CASE STUDY

FLEET MANAGEMENT

Queclink GV300 Series

Highlights:

INDUSTRY

Heavy Equipment

SERVICE AREA

Mainland China

Queclink Helps a Manufacturing Giant Slash Cost

Queclink Wireless Solutions' customer is one of the world's largest manufacturers of steel structures and cranes. One of its largest production bases is located on the east China coast. Prior to 2016, all vehicle scheduling and fleet management was done manually, resulting in low operational efficiency and high costs.

Queclink, in cooperation with a major telecom operator in China, built a smart vehicle scheduling and fleet management system for them. The system, now in its fourth year of service, has increased efficiency and reduced costs substantially: cutting unit fuel consumption by 15%, and reducing back-office personnel by 50%, saving over 6.8 million yuan per year.

Challenge

This production base has a total of 563 mechanical vehicles: forklifts, tractors, and ladder trucks, to list a few. Every day each vehicle takes 10 to 20 orders on average, taking from 10 minutes to a couple of hours to complete each order. As all vehicle scheduling and fleet management was being done manually, the base had been plagued by problems including:

Low efficiency in vehicle scheduling

After a request for vehicle use was received, the back-office staff had to call a list of drivers' mobile phones and confirm the driver's current position and status of vehicles. Once an appropriate vehicle and driver was located, it was allocated and scheduled.

Difficulty in monitoring

The production base covers an area of over 3 million square meters, roughly equivalent to the size of 400 football fields. It was almost impossible to keep track of vehicle usage and availability, not to mention driver behavior, working efficiency, etc.

Difficulty in collecting data and information

Scattered data and information at all levels were not only hard to collect, but also difficult to be delivered in a timely manner to the back office, resulting in obvious inconveniences in daily management.

Solution

In order to tackle these problems, Queclink cooperated with a major telecom operator in China and built a smart vehicle scheduling and fleet management system for the production base.

Integrated into the system are Queclink devices, the GV300 series that offer a telematics gateway and GPS and boast the following features.

Built-in GNSS chipsets with high sensitivity and precision, along with the dedicated external antenna, provides the most accurate vehicle positioning on various all-metal vehicles. The device, featuring a power supply circuit design compatible for 12V and 24V, works well in any complex power ambiance and on various types of vehicles. The specially designed accessory offering overvoltage protection allows it to work stably even in older models with the worst power supply conditions. Comprehensive alarm functions ensure real-time report and quick management of abnormal events such as low battery, disconnected antenna, vehicle collision, and towing. Built-in high-precision accelerometer and Queclink's unique algorithm to analyze driving habits can reliably detect and correct aggressive driving behaviors such as harsh braking and acceleration to ensure safe operation.

Benefits

Smarter vehicle scheduling
Today when an order comes in, the staff can easily make the most appropriate assignment, no matter whether they search for the nearest vehicle or the most skilled driver. Scheduling time per order dropped dramatically from 5 minutes to 30 seconds, and efficiency soared by an astonishing 95%. The production base was able to free up half of the back office staff and allocate them to other posts. Manual delivery of orders including the use of paper tracking sheets has been replaced.

Resources saved
Inefficiencies such as vehicle idling and low resource utilization are effectively removed with a smart management system. The fuel consumption of heavy vehicles for steel structure production declined 2.07 liters per ton – a 15% drop year on year.

Safer operation and management
The system allows real-time monitoring and vehicle track playback and automatically records overspeed, sending alarms not only to the back office but also to the driver. All these features made the operation safer.

Costs slashed
The application of the system helped slash costs of mechanical vehicle operation by nearly 7 million yuan per year.

Today for this production base, the smart vehicle scheduling and fleet management system has become something they are proud of. It has drawn attention from the media such as the Workers Daily and attracted visits from multiple enterprises including an international shipping group from Europe. The project has been recognized as a "Top 12 Case of Application of the Internet in Industry" and was awarded as "Special Recommended Case" in the "Safe Transport" innovation case collecting and evaluating activity organized by the Ministry of Transport of China.

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 35 million IoT products delivered to over 140 countries, Queclink inspires data-driven solutions for its worldwide customers.

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