Jimi loī

JIMI IOT INNOVATIVE SOLUTIONS





CHALLENGES

DANGEROUS DRIVING BEHAVIORS

Speeding, fatigue driving and running red lights are typical behaviors of drivers who ignore their own safety, vehicle conditions and company regulations, which not only threaten the personal safety of passengers, but also easily lead to traffic accidents, causing a lot of time and money losses to the company.

VEHICLE MAINTENANCE

For employees, the company car is more like a tool than their own property, so the probability of bad driving habits is often higher. But for corporate leaders and fleet managers, the cost of purchasing and maintaining vehicles makes up a large part of company expenditure. Thus, maximizing the uptime of company cars while keeping them in the best condition is a challenge that every fleet manager faces.

UNAUTHORIZED USE

As a common employee violation, using the company car for private purposes without approval will cause serious waste of resources, and increase the operating cost burden of the fleet and the company's financial expenses. And it will also encourage private uses, and further affect the normal management of company cars.



REDUCING ACCIDENT RISKS

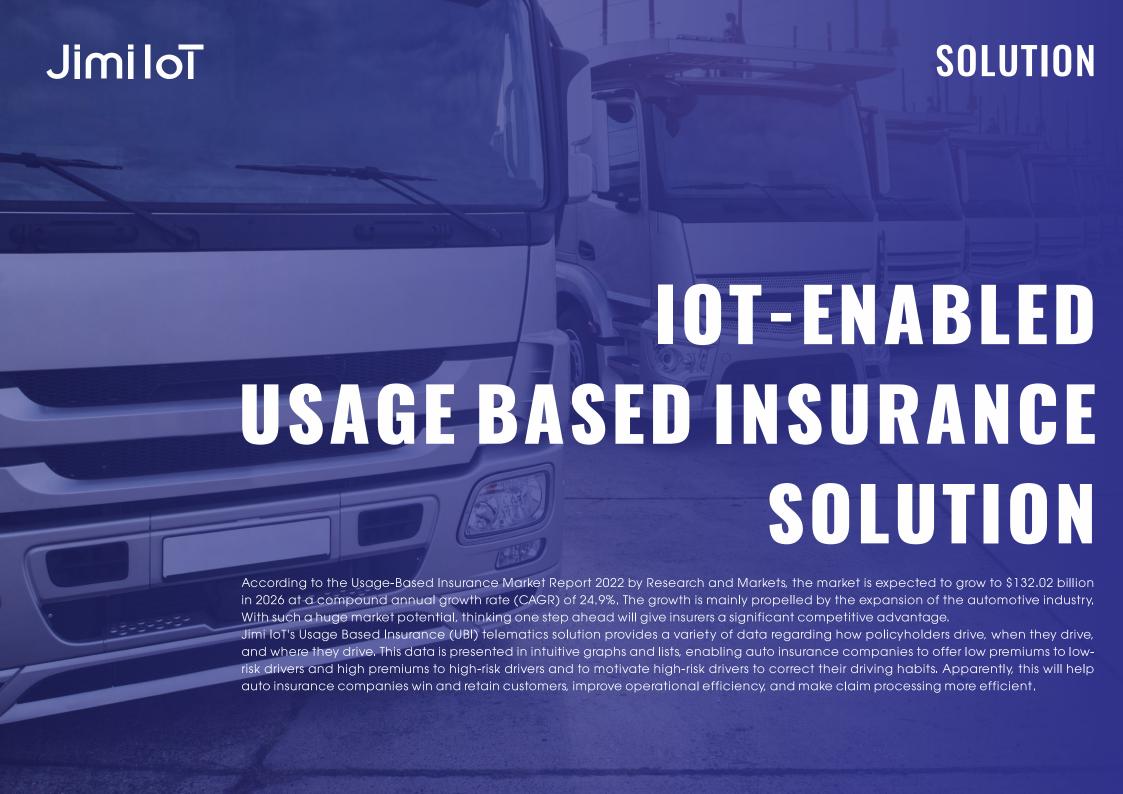
Corporate leaders, fleet managers and dispatchers can easily monitor any car in their company fleet, promptly identify and correct drivers' dangerous driving behavior, ensuring the safety of drivers and passengers. Moreover, there are instant alerts for high-risk behaviors such as speeding and fatigue driving, which further reduce the likelihood of accidents.

MAXIMIZING VEHICLE UPTIME

Real-time location tracking reduces the risk of vehicle theft, and multiple alerts prevent abnormal events such as dangerous driving behavior, tracking terminal damage, and battery exhaustion. Moreover, managers can evaluate vehicle status based on vehicle mileage and fuel consumption, and ensure that their company cars are well-maintained and overhauled on a regular basis.

MINIMIZING MAINTENANCE COSTS

Supports reading key vehicle data such as VIN number, odometer, coolant temperature, fuel consumption, vehicle speed, battery voltage, engine RPM, and trouble codes. Managers in charge can easily identify areas that need improvement in their company cars and avoid breakdowns for on-road vehicles, reducing fleet maintenance overheads.





EVENT VIDEO TO CLOUD

The Jimi IoT's dashcams or camera systems capture critical events, such as collision and harsh driving and save these critical data in the server for future use. These data can be used by insurers as evidence to reduce insurance frauds and exonerate innocent policyholders.

DRIVER MONITORING (DMS)

The peripheral driver attentiveness monitoring camera (DMS) captures driver distraction or fatigue or phone use or drinking in separate video clips and the platform classifies these data in types to facilitate search when circumstances call. These data can also be used to coach drivers in real-time and afterwards.

INDIVIDUALIZED PRICING

Mileage data collected are critical if you charge the insured based on usage; while driving behavior analysis (DBA) is of paramount importance if policyholders are charged on how they drive. The platform allows you to leverage both types of data to craft the most suitable insurance strategy for each individual customers. With the platform, you can also create incentive programs rewarding policyholders with good driving behaviors.

