

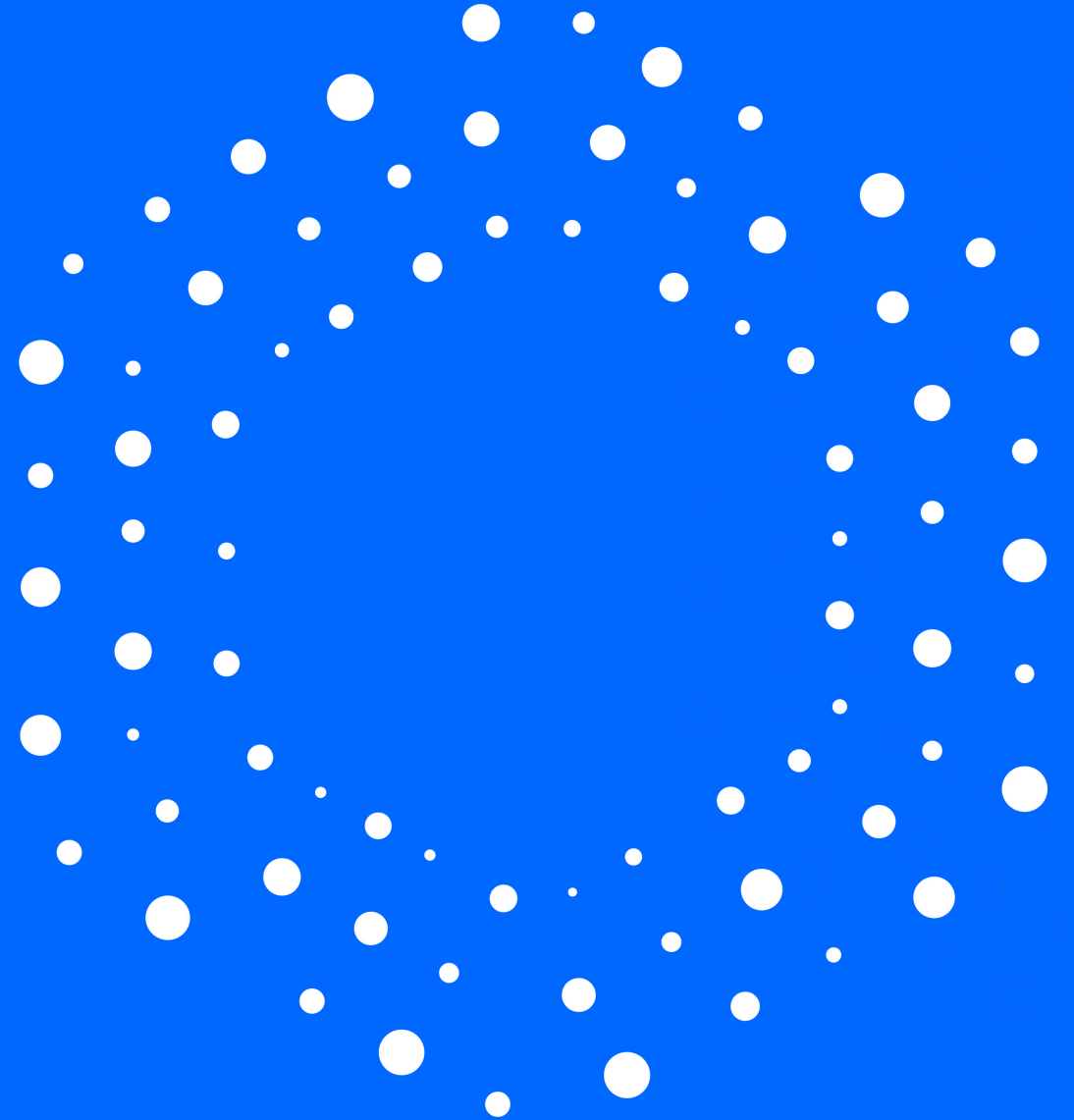


Dynamic IoT Tracking Solutions Introduction

Global Provider of Dynamic IoT Location
Service Solutions

Guangzhou SEEWORLD Technology Co., Ltd.

AUG 2025





Cold Chain Logistics Vehicle Monitoring Solution

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Guangzhou SEEWORLD Technology Co., Ltd.

AUG 2025





Cold Chain Logistics Market Overview



The cold chain logistics market is experiencing rapid growth, with the global market size projected to reach **3** trillion RMB by 2025. The adoption of IoT technologies has significantly improved transportation efficiency and regulatory compliance. As regulatory requirements become increasingly stringent, approximately **70%** of enterprises have increased their investment in IoT solutions. By 2025, the market size of IoT applications in cold chain logistics is expected to reach **84** billion RMB. In this highly competitive landscape, companies are striving to gain market share through technological innovation and differentiated services.

Market Status	Analysis	Supporting Data
Market Demand Growth	Demand for cold chain logistics continues to rise, especially in sectors like fresh food and pharmaceuticals. The global cold chain logistics market is expanding rapidly.	The global cold chain logistics market is projected to reach 3 trillion RMB by 2025, with a CAGR of 10.3%. (Source: MarketsandMarkets)
Stricter Regulatory Requirements	Governments around the world are tightening regulations on cold chain transportation, requiring strict temperature control and data recording as compliance standards.	70% of cold chain transport enterprises state that compliance pressure is a key driver for investing in monitoring technologies. (Source: Supply Chain Dive)
Application of IoT Technologies	IoT technologies are widely applied in real-time tracking, temperature and humidity monitoring, enhancing transparency and safety.	By 2025, the global IoT market for cold chain logistics is expected to reach 84 billion RMB, with a CAGR of 12.8%. (Source: IoT Analytics)
Increased Technical Demands	Intelligent and automated supervision systems are increasingly in demand, along with integrated technologies like GPS positioning and sensor networks.	55% of cold chain logistics companies are planning to or are already investing in IoT technologies. (Source: IoT Analytics)
Intensifying Market Competition	Enterprises now require not only basic monitoring functions, but also value-added services like data platforms and cloud solutions to meet diverse customer needs.	80% of cold chain logistics companies believe that technological innovation and differentiated services are key competitive advantages. (Source: PwC)

Throughout the entire cold chain—from origin to warehouse, from distribution centers to retail stores, and finally to end consumers—transportation is an essential link. At every stage, goods must be delivered in perfect condition. Maintaining the proper low temperature during transit is critical. Any temperature fluctuation can compromise product quality, leading to spoilage, damage, and significant financial losses. Ensuring temperature stability is not just a quality requirement—it's a core operational challenge.

Inefficient Monitoring

- No real-time monitoring, delayed over-temperature alerts, inability to intervene when food loses required temperature, and no traceability of temperature during transportation.

Cold Damage

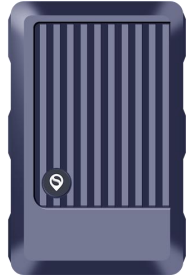
- Vehicle malfunctions, traffic delays, and poor loading practices cause temperature fluctuations in the compartment, leading to cargo spoilage and quality deterioration, resulting in major losses for businesses.

Cargo Loss

- Due to the particularities of the cold chain delivery industry, incidents of product substitution and inadequate supervision may lead to cargo loss.

Signal Interference

- Cold chain delivery vehicles are mostly enclosed, and many refrigerated containers are fully wrapped in metal, resulting in signal obstruction for many temperature monitoring devices placed inside the compartment.

