VEHICLE GPS TRACKING FOR MOTORSPORT

INTRO

Motorsports are popular events all over the world, including rally type ones. Faithful fans have known that there is almost nothing more exciting to watch a competing car or motorbike running a tricky section of the track while spitting gravel and dust. At the same time, relevant data tracking and monitoring to ensure accuracy of results, timely technical and medical assistance, proper safety measures are vitally important.

CHALLENGE

Motorsports are popular competitive events that take place in most countries around the globe and use customised motor vehicles for racing competitions. There is a wide range of different types of motor vehicles used, such as passenger cars, motorbikes, go-karts, boats, lorries, side-by-side vehicles (SxS or SSV), utility task vehicles (UTV), recreational off-highway vehicles (ROV), all-terrain vehicles (ATV), snowmobiles, etc.

According to KTVN press release data, the motorsports market revenue was USD 4,957 million in 2019 and will reach USD 8,792 million in 2025. At the same time, the increasing popularity inevitably causes a rising number of accidents, safety issues, challenges for event administrators, racing team managers and so on. It pushes national governments and event organisers to look not only to implement some stringent laws and regulations, but for present-day solutions to be adopted too.

In this case, we focus on point-to-point format motorsport events, such as rally or Baja racing. Some of the major concerns are people's safety, vehicle breakdowns, crashes, congestions, and passing of waypoints (aka checkpoints or control points) events tracking, etc. At any given moment, event administrators and racing team managers have to know the location of each participant and some parameters of vehicles, such as ignition on/off status and speed. They need the data to monitor racing event progress in real-time, to calculate time, points, and penalties flawlessly, to initiate timely alerts and take the relevant actions, respectively.

That said, is there any way to overcome these challenges by utilising the features and benefits of vehicle GPS devices and the relevant data they track to assist the motorsport industry? Yes, it is, and that is where Teltonika Telematics top quality products and expertise come in very handy.

SOLUTION

To address the challenges, the variety of Teltonika manufactured models can be successfully utilised depending on particular motorsport specifics, terrain, and meteorological conditions. For the sake of example, here we choose the SPECIAL category vehicle GPS tracker FMB204. Its distinctive features - a compact, robust, waterproof and dustproof IP67 rating casing with internal high gain GNSS/GSM antennas, and a high-capacity internal Li-ion battery.

Such properties will ensure that the device withstands elements driving on tarmac, gravel, mud, sand, pools of water, slopes, pits, humps, tree branches, leaves, grass, etc. in any weather patterns - from the scorching sun to torrential rain. Plus, the internal battery is very useful if the tracker is disconnected from the main power supply during a race.

How it works - at some point before the start of the competition, all GPS trackers have to be installed in racing cars, set up, and test accordingly. Types of vehicles may vary and a wide range of different types of motor vehicles can be used - from passenger cars and motorbikes to all-terrain vehicles.