24/7 AVAILABILITY

The mobile app for end-users offers customers quick and 24/7 access to relevant information, which enables them (policyholders) to know where they can improve and correct their driving behavior accordingly to get a better price on their annual rates.

UNINTERRUPTED TRACKING

In addition to position fix via GNSS, our house-developed inertial navigation module (INS) embedded in trackers enables the uninterrupted position fix in area with poor or even no GPS signals. This functionality further increases the chances of recovering stolen vehicles for policyholders, but also helps reduce the cost of vehicle losses.

SEAMLESS INTEGRATION OVER API

Jimi IoT offers an API protocol to integrate our devices with your existing platform and enable you to access all the data collected by Tracksolid Pro. Or if you would like to build a platform of your own, our team is here to assist you.

IMPROVED CUSTOMER EXPERIENCE

Generally, when a traffic accident occurs, drivers immediately take out their cellphones and contact their insurance companies. This First Notice of Loss (FNOL) can assist policyholders in getting help, but may not always be as prompt as they expect. Jimi IoT's hardware and software allow drivers to trigger a panic button at the very moment an incident occurs, and the insurer will receive an SOS alert notification. Upon receiving the notification, the insurer can locate the policyholder's vehicle and dispatch the nearest team to the scene. The manager or operator can even call the device and inquire about the driver's situation to determine if they need medical attention or if the fire department should be contacted. Besides improving response times in emergencies, this can also make your customers feel safer.

CUSTOMIZATION SERVICES

Jimi IoT has more than 20 years of experience in the IoT/IoV industry and a team of experts to assist you in the adoption. We offer ready-to-deploy solutions (with IoT SIM cards for worldwide connectivity) as well as OEM, ODM, and OBM services to suit your industry-specific needs.





RECKLESS AND CARELESS DRIVERS

Without effective monitoring methods, operators and managers have no idea how drivers behave behind the wheel and if they have been vigilant and attentive enough to protect themselves and passengers against possible dangers on the road or if they have been assaulted or verbally conflicted with passengers on routes, destinations, payments, or ratings.

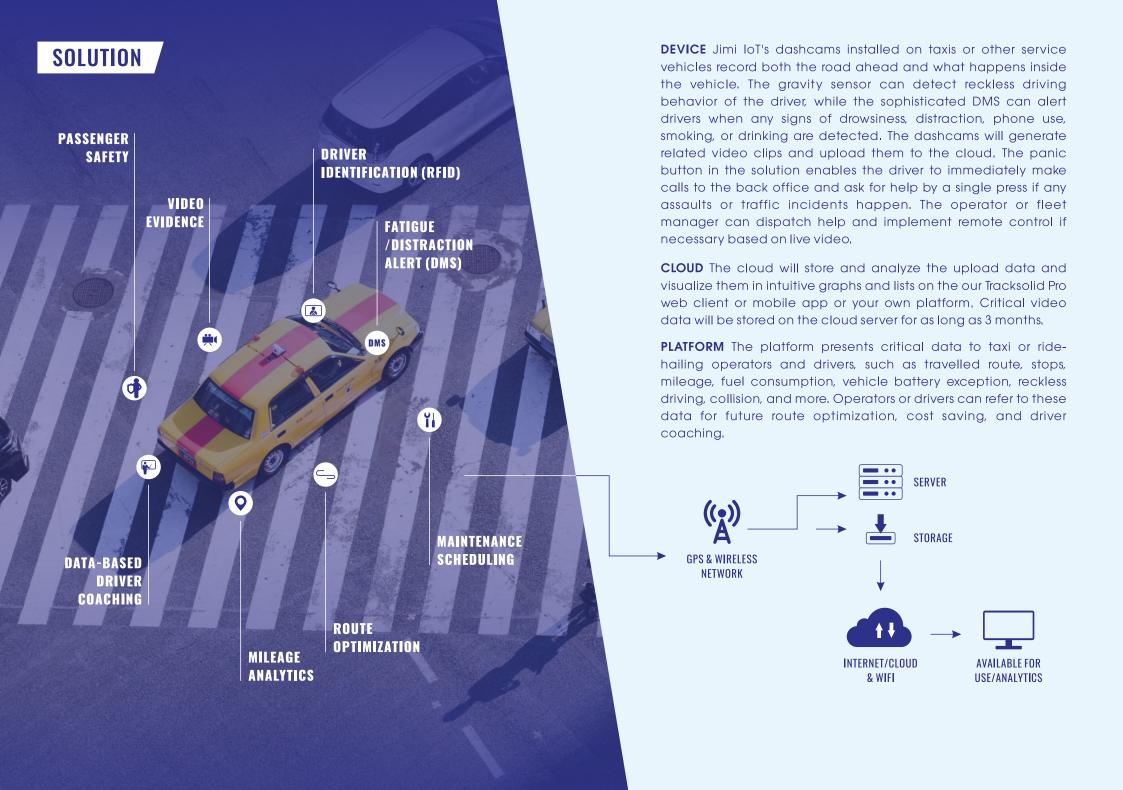
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LACK OF EVIDENCE AGAINST FALSE CLAIMS

If no reliable evidence can be presented to an authority in the case of a dispute between a driver and a passenger, taxi, ride-hailing, or ride-sharing companies may be forced to pay damages or collateral expenses. Accordingly, their insurance premiums may increase.

POSSIBLE DETOURS LEFT UNDETECTED

In non-rush hours, drivers might take a less direct route to earn more money, resulting in more customer complaints, fuel costs, and carbon emissions. If this happens, your hard-earned reputation may be damaged and you may lose your business.