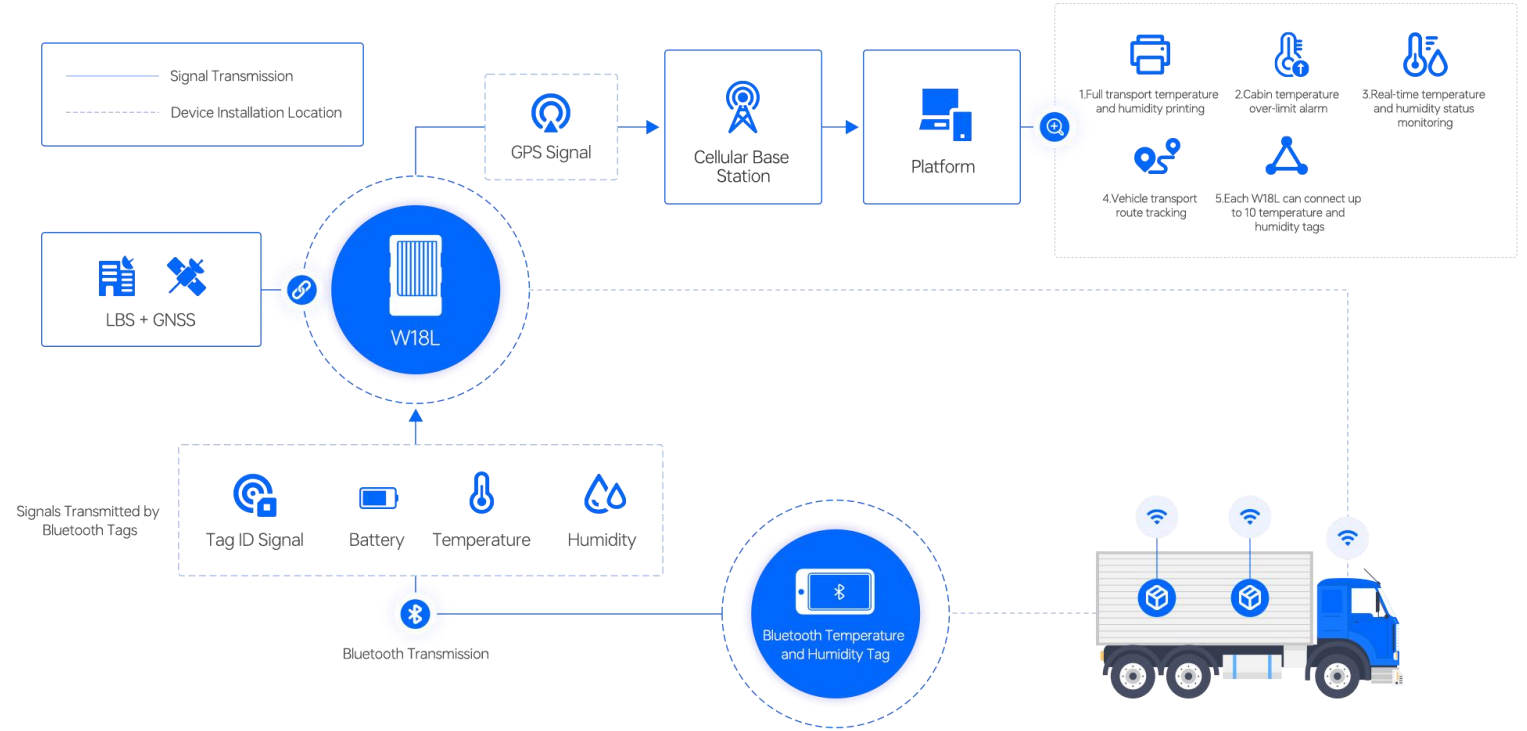


W18L Wireless GPS Tracker



Bluetooth Temperature Tag

Topology Diagram



How It Works

The Bluetooth temperature tag is portable and waterproof. It can be attached to refrigerated containers, cargo packages, pallets, or other items requiring temperature monitoring. The tag supports both temperature and humidity detection of the cargo. The W18L wireless positioning terminal supports Bluetooth connectivity. It communicates with the Bluetooth temperature tag to read data every 5 minutes and simultaneously transmits the GPS data collected by W18L to the server. Users can monitor the cargo's temperature and humidity throughout the entire transport process in real-time via PC or mobile devices, receive over-temperature alerts, and track the shipment location. This enables timely intervention for temperature control fluctuations and cargo loss prevention.



Solution 1

Real-time Multi-node Monitoring for the Entire Cold Chain Transport



Use Cases

Multi-zone temperature monitoring in compartments

Metal-structured refrigerated compartments

Multiple temperature sensing points required



Shipping:

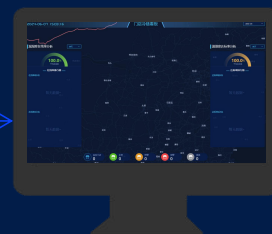
Place temperature tags inside monitored cargo



Transport:

Load tagged cargo into refrigerated truck; install W18L gateway in cab

Gateway auto-scans and uploads data



Platform enables one-click temperature report printing for delivery proof





Delivery:

Download and print full temperature records via App for handover








	W18L Wireless Tracker	Bluetooth Temperature & Humidity Tag
Image		
Network Mode	4G + 2G	N/A
Positioning Method	GPS + LBS + Wi-Fi	N/A
Battery Capacity	10,000 mAh	CR2450 Button Cell × 1
Protection Level	IP67	IP67
Temperature Range	-20°C to 60°C	Selectable by scenario: -10°C~60°C -30°C~80°C -35°C~70°C
	±0.5°C (within -20°C to 60°C), ±1°C (outside this range) Resolution: 0.1°C	
	0~99% RH, accuracy ±5% RH	
	Fixed at 5 minutes	Follows W18L
Temperature Accuracy & Resolution	With Bluetooth temperature & humidity tag, Mode 21, 8 hours active per day; approximately 12 days; device charging recommended	365 days



Solution 1 | Temperature Tag Specs Overview



	A-U202	A-U212	A-U401
Image			
Battery Type	CR2450 Button Cell	CR2450 Button Cell	Industrial Grade CR2450 Button Cell
Battery Life	365 Days	365 Days	365 Days
Bluetooth	V4.2	V4.2	V4.2
Temperature Range	-10°C to +60°C	-30°C to +80°C	-35°C to +70°C
Temperature Accuracy	±0.5°C	±0.5°C	±0.5°C
Humidity Measurement Range	Not Supported	0-99% RH	Not Supported
Humidity Accuracy	/	±5% RH	/
Applicable Vehicles	Underbody for Vehicles ≤ 9 meters	Underbody for Vehicles ≤ 9 meters	Underbody for Vehicles ≤ 9 meters
Protection Rating	IP67	IP67	IP67



Cost Reduction

- Ultra-thin Bluetooth temperature tags are easy to place inside multiple cargo compartments.
- IP67 waterproof rating ensures adaptability to more environments.
- Affordable tags can be placed across multi-zone cold boxes and multiple detection points.
- IoT-based management reduces manual labor costs.



Efficient Management

- Real-time temperature monitoring with data visualized via graphs and tables; one-click export available.
- Instant alerts triggered upon temperature deviation, enabling timely intervention.
- Live location data supports delivery traceability and cargo loss analysis.



Stable Transmission

- Over 50% of refrigerated trucks use sealed metal containers, which weaken signals. Bluetooth offers penetration capability, enabling signal transmission to the W18L even in closed environments. The W18L is positioned in an open area to ensure stable connectivity with the platform.



Easy Installation

- Both tags and the W18L terminal are wireless, eliminating the complexity of traditional installations—just place them with the goods.
- No fixed installation required, allowing reuse across trips and increasing flexibility.



Long Battery Life

- Bluetooth tags feature ultra-low power consumption, lasting up to one year with repeated use.
- W18L is equipped with a 10,000mAh high-capacity battery, supporting 12 days of operation (8 hours daily).
- When placed in the cab, W18L supports continuous charging, ensuring uninterrupted power.