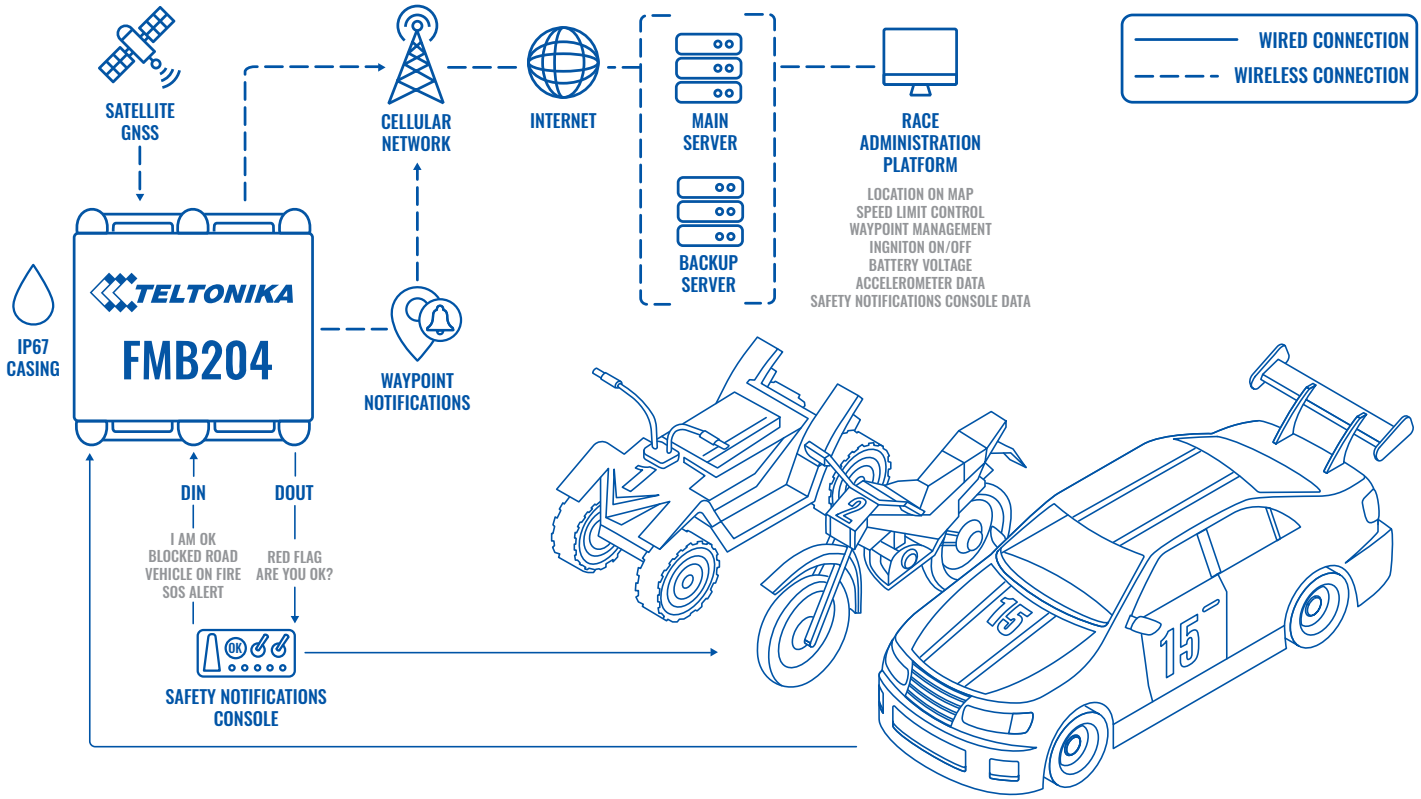
Thanks to extensive functionality, integrated accelerometer, internal Flash memory, and usage scenarios, FMB204 tracks in real-time each vehicle of interest GNSS coordinates, its speed, battery voltage level, accelerometer readings, ignition on/off events, overspeeding, idling, crash events, etc. All the relevant data will be sent to the main and backup servers via the GSM network for its monitoring, analysis, data-driven decision, actions, and reports using the dedicated race administration software platform.

As a result, racing event administrators and key personnel in charge can conveniently, accurately, and timely track each participant location on the map, congestions, and deviations of the race route; waypoint reached/missed events and notifications, respectively; speed regime monitoring of each racer on the road sections where it is restricted by event organisers; penalty points (or minutes) calculations and deductions; vehicle crashes, engine fire, and breakdowns ensuring timely assistance of on-site technical support team and, if necessary, paramedics and other things depending on particular event requirements.

Here to add, thanks to the relevant data gathering and dedicated 3rd party software, GPS devices allow not only precisely track racing-related events but to generate important notifications safety messages via dedicated dashboard-mounted consoles to ensure it is well-organised, safe as much as possible, law and regulation-compliant, has a good reputation, brings the joy to fans, and remains competitive.

Also, software updates and configuration changes for Teltonika vehicle trackers can be made using the recently updated FOTA WEB tool. This is a powerful software solution for the fast and efficient management of GPS devices.

TOPOLOGY



BENEFITS

• **Precise tracking of racing vehicles anytime, anywhere along the route** - racing event administrators can conveniently, accurately, and timely track each participant location, congestions, deviations of the race route, waypoint reached/missed events, etc.
• **Timely assistance and improved safety** - thanks to each racing vehicle speed regime, breakdowns, crashes monitoring and instant safety notifications, the required assistance can be provided when it's needed and where it's needed.
• **Value-adding services on demand** - thanks to vehicle telematics data and dedicated race administration software, extra services can be provided, such as road books, GPX files and their management, personal event maps, etc.
• **Wireless and affordable** - Bluetooth connectivity ensures fast installation and setup, low interference, power consumption and is inexpensive. If damaged, lost or stolen, the Teltonika BLE sensor can be quickly replaced.
• **Improved racing events management, administration, and reputation** helping to save precious resources, keep the racing events well-organised and compliant, attract more racing teams, fans, supporters, and investors.

WHY TELTONIKA?

To successfully resolve network reliability challenges for prominent automotive projects, we offer a valuable combo from Teltonika - special version firmware with implemented MQTT messaging protocol along with its exceptional features, and a wide range of the most sophisticated vehicle GPS trackers to help your business grow and prosper.

We are the right place to get all you need to succeed - the most abundant variety of top-quality certified GPS trackers, accessories, and solutions for any use case imaginable in vehicle telematics. From the start of the company 23 years ago until today, Teltonika 1,700 strong and growing team has manufactured 16 million IoT devices, helped to succeed thousands of customers and partners in over 160 countries across the globe.

FEATURED PRODUCT

FMB204

RECOMMENDED PRODUCTS

FMC125, FMC130, FMM125, FMM130, FMU125, FMU126, FMU130, FMB122, FMB125, FMB202, FMB110, FMB120, FMB130, FMB140