REAL-TIME MONITORING AND FEEDBACK

4G connectivity allows Jimi IoT's camera systems to upload vehicle data and display video from multiple cameras in near real-time, It provides instant visibility into vehicles, drivers, and passengers, ensuring passenger and driver safety. The system also sends out live alerts to drivers and operators on any exception to enable you to take immediate action if

OVERALL SAFETY IMPROVEMENT

Jimi IoT's camera system can alert drivers with in-cab alerts and operators with notifications if any signs of driver distraction, tiredness, phone use, drinking, or reckless driving like speeding, sudden braking or lane change or more are detected. All these fleet-ready features help ensure drivers, passengers, pedestrians, and road safety, increase safe driving, and coach drivers in real-time and afterwards.

BETTER ROUTE PLANNING

Jimi IoT's Tracksolid Pro allows drivers and operators to plan the shortest route to passenger pickup spots by utilizing history data and algorithm to avoid traffic and less safe places, saving fuel cost and improve customer experience.

EVIDENCE AGAINST FALSE CLAIMS

The dashcams record what's happening in front and inside the vehicle with audio (which can be mute on your demand). In the event of a traffic incident, disagreement, argument, or possible assault, these can be used as evidence to prove who is at fault, so insurance claim procedures are easier and faster and false claims can be eliminated.

MAINTENANCE REMINDER

Schedule regular maintenance on Tracksolid Pro (or your own platform) and set reminders to notify driver of maintenance time to prolong the vehicle's life.



CHALLENGES

FLEET COMPLIANCE CRISIS

According to Chapter II, Article 6 of REGULATION (EU) 2019/2144, motor vehicles shall be equipped with driver drowsiness and attention warning and advanced driver distraction warning. Other regions and countries have or are about to pass similar regulations, Currently, most fleet businesses (car rental services, ridesharing companies, trucking services, hazmat transportation services) have already adopted fleet solutions combining trackers and a tracking platform. So how to quickly upgrade the existing system to comply with the emerging regulations and take a lead in the business at the lowest cost is a pressing issue.

DRIVER PERFORMANCE AND COACHING CONCERN

Most existing telematics solutions could only provide information like time, speed, and location of the vehicles. This leaves fleet managers in the dark when it comes to the drivers' behavior, especially when your driver takes on a night shift or is involved in an accident. With limited knowledge of their behavior on road, it may become a bother when you have to evaluate their performance and make out targeted coaching sessions for them.

ACCIDENT LIABILITY DETERMINATION DIFFICULTY

According to Euro NCAP Assessment Protocol, among observable "human mistakes" that caused more than ninety percent of road accidents, human "errors" like the driver state - inattentiveness, fatigue, distraction - and inexperience play an important role. Telematics solutions can help you determine whether your driver has been speeding, but whether the driver has been talking on a cellphone, dozing off, drinking or smoking is unknown. So when an accident happens, you may be reduced to silence by the other party without supporting proof and you may have to take all the liabilities, which will certainly cost your business a fortune.



IN-FLEET MONITORING FOR DRIVER IMPROVEMENT

The JC170 DMS camera can detect and record unsafe driver behaviors. E.g. if your driver uses a cellphone, smokes in the car, or dozes off while driving – your driver receives in-cab alerts and you get notified instantly. You can know what your drivers are doing and the level of their alertness behind the wheel and access event images on Tracksolid Pro. Such insights can prevent unfortunate accidents and help you coach drivers at the moment and in the future.

FEWER EXPENSES

With images, you can get data regarding your drivers. This will help you identify driver-behavior-related issues such as drowsiness and distraction and enhance your driver's safety awareness through real-time and future coaching. A higher level of alertness means fewer accidents and millions of dollars in accidental damage and insurance premiums saved, avoid significant reputational damage, and ensure timely delivery of cargoes.

SEAMLESS INTEGRATION

Jimi IoT offers an API protocol to integrate our devices with your existing system and enable you to access all the data collected by Tracksolid Pro.

IMAGE ON-DEMAND FOR EVIDENTIARY SUPPORT

The cellular connectivity of the GPS tracker enables the fast upload of images captured by the JC170 driver-facing camera when any of the unsafe driver behaviors is detected, which can be used as supporting evidence in the event of accidents or compliance.

SITUATIONAL AWARENESS

Even if in a rare case, your driver is involved in a traffic accident, they can always use the panic button to notify you, so you can immediately send all necessary help to the site. And you can also activate the microphone remotely to listen to and record the ambient sound to get a better idea on the whole situation.

CUSTOMIZATION SERVICES

Jimi IoT has more than 20 years of experience in the IoT/IoV industry and a team of experts to assist you in the adoption. We offer ready-to-deploy solutions (with IoT SIM cards for worldwide connectivity) as well as OEM, ODM, and OBM services to suit your industry-specific needs.



CHALLENGES

POOR SERVICE QUALITY

Semi-trailers, with their unique structure, often offer economic advantages over other forms of transportation. They are also recognized as the preferred option for transporting a variety of goods. As the growth of the e-comerce and end-use industries, people now are spending more money on products like meats, seafood, bulkfood, fruits and vegetables, dairy products, fresh flowers. Therefore, it is no surprise that poor service quality is one of the key factors restricting the development of logistics enterprises.

INEFFICIENT MANAGEMENT

Most dispatchers, fleet managers, and company leaders often have trouble identifying where their semi-trailers are when needed, especially those on the road. Therefore, when receiving a task, it is difficult to arrange the nearest vehicle to deal with it in time, and it is time-consuming and laborious to contact by phone, which increases the operating cost of the fleet management.

INADEQUATE MONITORING

Whether in an unsupervised parking lot or in a container yard near a port facility, cases like loaded trailers being emptied by thieves are frequent occurrences. Also, damage to shipped cargo due to improper temperature and humidity level is common during cold-chain transportations. A significant reason for these accidents is the lack of effective monitoring tools.