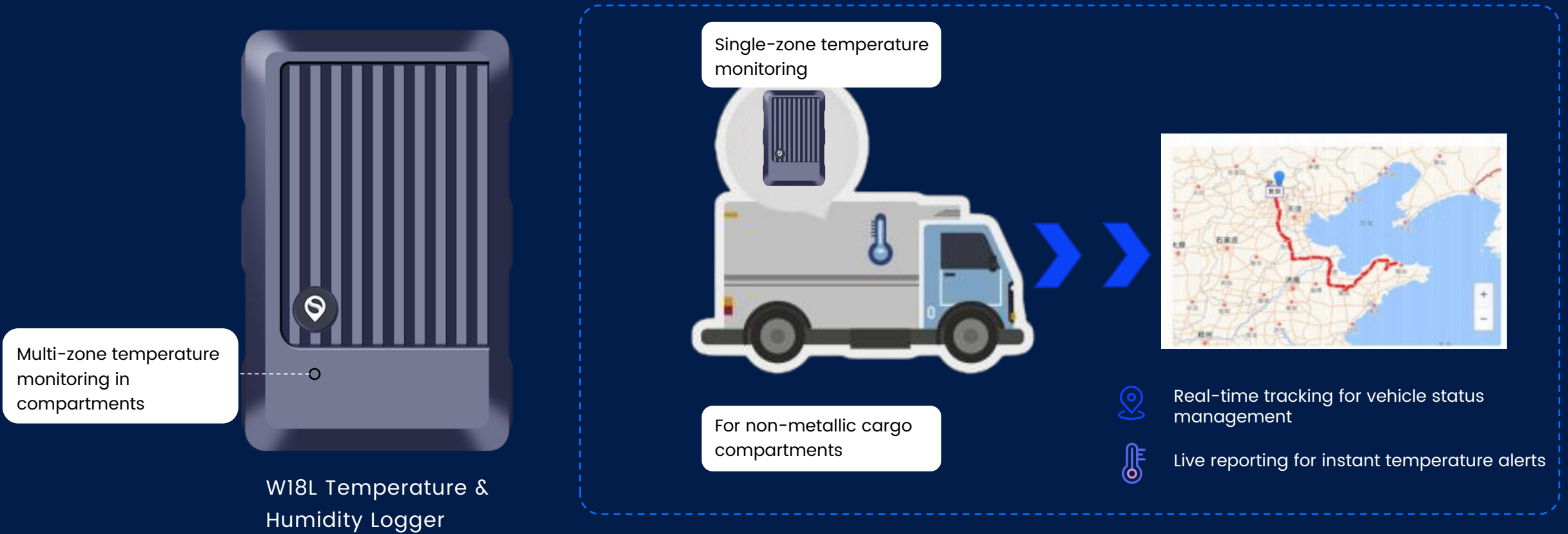


Solution 2 | Bluetooth Temperature & Humidity Tracker with Positioning



W18L is a portable temperature and humidity logger integrating 4G communication, real-time positioning, and environmental monitoring.

Connected to the IoT cloud platform, it allows real-time tracking of cargo location and temperature/humidity changes during transportation, ensuring live monitoring and post-delivery traceability. The device can also be used independently as a portable temperature and humidity detector.

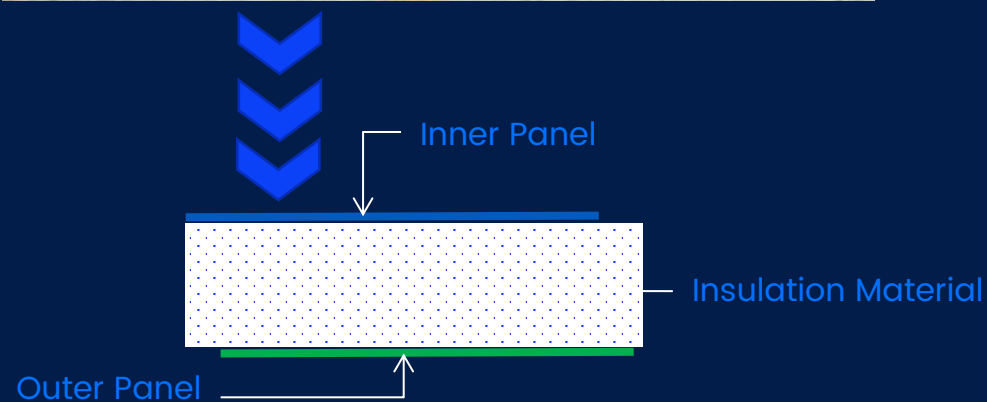




Solution 2 | Use Cases



Refrigerated truck compartments typically use a "sandwich structure": outer skin + insulation layer + inner skin. The skins may be made of metal or fiberglass, while insulation materials include polyurethane foam or XPS boards. Metal-skinned compartments can block signals, whereas fiberglass compartments have minimal signal interference. The W18L device, equipped with GPS, is suitable for use in fiberglass-structured refrigerated trucks. **For scenarios requiring only a single monitoring point in non-metallic compartments, the W18L with built-in temperature and humidity sensors can be used directly.**



Network Type	4G+2G
Positioning Methods	GPS + LBS + Wi-Fi
Battery Capacity	10,000 mAh
Protection Rating	IP67
Temperature Detection Range	-20°C to +60°C
Temperature Accuracy & Resolution	Accuracy: $\pm 0.5^{\circ}\text{C}$ (within -20°C to +60°C), $\pm 1^{\circ}\text{C}$ (beyond range) Resolution: 0.1°C
Temperature Sampling Interval	Fixed at 5 minutes
Battery Life	When paired with a Bluetooth temperature tag and used for 8 hours daily: approx. 17 days

