

CASE STUDY

Fleet Management



Queclink GV58CEU

Queclink's GV58CEU Enables Effortless Driver Identification and Authorization

Fleet businesses have developed into a multi-trillion-Euro sector in Europe in recent years. According to Statista's report, the total volume of the logistics market in the region has reached 1.12 trillion Euro in 2021, with notably 250 million passenger cars, 29.5 million vans, 6.4 million trucks, and 710 thousand buses in operation.

As the sector expands, optimizing operational efficiency and cost-effectiveness becomes crucial. One of the biggest considerations is the driver's payroll. Labor is expensive, yet unlike easily controlled assets, drivers pose a complex tracking challenge because they are rarely office-based and their movements more frequent and less predictable. For fleet management, keeping accurate records of drivers' working status and hours is as difficult as it is necessary.

Highlights:

APPLICATION

Driver Identification and Authorization

SERVICE AREA

Europe

Challenges

Traditional fleet management relies heavily on paper-based processes such as timesheets to document driver working hours and vehicle assignments. However, as businesses grow, these manual processes become increasingly cumbersome and prone to errors, resulting in inefficiencies and inaccuracies in payroll estimates as well as unwanted disputes.

While many IoT devices address these issues by accurately logging data, some fleets are also looking for more advanced solutions that can also help with driver authorization. To achieve that, it's not enough for a device to detect or record; but also to effectively react upon received messages, so that only authorized drivers can start the vehicle. Without this layer of security, unauthorized vehicle use and associated liability issues may still occur.

Given these challenges, the need for an innovative, comprehensive, and effective solution is apparent. Enter Queclink's GV58CEU, a game-changer in the fleet management sector. Integrated with the various accessories, the solution can empower accurate, on-demand driver identification and authorization.

Solution

Equipped with BLE capability and 1-wire interface, the GV58CEU can address the above challenges fully and flexibly. Fleet managers can choose either an iButton kit or a WKF300 BLE beacon for driver identification. Additionally, integration with the optional WRL300 BLE relay is available to accommodate additional authorization or remote control needs.

The iButton kit is a wired option that uses the 1-wire interface to achieve driver ID identification and access control. Widely applied in Europe, the method is simple yet highly effective: each driver is assigned a distinct key fob, and a reader installed in the vehicle, connected to the GV58CEU onboard. When a driver wants to start the vehicle, they must use the key fob to verify their identity before proceeding.

Apart from the 1-wire iButton solution, Queclink's GV58CEU also supports wireless solution using the WKF300 Bluetooth Beacon. The beacon enables driver authentication via Bluetooth Low Energy, replacing outdated paper-based methods with wireless efficiency. When paired with the GV58CEU, authorized drivers can be registered in advance, allowing the vehicle to be unlocked whenever a whitelisted driver approaches the vehicle and presses the button on the WKF300. Combine this with the GV58CEU's GNSS module and built-in



motion sensor, detailed information of driver activity and working hours can be tracked and logged as the vehicle moves around.

When integrated with an additional WRL300 relay, remote control of ignition can be achieved. Once an unmatched driver is identified, the relay will prevent the engine from igniting to make sure only the authorized ones can move the vehicle. Supporting BLE 5.1, the relay can be deployed flexibly without being hardwired to the GV58CEU, so there will be less chances for the relay to be spotted even when the vehicle is towed away and the device is pulled down.

Benefits

Queclink's holistic approach using GV58CEU and multiple accessories brings together driver identification, precise timing, and vehicle safety to redefine fleet management standards, offering a host of benefits as below:

Future Scalability for Fleets

Queclink's BLE solution is designed to be scalable, meaning it can accommodate the growth of a fleet business effectively. As the fleet expands, adding new drivers to the system becomes a straightforward and effortless process thanks to the whitelist feature. This supports business growth without interrupting fleet operations.

Strengthened Security Measures

The risk of theft or unauthorized removal is diminished when an additional WRL300 BLE relay is installed, as only authorized individuals will be able to start the vehicle. Even if the thief removes the GV58CEU tracker from the stolen vehicle, the Bluetooth-connected relay will keep functioning.

Increased Operational Transparency

The detailed information recorded (driver activity, working hours and data on the vehicle movements) provides a higher level of transparency in operations, reinforcing driver's regulatory compliance and accountability, while also allowing for accurate and efficient payroll procedures.

About Queclink

Since 2009 Queclink Wireless Solutions has been "Driving Smarter IoT".

Queclink is a pure play IoT hardware designer and manufacturer working with many well-known industrial and consumer companies to bring innovative IoT solutions to market. Its business units span transportation, asset and mobility, networks and agriculture. With 52 million IoT products delivered to over 140 countries, Queclink inspires data-driven solutions for its worldwide customers.

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