SOLUTION DEVICE Jimi IoT's asset trackers mounted in trucks, trailers and containers read and send telematics data to the cloud platform, helping managers in charge get to know the status of semi-trailers in real-time - current location and track history, mileage, how many times it stopped on the specified route, which driver is on duty. With various external sensors and the suite of event-triggered alerts, Jimi trackers can detect abnormal events at the first time and send the alerts to the cloud platform. **PLATFORM** With Tracksolid Pro tracking platform, company leaders, fleet managers and dispatchers can easily monitor the status of any semitrailer from anywhere, anytime, and effectively identify idle trailers, thereby maximizing vehicle uptime and dispatching efficiency. It also allows managers in charge to stay on top of exactly what's going on at HALL all times, enabling them to make accurate decisions if anything unusual **EFFECT SENSOR** occurs, such as tracker removal, container door opening, or unauthorized trailer use, and to plan their next steps efficiently and on TEMPERATURE/ time. **HUMIDITY SENSOR REMOTE LISTEN-IN GNSS** INTERNET EASY TO INSTALL (19) LONG STANDBY (UP TO 3 YEARS) LOCATION TRACKING (Q) - .. - • • MULTIPLE WORKING MODES LTE & GSM **CLOUD SERVER** DUST & WATER RESISTANCE **IOT DEVICE FUEL LEVEL SENSOR** RFID READER MOBILE **PLATFORM**

OPTIMIZE TRAILER UTILIZATION

By collecting telematics data, Jimi IoT's tracking terminals help you better identify underutilized semi-trailers, reduce dwell time and increase the number of loads carried per trailer per month, thereby improving the tractor-to-trailer ratio and business operations without investing in new equipment.

RAPIDLY RESPOND TO THEFT

With location reports and instant alerts, you will be able to be notified immediately by email, SMS, and other methods in case of vehicle theft, and take remedial measures to avoid huge economic losses, giving you great assistance with trailer theft prevention and recovery.

GAIN INSIGHT INTO ALL TRAILERS

Helps you get rid of the tedious work of searching, locating and redeploying your semi-trailers, Rather than wasting time on long searches, you'll be able to quickly identify each trailer's real-time status including location, and find the right trailer for the job in the fastest way.

INCREASED FLEET/CARGO SAFETY

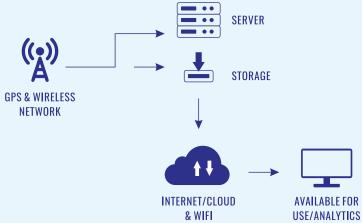
The suite of event-triggered alerts and various sensors will ensure atypical events detection like unauthorized door openings, geo-fence crossing, device removal, abnormal vibration, abnormal temperature/humidity, etc. Driven by GNSS and LTE communication, our devices ensure prompt transmission of security alerts, giving dispatchers, fleet managers and business owners a chance to react to potential damage before it worsens,





DEVICE Featuring advanced GPS antenna and sensitive sensors, Jimi IoT's intelligent trackers can monitor the status of on-road vehicles in real-time. Along with the help of multiple positioning systems, solid communication networks and K-Line & CAN Bus data reading ability, the collected telematics data (location, mileage, alarm information, etc.) are all transmitted to the cloud server for analysis and calculation, and the visual data reports are fed back to the risk control platform, helping managers in charge to feel totally assured that their leased vehicles are under constant protection.

PLATFORM The Tracksolid Pro platform provides real-time location tracking, daily route maps, geo-fences setting, event-triggered alerts, driving behavior analysis, and reports & analytics, helping leasing companies get to know what's going on of their leased vehicles at all times. Among these features, the data dashboard is the most powerful tool to assist managers in identifying risk events promptly, and even predicting them in advance, thereby enabling a higher level of risk control in the auto finance industry.



EASY DEPLOYMENT

Featuring a plug-and-play design and powerful magnetic base, Jimi IoT's wireless tracking terminals provide hassle-free installation, saving you a lot of time. Rather than changing their vehicles from their factory stock to new ones, car rental companies are able to keep the integrity of their vehicles without wiring, which in turn helps with secondhand sales at the end of their lifecycles.

PREVENTATIVE MAINTENANCE

Near real-time wireless OBDII data transfer from on-road vehicles to the cloud platform, regular and preventative maintenance can be more precisely arranged with visual reports from the platform, making it easier to avoid breakdowns for on-road vehicle fleets, thereby maximizing your vehicles' uptime.

DATA INSIGHT

By using the all-in-one data dashboard, fleet managers can monitor the driving conditions and locate overdue vehicles at a glance, helping leasing companies find potential problems such as improper driving habits. The data insight can also help fleet managers improve their business operations and stand out from their competitors by minimizing risks or compensation claims in the future,

LOSS MINIMIZATION

Using real-time location tracking, geo-fences setting and instant alerts system, leased vehicles' security can be greatly improved, ensuring a lower ratio of auto thefts. Even if theft or any other emergencies happen, leasing companies can leverage the tracker to confirm the location, and the vehicle will likely be retrieved in a couple of hours, saving a lot of time and money.

EFFICIENCY MAXIMIZATION

With predictive strategies, fleet managers and corporate leaders can easily lengthen the lifespan of their leased vehicles. Along with hard-wired trackers, we also offer various battery-powered asset trackers leveraging different battery capacities to allow leasing companies to choose an ideal tracking solution based on the contract period, ranging from several days to a few months or even longer.





DIFFICULT TO STAY COMPLIANT

Food safety regulations require drivers of cold chain fleets to take temperature readings at regular intervals to ensure goods are arrived in good condition and safe. Whether drivers have followed these rules is merely a matter of responsibility and integrity. No effective way to monitor and control their behavior.

LACK OF REAL-TIME VISIBILITY

Automated temperature and humidity logging is crucial for maintaining an accurate record of cold chain fleet conditions. Without it, manual logging is prone to errors, and managers may not be aware of any issues until the fleet reaches its destination or returns to the logistics service providers. Blind spots are common between warehouses and retail stores, and this can lead to significant problems. For instance, drivers, especially self-employed ones, may keep the temperature in the cold chamber higher than the required value during transit to save money or the temperature in the chamber might suddenly change due to a failure of the refrigeration equipment. Unfortunately, shippers often have no instant access to such information, which can lead to an increase in customer complaints and losses from spoilage.