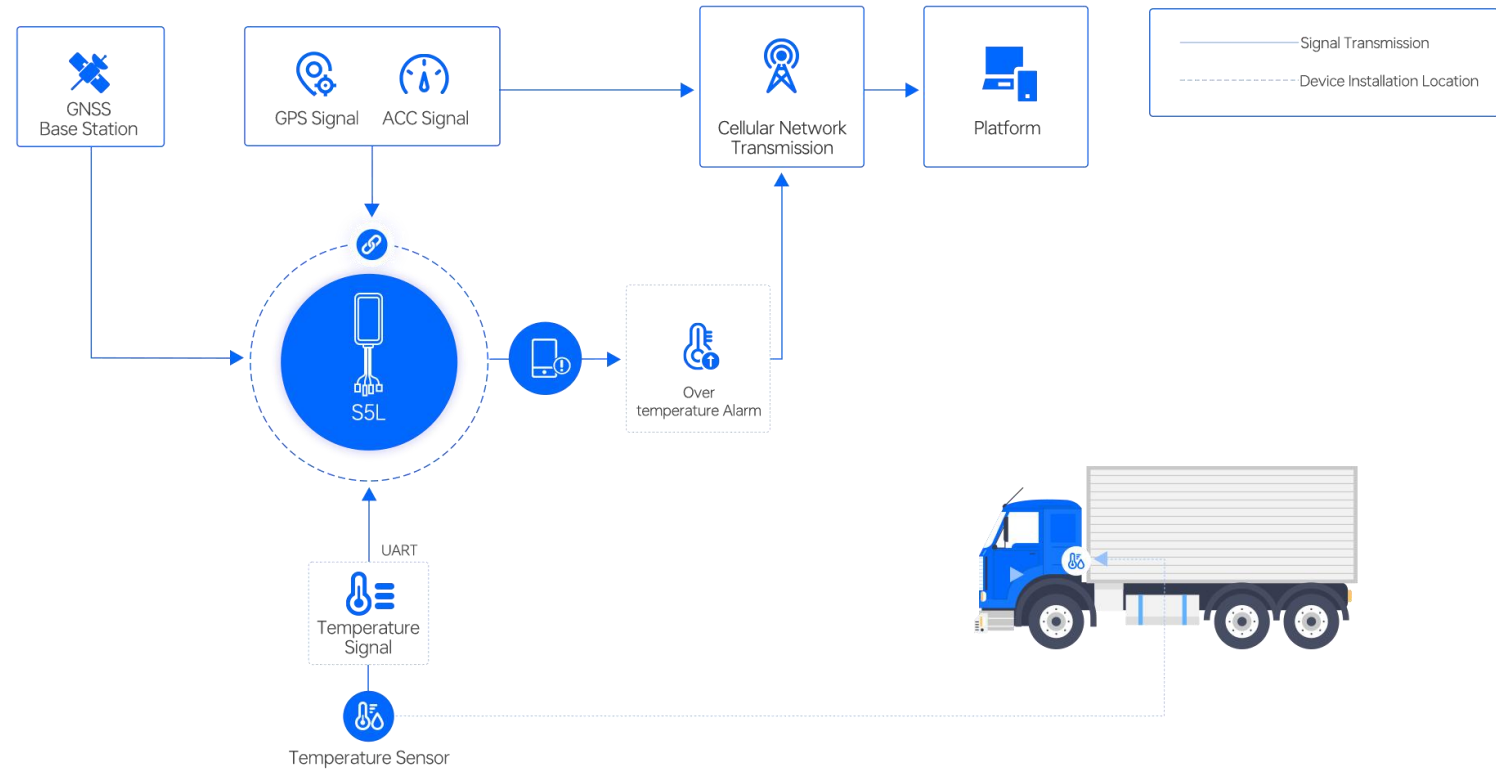


S5L Wired Positioning Terminal



Temperature Sensor

Topology Diagram



How It Works

The wired temperature sensor is a probe-type device connected to the main unit via a serial cable. It operates with continuous power and does not require replacement, but it does need professional installation. The cable runs from the vehicle's main unit to the refrigerated compartment. The sensor supports real-time temperature monitoring and covers a wide range from -50°C to 125°C .

The S5L is a multi-wire tracking terminal with a serial port that connects to the temperature sensor for real-time monitoring. When the temperature exceeds the threshold, an alert is sent immediately for timely intervention. The S5L also detects ignition status, helping to analyze whether temperature loss was caused by improper vehicle operation.

	S5L	Temperature Sensor
Image		
Network Type	4G + 2G	/
Positioning Methods	GPS + LBS + GLONASS	/
Number/Length of Wires	10 wires	3000 mm
Operating Voltage	9–90V	UART Interface
Temperature Measurement Range	/	-50°C to 125°C
Temperature Accuracy & Resolution	/	Accuracy: $\pm 0.5^{\circ}\text{C}$ (within 0°C to 50°C), $\pm 1^{\circ}\text{C}$ (beyond range) Resolution: 0.1°C
ACC Detection	Supported	
Temperature Sampling Interval	Real-time	
UART Ports	1 (for temperature sensor)	1

Eliminating Power Concerns

- Both the temperature sensor and S5L are hardwired devices powered directly from the vehicle's electrical system, ensuring uninterrupted operation without the need for battery replacements or concerns about power consumption.

Extended Temperature Range

- The wired external probe temperature sensor offers an extensive measurement range of -50°C to 125°C , enabling reliable monitoring across a wide variety of temperature-critical applications.



Solution 4

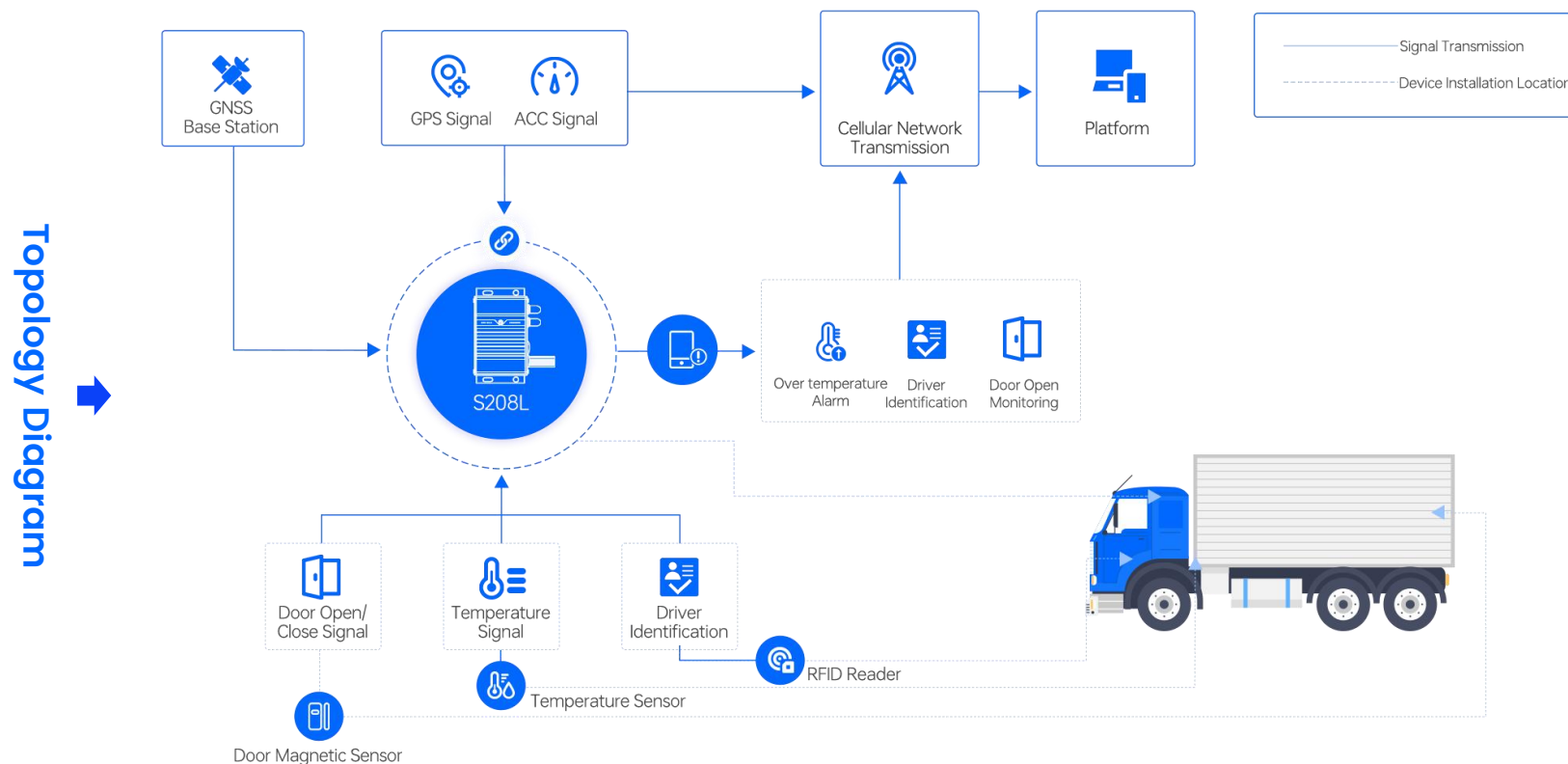
Wired Positioning Terminal + Wired Temperature Sensor



S208L Wired Positioning Terminal



Temperature Sensor



How It Works

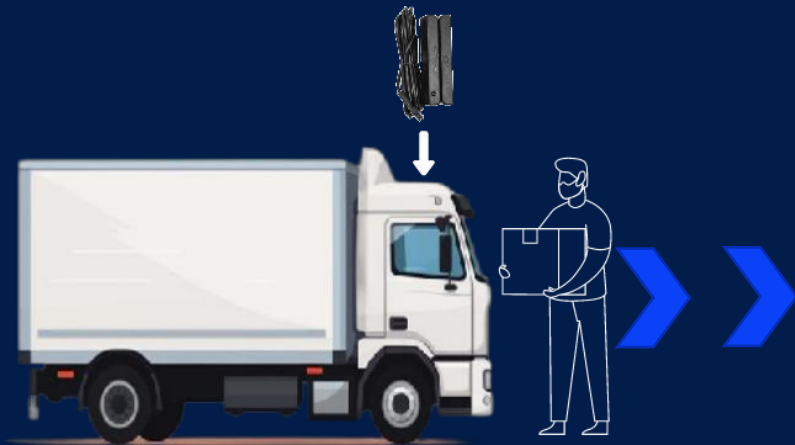
The wired temperature sensor is a probe-type sensor connected to the wired device via a serial cable, requiring professional installation. The serial cable runs from the vehicle's main device to the refrigerated compartment. The probe sensor enables real-time monitoring and covers a wide temperature range from -50°C to 125°C.

