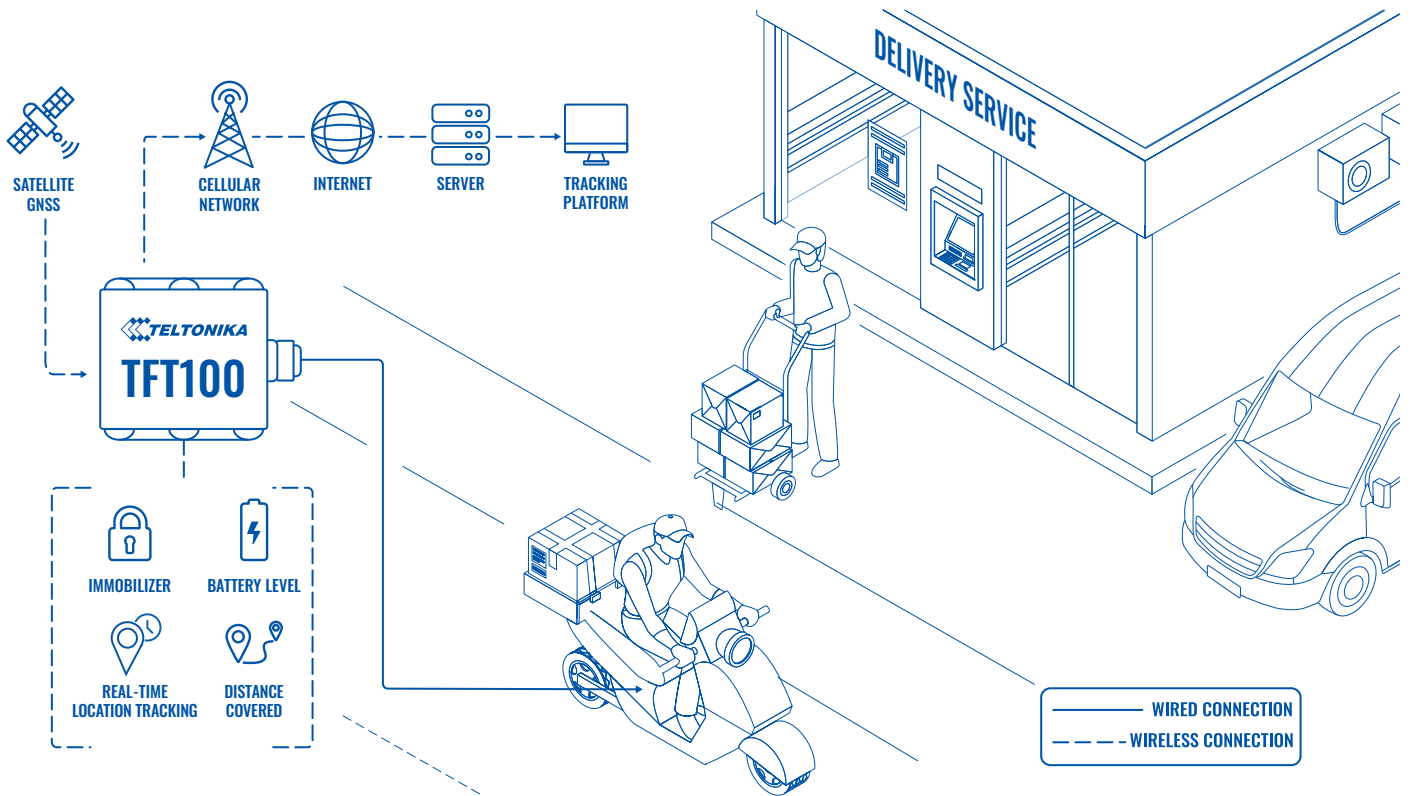
How it works – the TFT100 must be installed and configured on each electric two-wheeler to be tracked and monitored. Using a combination of satellites, the tracking device can detect the movement, location and other relevant data of the e-bike or e-scooter, depending on the tracker configuration and project requirements. The information is then transmitted via the GPS network to a dedicated server, allowing the fleet owner, manager, or operator to monitor the movements and parameters of each fleet asset in real time.

To ensure the best electric fleet performance, full accountability, and safety, the TFT100 has an impressive number of practical scenarios built into its [firmware](#) - Eco/Green Driving, detection of Overspeeding, Jamming, Excessive Idling, Fall Down, Towing and Crash, Geofence, Trip/Odometer, Immobilizer, Last Known Position, Timestamp Backup, etc.

Daily and weekly reports also provide valuable information on the performance of the e-bike or e-scooter, such as battery levels, charging needs or maintenance issues. With detailed information on these aspects, it would be possible to identify gaps and challenges that need to be addressed in the delivery process and business operations, e.g., inappropriate driver behaviour, missed deliveries, e-vehicle breakdowns, excessive downtime, etc.

Finally, Teltonika TFT100 tracker offers the convenience of remote firmware updates and configuration changes through the [FOTA WEB](#) tool, a powerful software solution designed to help manage these

TOPOLOGY



BENEFITS

- **Real-time monitoring** - by tracking their electric vehicles in real time, companies can respond quickly to issues that arise during deliveries. For example, if a driver gets lost or stuck in traffic, dispatchers can redirect them to a better route.
- **Improved route planning** - with GPS tracker Teltonika TFT100, delivery companies can optimise their routes for maximum efficiency. This means less time on the road and more deliveries in less time.
- **Increased accountability** - such fleet tracking provides an accurate record of where each delivery vehicle has been and how long it took to get there. This helps prevent theft or misuse of company assets.
- **Improved customer service** - GPS tracking enables delivery companies to provide customers with up-to-date information about their orders, including estimated arrival times and location updates.
- **Reduced costs** - by optimising routes and reducing idle time, continuous tracking can help reduce fuel costs and improve overall fleet efficiency.
- **Improved road safety** - knowing the exact location of each e-vehicle at all times helps ensure the safety of both drivers and pedestrians on busy city streets.
- **Increased fleet security** - electric two-wheeler tracking provides an added layer of security by allowing companies to track the movement of their vehicles, helping to prevent theft and unauthorised use.

WHY TELTONIKA?

To successfully address and solve the challenges of tracking and monitoring e-scooters and e-bikes, we offer a beneficial choice from Teltonika - the TFT100 tracker with robust IP67-rated casing easily adapted to different means of transport model with extended usage scenarios to help effectively manage electric two-wheeler fleets in the urban delivery service industry.

With over 24 years of experience in the telematics industry and a staggering 21 million IoT devices produced, Teltonika Telematics is an unrivalled leader in providing high-quality certified vehicle GPS trackers and asset trackers to customers around the world. We believe that our expertise and knowledge make us the perfect business partner for companies who need to achieve their goals. Our team has been helping thousands of businesses and organisations succeed for over two decades - saving them time, money, and hassle.

FEATURED PRODUCT

TFT100