UNINTERRUPTED MONITORING

Cold chambers and refrigerated vehicles are monitored 24/7/365 and the auto data logging saves manpower and time and the readings are much more accurate. And the data can be viewed in real time on any internet-connected device from anywhere.

REAL-TIME LOCATION TRACKING

With GNSS, WiFi, or cellular networks, managers can always know the whereabouts of their refrigerated fleets. This helps reduce inquiries from customers (as you can always show them where cargoes are with screenshots or images) and streamline deliveries.

PROGRAMMABLE GEO-FENCE

By presetting geofences via the platform, cold chain managers can get real-time notifications about when and at which warehouse reefer containers arrive during transit, as well as when they will arrive at their destinations. This can protect your good reputation.

SEAMLESS INTEGRATION OVER API

Jimi IoT offers an API protocol to integrate our devices with your transportation management system (TMS) and enable you to access all the data collected by Tracksolid Pro at various stages of the cold chain.

ACTIONABLE DATA

The platform allows managers to decide which events are important to them and set separate alerts, so they are only notified of matters of the greatest significance and take actions at the right moment to reduce spoilage and mitigate losses caused by outdated information.

EASY MASS DEPLOYMENT

The magnetic mounted, battery-powered asset trackers are easy for mass adoption. No cables are required. The high-capacity internal batteries can power the device to stay active for several years, making it a long lifecycle solution.

REGULATORY COMPLIANCE

Using the platform, managers can configure the device to take temperature and humidity readings in cold chain transport vehicles at intervals specified in food safety regulations, ensuring compliance throughout the entire delivery process.

CUSTOMIZATION SERVICES

Jimi IoT has more than 20 years of experience in the IoT/IoV industry and a team of experts to assist you in the adoption. We offer ready-to-deploy solutions (with IoT SIM cards for worldwide connectivity) as well as OEM, ODM, and OBM services to suit your industry-specific needs.

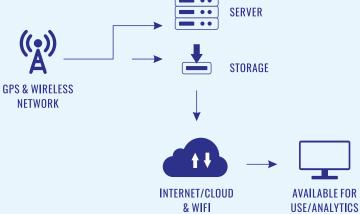




DEVICE Jimi IoT's telematics devices installed on electric scooters, bikes, mopeds, and other two-wheelers interact with and collect data such as locations, battery status and faults and upload these data to a cloud-based platform.

CLOUD The cloud server analyzes the uploaded data and visualizes them in more intuitive forms, such as graphs and lists on a designated web client or mobile app, so managers can have a clear understanding of the current statuses of their two-wheelers.

PLATFORM The platform alerts fleet managers or operators in the back office if any exception occurs such as low battery, entering or leaving geographical zones, and tamper, so they can act accordingly. The platform also enables fleet managers or operators to schedule maintenance to extend the service life of your fleet vehicles.



PREDICATIVE MAINTENANCE

With trackers factory-installed, manufacturers can get reliable data of vehicles. The data will be uploaded to a cloud platform for analysis. Important data will be singled out in lists, graphs, or notifications to facilitate maintenance and real-time GPS data facilitate the dispatch of engineers to the field if circumstance calls. This saves time/cost, increases efficiency, and improves user experience.

BETTER USER EXPERIENCE

Jimi IoT's trackers for electric two-wheeled vehicles, working with the cloud platform, can provide various features for users to have a better riding experience. These features include easy lock/unlock via Bluetooth, one tap to find vehicle, real-time location to help recover stolen vehicle or battery, panic button for emergencies, keyless start to share with friends, etc.

BATTERY MANAGEMENT (BMS)

The tracker can work with a BMS protection board to collect the location, strength, and other exceptions of vehicle batteries and upload the data to a cloud platform. With real-time notifications, batteries will be protected against exceptions including high temperature, overcharge, and overcurrent to increase their service lives.

CUSTOMIZATION SERVICES

For conventional legends in the industry, the lack of IoT expertise and experience impedes the progress of digital transformation and upgrade. This may become a huge hurdle for competing with starters. As for Jimi IoT, we have more than 20 years' experience in the field and a team of experts to help. We had a wide range of tracking terminals and a cloud platform ready for you to manage two-wheelers.





UNPLANNED DOWNTIME

According to a report by Senseye, each hour of unplanned downtime costs companies \$532,000. The accumulate cost for a year would be appalling even for construction companies with a small equipment fleet.

EQUIPMENT UNDERUTILIZATION

Often, backend officers and field operators are unaware of the location and type of machinery or heavy equipment in the yard that can be dispatched through traditional methods. Keeping track of inventory requires regular visits to the yard by manpower, which may prone to error and is costly and time-consuming.

HIGH FUEL CONSUMPTION

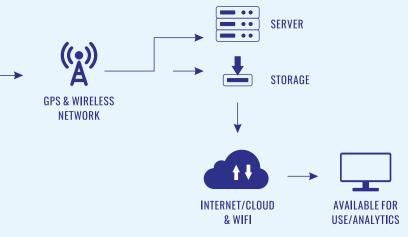
Idling, detours, or fuel theft are unknown to fleet managers or operators without an effective way to monitor mobile plant machinery, trucks, or trailers. These three factors are the main drivers to push your budget high.

SOLUTION BLINDSPOT MONITORING REGULAR MAINTENANCE **SCHEDULING** FATIGUE/ DISTRACTION **ALERTS** FUEL CONSUMPTION PANIC **BUTTON FOR EMERGENCIES** DRIVER **BLUETOOTH IDENTIFICATION** SENSORS SUPPORT LIVE **EOUIPMENT** LIVE DISTRIBUTION DRIVER **ASSISTANCE** IDLING REPORTS

DEVICE Jimi IoT's trackers and dashcams installed on the equipment collect data about statuses including idling, monitor driver and road conditions, assist in reversing, and remind drivers with actionable incab alerts if any exception occurs. With peripheral support, our devices can be customized to suit most construction applications. In addition, the personal tracker is handy in case of an emergency. A single press of the SOS button will alert you that your field staff needs assistance, giving you peace of mind.