The S208L is a multi-port positioning terminal with two serial ports: one for the temperature sensor, and the other configurable for external devices such as RFID for driver identification, fuel level monitoring, or humidity sensors. Additionally, the S208L supports wired door magnetic sensors to detect unauthorized door openings, providing comprehensive security management for cold chain vehicles.

Use Cases

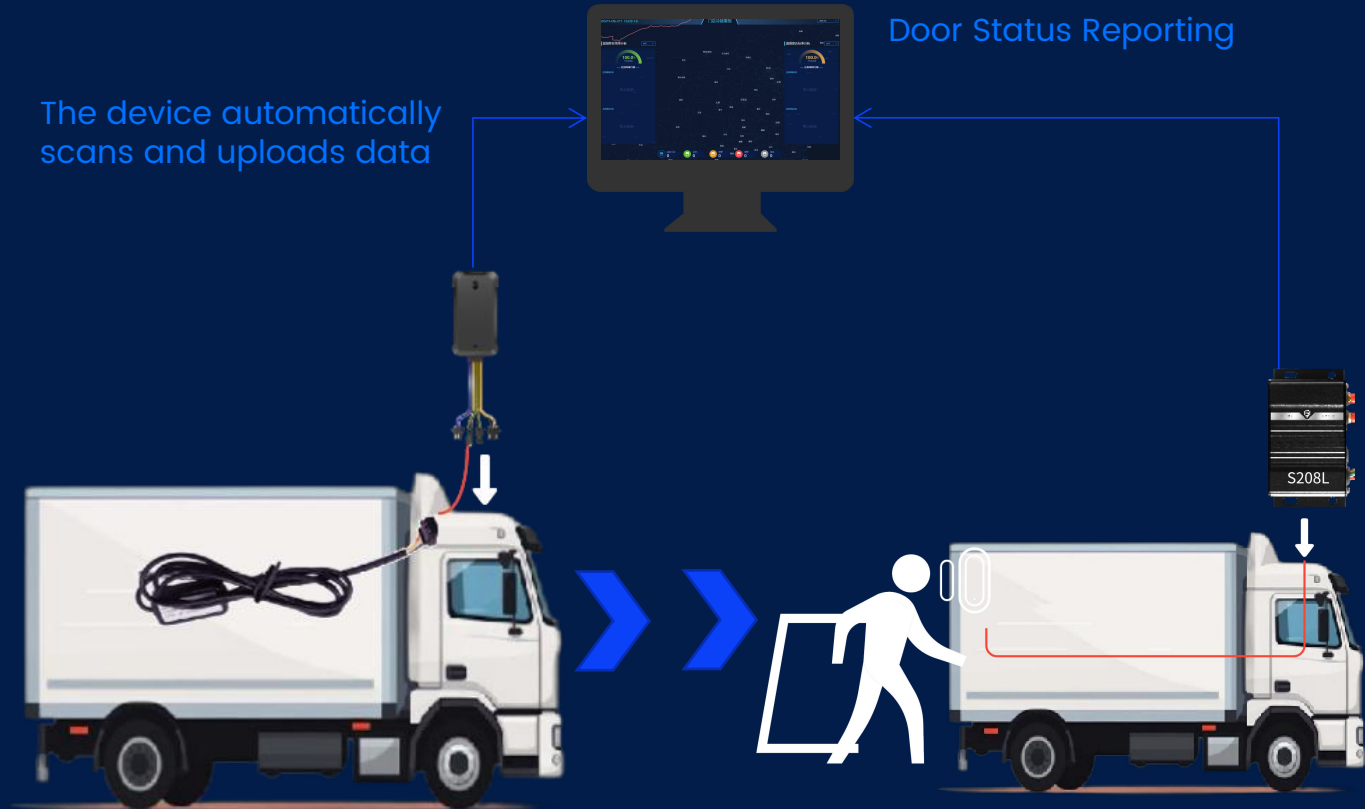
Multi-zone temperature monitoring in compartments

Vehicle monitoring



Departure:

An RFID card reader is installed in the cab and connected to the S208L via a serial interface. Drivers swipe their cards to unlock the door and verify identity.





Transport:

A temperature sensor is mounted inside the refrigerated compartment and wired to the S208L gateway, which is positioned in the cab.

Checkpoint:

A magnetic door sensor is installed on the compartment door and connected to the S208L. If the door is opened at unauthorized times or locations, an alert is triggered and sent to the platform.



	S208L	Temperature Sensor
Image		
Network Type	4G + 2G	/
Positioning Methods	GPS + LBS + GLONASS	/
Number/Length of Wires	Multi-wire	3000 mm
Operating Voltage	9-90V	UART Interface
Temperature Measurement Range	/	-50°C to 125°C
Temperature Accuracy & Resolution	/	Accuracy: $\pm 0.5^{\circ}\text{C}$ (within 0°C to 50°C), $\pm 1^{\circ}\text{C}$ (beyond range) Resolution: 0.1°C
ACC Detection	Supported	
Temperature Sampling Interval	Real-time	
UART Ports	2 (for any two among Temperature Sensor, RFID, Humidity Sensor, and Fuel Level Detection)	1



Comprehensive Cold Chain Vehicle Management

- The S208L monitors vehicle ignition status, supports external RFID for driver identification, provides real-time temperature monitoring, and GPS tracking data—enabling full digital management of cold chain vehicles.

Eliminating Power Concerns

- Both the temperature sensor and S208L are hardwired devices powered directly from the vehicle's electrical system, ensuring uninterrupted operation without the need for battery replacements or concerns about power consumption.

Extended Temperature Range

- The wired external probe temperature sensor offers an extensive measurement range of -50°C to 125°C, enabling reliable monitoring across a wide variety of temperature-critical applications.



Integrated Car Rental Management Solution

—
Guangzhou SEEWORLD Technology Co., Ltd.

AUG 2025





Car Rental Market Overview



The global car rental market is steadily expanding, with projections reaching USD **168** billion by 2025. As digital transformation accelerates, **60%** of rental companies are actively adopting IoT and location-based technologies to enhance operational efficiency and customer experience. Increasing regulatory demands and intensifying competition are also driving greater investment in location services and innovation, with **65%** of companies identifying location services as a key competitive advantage.

Market Status	Analysis	Supporting Data
Growing Market Demand	Global demand for car rental services continues to rise, especially in shared mobility, and short- and long-term rental segments.	The global car rental market is expected to reach ¥1.2 trillion by 2025, with an average annual growth rate of 8.5%. (Source: Statista)
Digital and Smart Transformation	Rental companies are accelerating digital transformation by integrating IoT and big data to provide intelligent services and enhance visibility.	60% of rental companies have invested or plan to invest in IoT technologies and vehicle tracking systems. (Source: Frost & Sullivan)
Rising Demand for Location Services	Precise real-time tracking services are in high demand, particularly for fleet management and personalized customer services.	65% of rental firms see location services as key to improving operational efficiency and enhancing customer experience. (Source: PwC)
Tighter Regulatory Compliance	Regulatory requirements on driving safety and vehicle supervision are tightening, requiring more advanced tracking and compliance solutions.	50% of rental companies are upgrading their compliance and monitoring technologies to meet new regulations. (Source: Deloitte)
Intensifying Market Competition	New entrants and digital platforms are challenging traditional rental firms, pushing them toward rapid digital and intelligent upgrades.	75% of rental firms report that intensified competition is accelerating their digital and smart transformation efforts. (Source: McKinsey)

Car rental is gaining significant traction among both enterprises and individual users. According to Statista, the global user base in the car rental sector is projected to surpass **500** million by 2025. However, this upward trend also presents emerging risks, with incidents such as vehicle theft and illicit resale expected to rise in parallel with market expansion.

Vehicle Recovery Issues

- Theft, resale, and pawning of rental cars lead to major asset losses, with low recovery rates once vehicles go missing.

Equipment Vulnerability

- Criminals often disable or interfere with tracking devices, compromising monitoring effectiveness.

