CASE STUDY

Equipment Management

Queclink GV620MG

Queclink's GV620MG Helps Improve Downtime Control, Efficiency and Safety on Construction Sites

Highlights:

INDUSTRY

Construction

SERVICE AREA

Europe

The eurozone's construction sector is suffering its worst decline since the pandemic brought the economy to a halt in 2020. Businesses are having a hard time overcoming the unfavorable conditions due to rising borrowing costs and sharply higher raw material prices. Meanwhile, ineffectual downtime control and sluggish management have also hampered companies' efforts to find a way out.

Statistics suggest that construction companies today are losing over a full workday's worth of productivity per week due to inefficiency. 66% burn more than a quarter of their work hours waiting for tools and equipment, costing an average $17,000 per a downtime incident.

Luckily, IoT technology is here to turn the tide. As predicted by McKinsey, operators in the construction subsetting may improve uptime by 30-50% and increase throughput by 1-5% by employing IoT applications. And with Queclink's GV620MG, an LTE Rechargeable Ruggedized Trailer Tracker, the finest chances are within grasp.

Challenges

A construction company in Benelux – one of the biggest in Europe, has been actively searching for solutions that can help them better manage cranes, excavators, and tools on the construction site to reduce losses and slash costs.

The costly equipment downtime of excavators and cranes has been their biggest problem and top concern. For it involves not just the cost of the repairs, but also that of disruptions to production on the jobsite, idle operators and rental costs incurred. Statistically speaking, a company with 50 pieces of heavy equipment could be looking at an annual loss of $2 million, whereas the bottom-line impact for a contractor with 200 assets could reach $8 million.

Weak management is another major challenge yet to be overcome. Very often, the most difficult task of any construction company is managing its budget. But in practice, available resources are usually not handled in line with their actual worth, workers are idle, and the true value of the use of rented or owned equipment is not correctly accessed, resulting in high costs and in low efficiency on sites.

Small tools such as drilling machines and circular saws are also prone to going missing between shifts and from site to site due to mismanagement. As a matter of fact, construction sites bear annual losses of up €1.5 billion in Europe due to equipment theft, while at the same time workers look for lost equipment for 38 hours annually – an average 10 minutes per working day.

Solution

Cooperating with a solution provider in Europe, Queclink has offered GV620MG to suit the company's needs and to address above challenges.

To reduce downtime, GV620MG improves preventive maintenance of the equipment by utilizing a wireless BLE tilt sensor that measures the rotation of crane arms. Once the angle of the crane arm exceeds the specified boundaries, the data will be sent to the server and the driver warned so that potential damages can be avoided.

With the built-in 3-axis accelerometer, GV620MG monitors and analyzes machine movement, detects and alerts for harsh driving behavior (such as abrupt starts and stops) that could endanger equipment and operator, and thereby improves the safety for both.

The motion sensor also keeps track of the machines' idling and working time, which can help managers develop a clearer plan of advanced budgeting and efficiency, empowering better management of resources, money, and time.

Besides, GV620MG allows users to couple the device with additional Queclink's accessories for secured asset security. The iButton kit which is connected via direct 1-wire interface, for example, effectively prevents unauthorized use of the vehicle and better safeguards the assets from theft.

Another Queclink accessory, WID310, is also used to track smaller tools. These compatible Queclink BLE Beacons enable up to 15 tools to be connected to each crane or excavator equipped with GV620MG via Bluetooth. As soon as any tool leaves the device's monitoring range, the missing alarm will go off.

Benefits

Queclink's GV620MG features an IP-67 rated ruggedized enclosure, which makes it ideal for working in harsh outdoor conditions and humidity on the construction sites. Its multiple I/Os, as well as the accessories and BLE external sensors it supports or pre-integrates have all contributed to a comprehensive solution that offers unmatched benefits, listed mainly as below:

Reduced Downtime

By tracking and reacting upon the real-time data, the solution has improved the preventive maintenance of the equipment and boosted their uptime from site to site.

Enhanced Efficiency

With information gathered on idling and working time of the vehicles, the construction site has also been able to better utilize the machines and to develop a more efficient plan for equipment and drivers.

Improved Safety

Paired up with WID300, Queclink's GV620MG keeps records of the motion and the status of all equipment and tools. In the event of a missing machine, the location of every item is easily accessible.

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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