CLOUD As the data from your devices is analyzed by the cloud server, the most important data from your business is visualized in intuitive graphs and lists on a platform or mobile app (Tracksolid Pro or your own) so that operators or managers can see the field situation intuitively in real-time from the back office.

PLATFORM The platform alerts operators or managers if any exception occurs, such as fuel theft, driver fatigue, or leaving or entering a designated area. In addition, you can track traveled routes, monitor drivers and heavy machinery in real-time, plan routes, schedule maintenance, and track fleet distribution. By doing so, you will be able to have better control over the field fleets and mobile workforce.



CABLE-FREE NETWORK CONNECTIVITY

All Jimi IoT's devices are equipped with an internal network module. It saves the time and hassle to route network cables for monitoring devices in the already-complicated construction site, making this solution a suitable choice for projects that are small or need temporary works. This further shortens the time to move-in and move-out and lowers the cost for technical maintenance.

PROGRAMMABLE GEO-FENCE

By pre-drawing geofences on the cloud-based platform, you can see the distribution of your equipment assets, determine if they have reached the predetermined sites, and know clearly what types of machinery and equipment are in the yard for dispatch and which are nearest to the required job site.

REAL-TIME VIDEO INSIGHT

Jimi IoT's camera system allows managers or operators to remotely monitor their field drivers' attentiveness like fatigue or distraction (DMS), helps monitor the blindspots of the construction vehicles and the rear of the equipment fleet to assist reversing or parking.

PREVENTIVE MAINTENANCE

Studies suggest that preventive maintenance can save an average of 12% to 18% in costs. Preventive maintenance can be a game changer. It enables heavy equipment fleet managers or operators to act proactively instead of reactively by scheduling regular maintenance. This reduces the cost of unplanned downtime and ensures the uptime to guarantee projects are completed in time and protect your good reputation.

TRACK AND TRACE

Live GPS to pinpoint equipment fleet stolen, on road, and in the yard and travel history including distance, time, and speed to see if your construction equipment fleet has been detoured or gone to non-work sites for private use.

ACTIONABLE ALERTS

The platform allows managers or operators to decide which events are important to them and set separate alerts, so they are only notified of matters of the greatest significance and take actions at the right moment to maximize productivity, utilization, and profitability.



DATA-DRIVEN REPORTS

Jimi IoT's trackers and dashcams collect and upload key information about heavy equipment such as engine hours, harsh driving events, fuel consumption, water tank temperature and our software analyzes and visualizes these critical data to avoid extended operation and extend the service life of your equipment assets.

IMMEDIATE HELP TO ACCIDENT SITE

All Jimi IoT's hardware (mobile worker trackers, vehicle trackers, and dashcams) offer a panic button for site workers or drivers to call for help in emergencies such as accidents or personal injury.

ROUTE OPTIMIZATION TO WORK SITES

Once a request is received, equipment asset managers or operators can plan the shortest route to the work site to save time en-route and fuel consumption.

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SOLUTION

REMOTE PUMPJACKS MONITORING SOLUTION

The uptime of a pumpjack greatly affects the oil production. As operators of oil fields, it is important to know the run status of all pumpjacks to ensure that exceptions can be found in time, maximizing the uptime of the pumpjacks, optimizing operations, and increasing the productivity of the oil field.

CHALLENGES

RUN STATUS UNKNOWN

It is difficult to know in time which pump jacks in the distant oil fields have been idling or stopped and to get the exact data requires visits to the site and time for visual inspection. Thus, production is severely affected and the cost is high.

DIFFICULT TO GET CRITICAL DATA

It is time-consuming to manually record the current run statuses of pumping units and to screen out the most useful data. Moreover, the data may be inaccurate,

DELAYED/UNRELIABLE DATA TRANSMISSION

Operating data of oil pumpjacks may fail to be reported by a wired digital monitoring system due to a circuit or power failure.

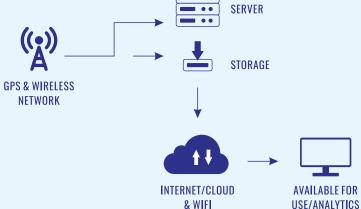
SOLUTION



DEVICE Run time efficiency monitoring devices installed on the walking beams collect the run status data (start, stop, swing) of the pumpjacks in real-time and upload the data using the cellular network to the cloud server.

CLOUD The cloud server analyzes the data and visualizes them in intuitive graphs and lists on the designated web client or mobile app.

PLATFORM The platform alerts operators if any exception including unexpected stops or low battery occurs to enable operators to act accordingly.



BENEFITS

HIGHER PRODUCTION

Maximize uptime and oil production and optimize operations with realtime status feedback,

BUDGET-FRIENDLY

Save money on cables and cabling with the magnetic mount design.

RELIABLE TRANSMISSION

Guarantee uninterrupted data transmission with the internal battery featuring 5+ years of service life.