Accident Evidence Gaps

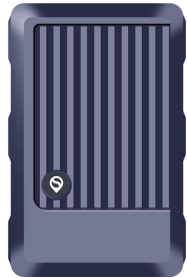
- Accidents cause financial loss and make it hard to gather evidence and determine liability.

Management Complexity

- Lack of data insights creates blind spots in risk control and reduces operational efficiency.

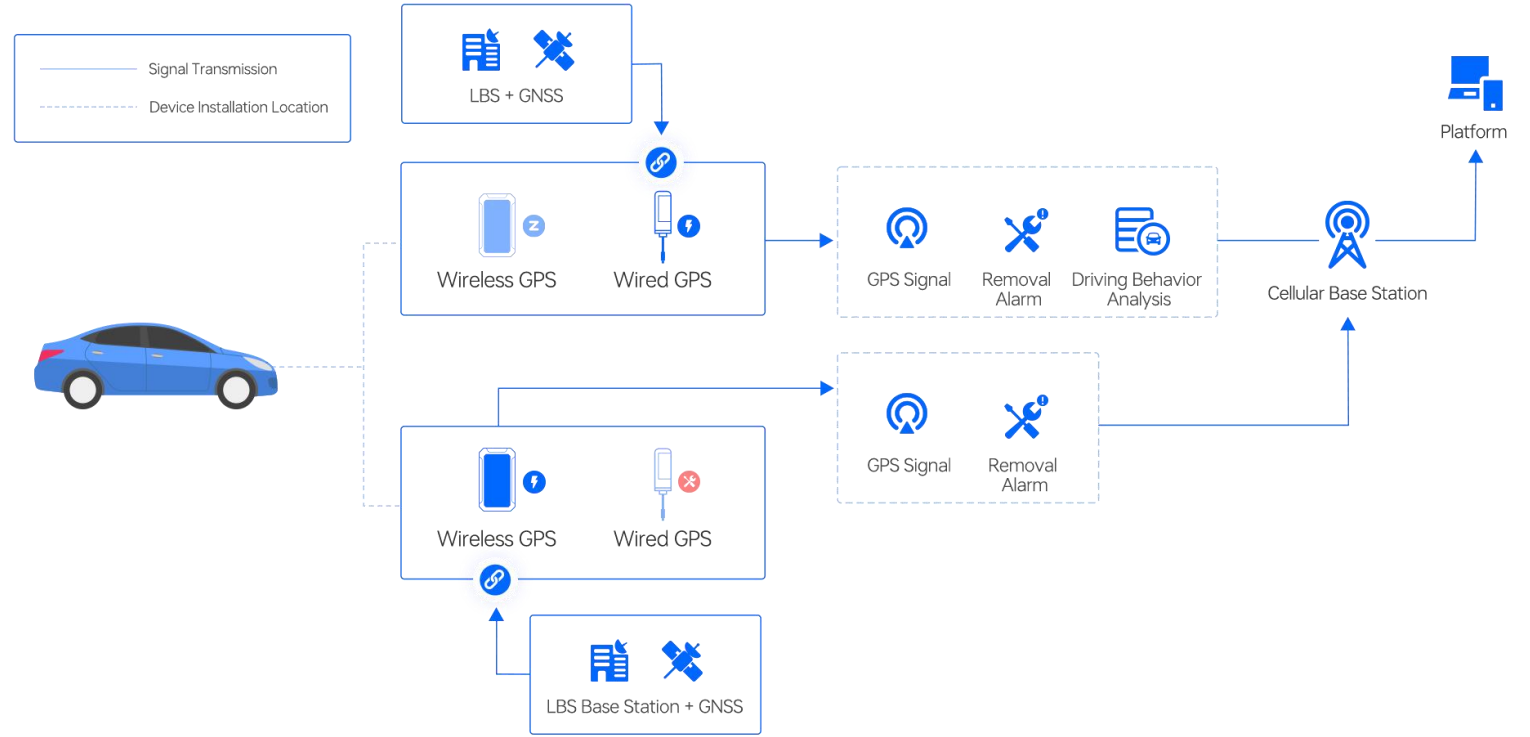


R12L Real-Time GPS Tracker



W18L Wireless GPS Tracker

Topology Diagram



How It Works

R12L is an online real-time device that remotely retrieves vehicle location data at any time. As the primary tracker, it continuously monitors driving behavior and vehicle routes. In the event of theft, it sends an alert and can cut off fuel and power to immobilize the vehicle.

W18L is a wireless unit that can be hidden in the vehicle. As a secondary tracker, it reports the vehicle's location at scheduled intervals, helping managers stay informed. If theft is detected by the main unit, W18L can be activated to serve as the primary tracker and provide real-time location updates.

	W18L (Wireless Non-Rechargeable Tracker)	R12L Tracker
Image		
Network Type	4G + 2G	4G + 2G
Positioning Method	BDS/GPS/GNSS/LBS	BDS/GPS/GNSS/LBS
Battery Capacity	9600mAh	100mAh
Protection Level	IP67	IP65
Power Input Voltage	Non-rechargeable	9-90V
Driving Behavior Analysis	/	✓
Collision Alarm	/	✓
Remote Fuel/Electricity Cut-off	/	✓
Tamper Alarm	✓	✓
Standby Duration	Up to 9 years with one location report per day	/

Vehicle Security



Vehicle Monitoring



Anti-theft Alerts



Geofence Management



Risk Prevention



Remote Tracking



Abnormal Events



Route Playback



Remote Flameout



Remote Power Cut



Combined Alarm Monitoring



Driving Behavior Reports



Data Analysis



Data Monitoring



Alarm Summary



Operation Statistics



Parking Details



Data Comparison & Cross-analysis



Risk Prevention

- Eliminate risks of vehicle pawn, resale, or theft with electronic geofencing and multi-level alert mechanisms.
- Promote safe driving behavior to reduce traffic accidents.



Visualized Management

- Real-time location reporting allows managers to track vehicles and optimize dispatch.
- Summary reports and data analytics identify operational risks and support business decisions.



Quick Vehicle Recovery

- Dual real-time positioning helps managers accurately monitor vehicle movement and speed up recovery in case of loss.



Remote Vehicle Control

- After locating the rental vehicle, remote ignition cut-off and locking can be executed via the cloud platform to ensure asset security.



Asset Management Solution

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Guangzhou SEEWORLD Technology Co., Ltd.

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Asset Management Market Overview



The global asset management market is expanding rapidly, projected to reach **\$18** trillion by 2026. Driven by the adoption of IoT and real-time location services, **65%** of asset management companies now use live tracking and monitoring technologies to boost efficiency and security. Meanwhile, **72%** of enterprises recognize location services as essential for optimizing asset utilization and minimizing operational wear and tear. Rising demands for data security and regulatory compliance are accelerating technological innovation and digital transformation, as companies strive to stay competitive in a fast-evolving market.

Market Status	Analysis	Supporting Data
Rising Market Demand	The global asset management market continues to expand, especially in enterprise assets, equipment, and infrastructure—driving demand for accurate tracking and monitoring.	The global asset management market is projected to reach \$18 trillion by 2026, with a CAGR of 7.1%. (Source: GlobalData)
IoT & Tracking Technology Adoption	Increasing use of IoT and sensor technologies in asset management enhances security and operational efficiency through real-time tracking and environmental monitoring.	65% of asset management companies have adopted IoT technologies for tracking and real-time monitoring. (Source: Gartner)
Growth in Location Service Demand	Precise location services are becoming essential, particularly in managing large-scale assets and infrastructure, helping improve monitoring and dispatch.	72% of companies believe location services are critical for improving asset utilization and reducing wear. (Source: McKinsey)
Increased Data Security & Compliance	With rising privacy and security demands, companies require secure transmission and storage of location data, ensuring regulatory compliance.	55% of companies say strengthening data security and compliance is a top priority for transformation. (Source: Deloitte)
Intensifying Competition & Innovation	Growing competition pushes companies to invest in smart technologies, cloud platforms, and analytics to gain an edge in operational efficiency.	80% of asset managers cite innovation and digital transformation as key to staying competitive. (Source: PwC)

As the importance of enterprise asset management becomes increasingly prominent, its efficiency directly impacts a company's profitability and future development. However, businesses often struggle to obtain timely and clear information about the quantity, distribution, and usage status of their assets. This lack of visibility leads to low asset management efficiency, which in turn affects internal cost control and human resource management.

Difficulty in Asset Distribution Management

- Many large-scale assets located outdoors remain unmanaged for extended periods. These assets are widely dispersed and often move between different sites, making them hard to locate and significantly increasing management costs.

Difficulty in Recovering Lost Assets

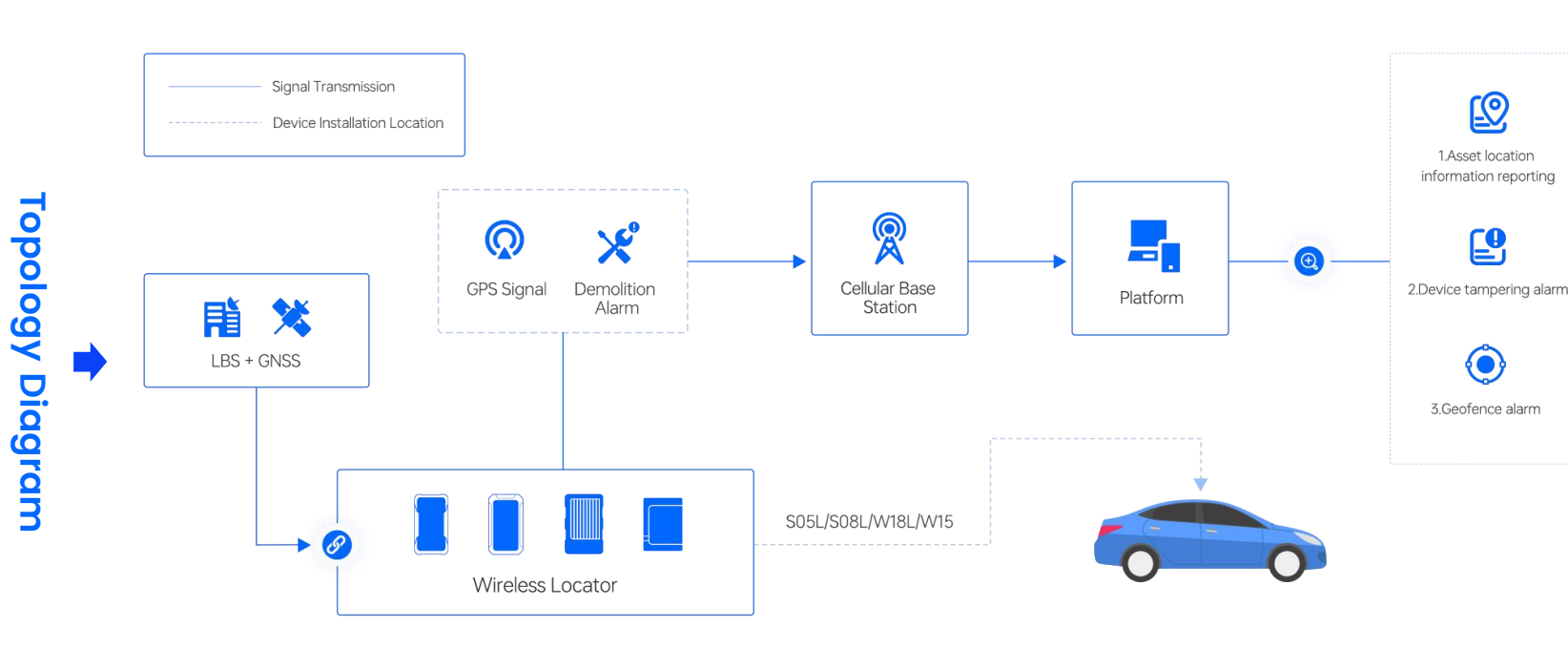
- Once equipment is stolen, it is hard to detect the loss in time or track its location. Retrieving relevant information requires significant manpower and resources.

Lack of Systematic Data Analysis

- There is no analytical insight into asset usage. Data is unclear, disorganized, and lacks security, making it difficult to support effective decision-making.



S08L Wireless GPS Tracker



How It Works

The S08L can periodically report location data at user-defined intervals and detect device movement. If the device is moved, the S08L automatically switches to real-time reporting mode to facilitate cargo tracking, allowing users to easily locate the asset. In other words, when the device remains stationary (e.g., in a warehouse), it reports data at regular intervals; once it is moved out of the warehouse, it switches to real-time tracking mode.

The S08L also features a tamper alert function—if the device is removed, it will immediately send an alarm notification.

	S08L Wireless Non-rechargeable Tracker
Image	
Network Type	4G + 2G
Positioning Method	BDS / GPS / LBS
Battery Capacity	4200mAh
Protection Rating	IP65
Charging	Non-rechargeable
Motion Sensor	Optional (adds to product cost)
Working Current	2mA
Standby Current	0.0032mA
Tamper Alarm	Supported
Battery Life	Up to 3 years (based on one fix per day)



Risk Alert

- Through electronic fences, device movement notifications, and a multi-layered alert mechanism, the risk of equipment theft can be effectively eliminated.



Visualized Management

- By reporting location data from the device, administrators can clearly understand the equipment's location, making asset redeployment and management easier.
- Monitoring dashboards and statistical reports help managers track equipment transfers or leasing status, identify potential risks and vulnerabilities, and support business development.



Quick Device Positioning

- With dual real-time positioning functions, administrators can track the device's location and status in real time, enabling accurate and efficient asset tracking.



Personnel Management Solution

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Personnel Management Market Overview



The personnel management market is steadily growing and is expected to reach RMB **300** billion by 2026. With the widespread adoption of real-time personnel positioning technologies, **68%** of enterprises have already started using such systems to improve work efficiency and employee safety.

In high-risk industries, **55%** of companies are leveraging positioning technology to enhance emergency response and regulatory compliance. Amid fierce market competition, companies are accelerating digital transformation and adopting personnel positioning and intelligent management systems to improve flexibility and competitiveness.

Market Status	Analysis	Supporting Data
Growing Market Demand	Enterprises have an increasing need for efficient personnel management and streamlined workflows, especially regarding safety, compliance, and regulation.	The global personnel management market is projected to reach RMB 300 billion by 2026, with a CAGR of 6.5%. (Source: GlobalData)
Adoption of Positioning Technology	With the advancement of IoT and GPS-based real-time positioning, personnel location tracking is increasingly used in security, production scheduling, and mobility scenarios.	68% of enterprises indicate that real-time positioning systems have become essential tools for improving work efficiency and safety. (Source: Forrester)
Safety Management and Compliance	Ensuring safety in work areas and regulatory compliance is crucial, particularly in high-risk sectors. Personnel positioning improves employee safety and response speed.	55% of enterprises in high-risk industries have adopted personnel positioning technology to ensure safety and improve emergency responsiveness. (Source: Gartner)
Digital Transformation & Efficiency	Companies are pushing digital transformation of personnel management and leveraging intelligent systems with real-time data to improve workforce deployment and operational efficiency.	60% of enterprises plan to invest in personnel positioning and intelligent management systems within the next three years. (Source: Deloitte)
Market Competition & Tech Innovation	As competition intensifies, companies innovate with positioning data and analysis tools to enhance HR flexibility and differentiation.	70% of executives believe positioning technology and data-driven management solutions are key to improving competitiveness. (Source: PwC)

Pain Points in Asset Management



In scenarios such as construction sites, sanitation, and property management, there are common issues including the inability to monitor on-site personnel activities, difficulties in personnel management, and a lack of data to support attendance tracking.

These challenges highlight the urgent need for a comprehensive personnel management solution—one that not only helps enterprises understand employee attendance and streamline management, but also enables real-time visibility into workers' safety conditions, thereby enhancing overall workplace safety and operational control.