LABOR-SAVING

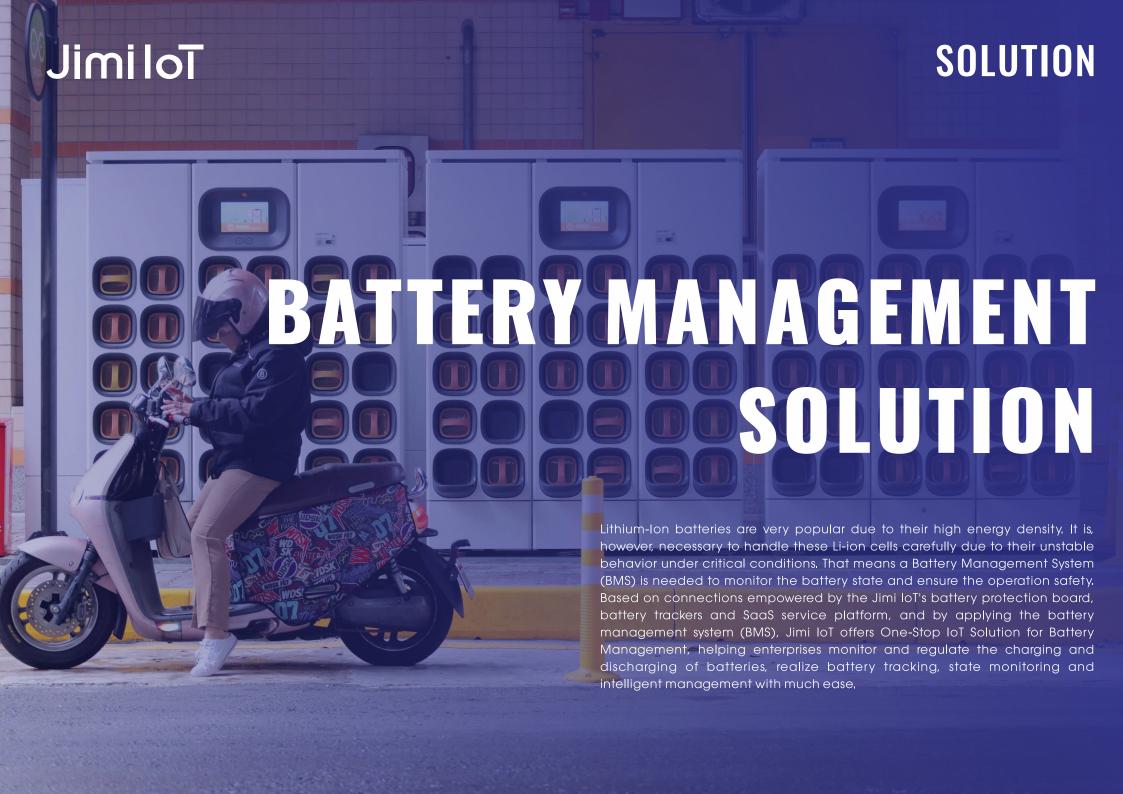
Save manpower from frequent visits to and fro oil fields.

VISIBLE DATA

Reduce the time to scramble critical data from heaps of paper documents with intuitive graphs and lists,

WATERPROOF DESIGN

Ensure reliable operation in various harsh environments with a wide operating temperature range (-45°C to +85°C) and the IP66 protection and guarantee production efficiency.



CHALLENGES

RESTRICTED PERFORMANCE

The lithium-ion battery pack is composed of multiple cells that work together, but the overall performance of the pack is actually determined by the worst cell. In the long-term use of the battery pack, if one of the batteries has a failure, it will accelerate the decline of the entire battery system. That is to say, the key to promoting the development of power lithium batteries is battery pack technology and BMS technology.

SERVICE LIFE

Each battery type has recommended charge and discharge current and voltage limits. Exceeding these parameters can lead to oxidation and short circuits, which can damage the battery and shorten its lifespan. For example, battery discharge below the specified threshold will result in battery failure. In the worst case, explosion, fire and electric leakage may occur. And all these illegal operations will lead to the decline of the battery pack.

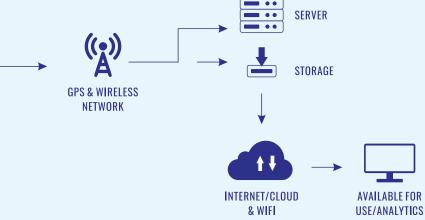
CELL SAFETY

Although with high energy density, lithium-ion batteries are fragile. Lithium is a very reactive and flammable metal that burns instantly when it comes in contact with water and air. Even a slight increase in temperature or minor damage to the battery can cause thermal runaway and short circuits that can lead to explosions and fires. Even the overcharge and over-discharge will cause the lithium battery to burn and explode.



PROTECTION BOARD A Battery Management System (BMS) is an electronic system that manages rechargeable batteries, whether they're single cells or battery packs. Jimi IoT offers three in-house battery protection boards designed for different types of lithium batteries such as LMO, Ternary, LCO, and LFP. These boards can connect to battery packs with 13 to 20 strings, handle over 60A continuous current, and monitor key data such as voltage, current, temperature, capacity, and SoC. They also support cell balancing, voltage protection, and offer communication options via RS485, UART, SIF, or 1-wire. In addition, the protection board includes or can be customized to include cellular and location tracking capabilities, making it ideal for managing shared batteries in swap stations, base station batteries, electric two or three-wheelers, scooters, drones, and more.

BATTERY TRACKER Jimi IoT's battery trackers, with multiple positioning systems, empower business owners to easily locate all of their batteries and monitor battery distribution in real time, reducing battery theft incidents and enabling quick recovery of stolen batteries. These trackers utilize LTE communication (with GSM (2G) fallback) to ensure reliable connections in nearly all scenarios and feature an advanced GPS antenna for accurate positioning. Integration with third-party platforms facilitates data analysis to help companies manage, protect, and optimize battery performance.



BENEFITS

BATTERY PACK SUPPORT

With advanced battery pack technology, the BMS protection board provides 13-to-20 string battery pack support, enabling batteries to be used in a variety of products ranging from low-powered consumer electronics to high-powered electric vehicles. And through the voltage control of single cells, the battery protection board can ensure the optimal utilization of the remaining energy in the battery.

TEMPERATURE CONTROL

Using high-accuracy NTC thermistors, the the battery protection board can detect the temperature of the cells and MOS driver in real time. The protection board also provides charge and discharge temperature protection, once the battery temperature exceeds the operating temperature range, it will automatically cut off the current path, preventing cells from thermal runaway.

4G/GNSS/BLE SUPPORT

1. Support using the 4G network to transmit battery data and locations; 2. Real-time battery tracking is supported by pairing the battery protection board with a GNSS module or Jimi IoT tracker; 3. Provide Bluetooth support for transmitting battery parameters to the mobile app and configuring parameters. (These features are available on demand)

VOLTAGE BALANCING SUPPORT

With voltage balancing, the battery protection board compensates for the differences between individual cells and does some active or passive charge or discharge management to ensure the consistency of cells. During charging, the voltage of each cell will be balanced so that all cells in the pack have the same voltage, thereby improving the performance and efficiency of the battery pack.

MULTIPLE COMMUNICATION INTERFACES

Different systems have different requirements for communication interfaces. The battery protection board supports the transmission of battery data through RS485, UART, SIF, or 1-wire, thus extending more battery pack usage scenarios.



CHALLENGES

THEFT AND LOST ANIMALS

Most livestock often wander around vast expanses of grasslands, moving in groups in search of food, and some of them roaming the ranch may reach the perimeter fence and get past it through some unchecked opening. Besides, the ranch may encounter theft from time to time. In these situations, most herdsmen have difficulty finding their lost livestock using traditional methods.

INADEQUATE MONITORING

Most ranchers, managers and herders are ignorant of real-time information about their livestock, such as livestock movements throughout the ranch, areas where the livestock have been depleting nutrients in the soil, livestock pedigree analysis and quarantine inspection log. Leading to overgrazing, rangeland degradation, inbreeding, unstable product quality and inadequate epidemic prevention.

LACK OF QUALITY CONTROL

Manual measurements are usually time-consuming and laborious, so ranchers and herdsmen can't follow up on the growth performance of livestock in real time, let alone ensure the steady quality of animal products. And due to the absence of effective data collection and analysis, breeding stock is always randomly replaced or eliminated, making it difficult to increase the number of good breeds.

DEVICE The smart tracker comes with a leather strap **SOLUTION** that fits easily around the animal's neck without discomfort. Depending on reporting frequency, the tracker's low-power internal battery can ensure sufficient standby time on a single charge. Moreover, the device is equipped with multiple positioning systems that provide strong signal acquisition and accurate positioning capabilities, allowing ranchers, managers and herders to track their livestock in any weather condition. This powerful device also collects accurate livestock information and allows managers to **GPS TRACKING** see the status of each animal in real time, enabling FOR SWIFT THEFT RECOVERY governments and breeding farms to make informed decisions, REAL-TIME In addition to these features, low battery alert, IP67 **ALERTS** dust & water resistance, multiple working modes, **VIRTUAL FENCING** compact size and motion detection will make this FOR UNUSUAL OR LOW BATTERY ALERT TO PREVENT smart tracking terminal a valuable part of your UNAUTHORIZED FOR TIMELY TRESPASSING AND livestock management strategy, MOVEMENTS RECHARGING **OVERGRAZING** REMINDERS IN DESIGNATED AREAS SERVER _ .. STORAGE TBT200 **GPS & WIRELESS SMART COLLA NETWORK IP67 PROTECTION** 3-YEAR FOR HARSH WEATHER RELIABILITY **SERVICE LIFE ACTIVITY DATA** INTERNET/CLOUD **AVAILABLE FOR** WITH 3 FIXES COLLECTION & WIFI USE/ANALYTICS PER DAY FOR LIVESTOCK HEALTH MONITORING

BENEFITS

ACCURATE LOCATION TRACKING

The smart collar supports GPS, BeiDou B1, B2, and B1C bands to enhance location accuracy. This is critical when animals are stolen, lost, or strayed and need to be found quickly.

ENHANCED SECURITY

Real-time alerts notify farmers/herdsmen and authorities of tampering attempts or unauthorized movements, enhancing farm security.

REMOTE LIVESTOCK MONITORING

Farmers can remotely monitor livestock and receive instant alerts on their mobile devices for exceptions such as geo-fencing violations or unusual behavior, allowing them to respond quickly.

CONTINUOUS HEALTH MONITORING

It tracks animal movement and behavior to detect potential issues, enabling immediate action such as scheduling a vet appointment and ensuring that livestock are well-cared for.

IMPROVED COMPLIANCE

Livestock data such as weight, vaccinations, and medical history are stored on a cloud platform for traceability and informed decision-making on breeding, feeding, and overall livestock management, leading to improved productivity.

SUSTAINABLE PRACTICES

Livestock health and behavior data can help farmers/herdsmen implement more sustainable and eco-friendly farming practices, reducing the environmental impact of livestock farming.



Headquartered in Shenzhen, with a R&D center in Huizhou and local offices in the United States, Dubai, Brazil, India and other countries and regions, Jimi IoT is a high-tech IoT company focusing on location service. Based on connections empowered by IoT devices and SaaS service platform, and by using cutting-edge technologies including the newest advancements in cellular communication, global positioning, sensing, cloud computing, and Artificial Intelligence (AI), Jimi IoT develops telematics hardware and cloud service solutions that help companies across multiple fleet and logistics industries leverage IoT technologies to improve their operations.





Jimi IoT has been deeply rooted in software and hardware solutions based on location services for several years. Our main hardware includes: smart terminals for vehicles, escooters, assets and cargos, and field workers; and more. We have also established platforms for managing IoT Hub accesses, connections (CMP), and hardware (AMS). We have a lead in technological level, product quality, and economic returns, and have a competitive edge with similar products around the world.

For many years, we have been striving to enable location-based commercial applications and to help traditional industries with digital transformation and collaboration. Being persistent in creating long-term value for the society, we have also been pursuing growth relentlessly, promoting innovation actively, and facing every challenge with optimism.

20+

Years In IoT industry 21

Invention Patents

55

Utility Model Patents 163

Software Copyrights

150+

Countries And Regions 1500+

Partners
Around the World

OUR VALUES

CARE FOR PEOPLE ACT WITH INTEGRITY AND DECENCY

STRIVE TO INNOVATE PUT CUSTOMER SUCCESS FIRST

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