Difficulties in Managing Dispersed Personnel

- Personnel often work in scattered locations, and supervision relies heavily on periodic on-site inspections by patrol staff. This approach leaves gaps for subjective or inconsistent management.

No Early Warning for Safety Hazard

- Unpredictable incidents can occur during operations. To prevent serious consequences, it is essential to establish a sanitation scheduling and command system for risk prediction and timely resolution.

Lack of Operational Monitoring

- Workers' real-time activity status cannot be effectively monitored, resulting in poor work quality, undefined operation areas, and duplicated efforts.

High Operating Costs

- Traditional operational models require significant manpower and resources for task scheduling and data collection, leading to consistently high operating costs over time.



D80L Smart Badge



Bluetooth Beacon


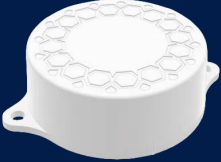


How It Works

The D80L device provides real-time location reporting, enabling remote tracking of personnel movement trajectories. The geofencing function supports contactless attendance recording by automatically registering presence within predefined zones. The device is equipped with an SOS alarm and two-way voice communication capabilities, facilitating timely management response and worker safety.

When paired with Bluetooth beacons, the D80L periodically scans to verify whether personnel are wearing personal protective equipment (PPE). If a Bluetooth beacon signal is not detected, the system issues alerts to supervisors, site managers, and the respective personnel. This mechanism significantly reduces workplace fatal injuries and provides verifiable evidence in case of accidents involving missing PPE.

The D80L can monitor the proximity between workers wearing ID badges, contributing to safety protocols during epidemic conditions by enabling social distancing enforcement.

	D80L Smart Badge	Bluetooth Beacon
Image		
Network Type	4G	/
Positioning Method	BDS/GPS/LBS/Wi-Fi	/
Battery Capacity	1500 mAh	1200mAh/2400mAh
Bluetooth Specification	Bluetooth 5.1	Bluetooth 5.1
Charging Port	Type-C Charging Port	Non-rechargeable, replaceable battery
Power Consumption	Standby Current ≤ 5 mA	25uA
RFID	Optional	/
Buttons	4 Buttons (8 Functions)	/
Product Weight	75 g	44.8 g/54.6 g



Safety Improvement

- Protect workers by monitoring whether they are wearing personal protective equipment and providing alerts for personnel gathering.
- SOS alarm and two-way voice communication enable timely situation awareness and rescue when workers are in danger.



Visualized Management

- Location data reported by the device allows managers to track workers' positions in real time.
- Alarm overview and statistical reports help managers monitor individual work status and detect negligence or idling.
- TTS voice function facilitates on-the-fly work assignment notifications.



Convenient & Intelligent

- Geofencing enables contactless attendance, preventing missed clock-ins and reducing maintenance costs.
- TTS voice dispatch allows managers to issue temporary task notifications anytime.



Two-Wheeler Management Solution

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1

Market Size and Growth

In 2023, the global market size of two-wheeled electric vehicle sharing was approximately USD **3.587** billion. It is projected to reach USD **15.52** billion by 2030, with a compound annual growth rate (CAGR) of **23.6%** from 2024 to 2030. The demand for shared electric bikes in China is substantial, with cumulative sales reaching 41 million units in 2021 and **55** million units in 2023. Lithium-ion battery-powered two-wheeled electric vehicles accounted for **23.4%** of total sales.

2

Policy and Environment

Driven by the "Carbon Peak and Carbon Neutrality" policies, electric two-wheelers, as a green transportation mode, have seen increased market demand. Meanwhile, the shared electric bike sector is experiencing tighter government regulations, fostering a more orderly competitive environment.

3

Technology and Innovation

Shared electric bikes represent an innovation combining traditional electric bicycles with "Internet Plus" technology. The global market penetration rate for shared electric bikes remains relatively low, indicating significant potential for growth in overseas markets.

4

Competitive Landscape

In China, key players include Hello Bike, Didi Chuxing, and Meituan Dianping, among others.



Pain Points in Two-Wheeler Management



The core pain points in the shared two-wheeled EV leasing industry are: Chaotic parking of shared vehicles; Difficulty in tracing accident liabilities; High theft vulnerability of EVs; Inadequate asset protection mechanisms; Unanalyzed driving data failing to yield operational value.

Disorderly Parking

- Improper parking of shared electric two-wheelers causes sidewalk obstruction, encroachment on tactile paving for the visually impaired, and cross-region parking problems.

Safety Concerns

- Accident sources are difficult to trace; abnormal fire incidents lack timely alerts or early warnings.

Theft and Asset Security

- Due to their lightweight design and random parking, electric vehicles are highly susceptible to theft, resulting in poor asset security.

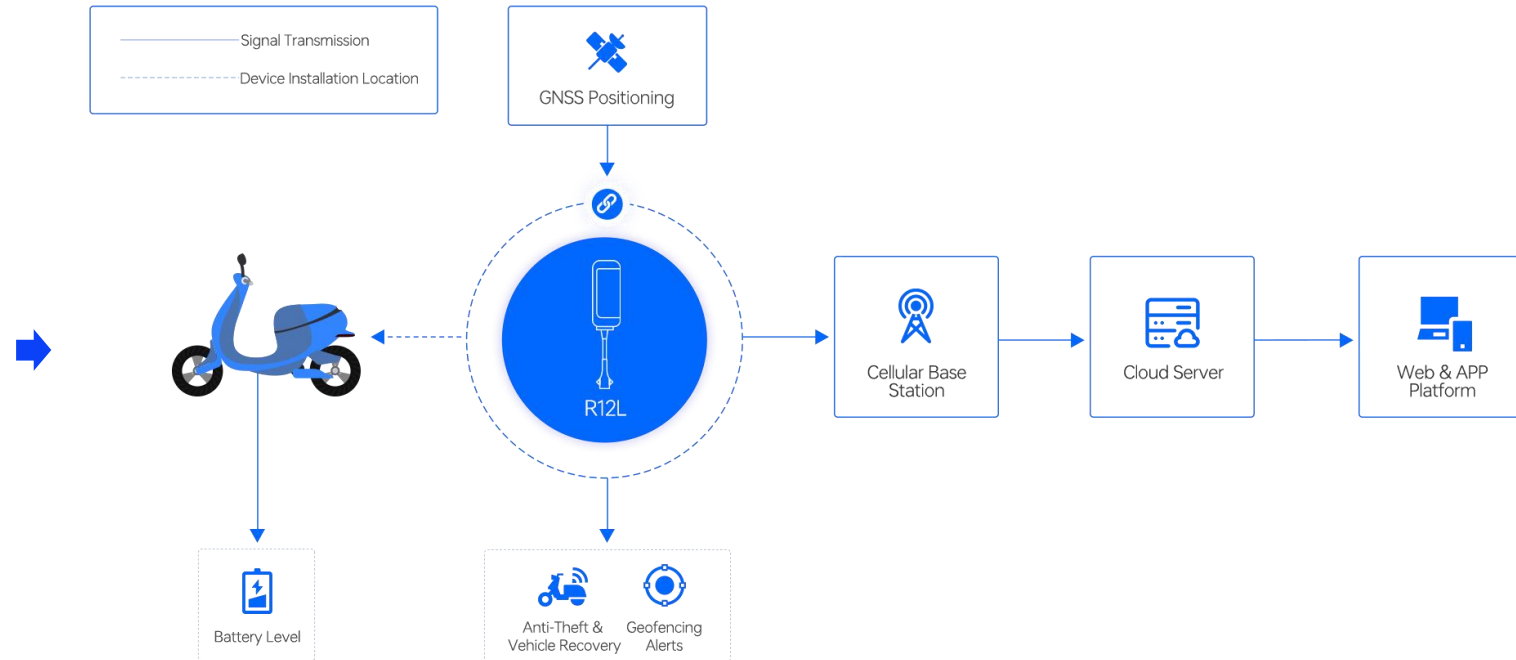
Underutilization of Big Data

- Driving data generated by the company's electric vehicles is not analyzed, leading to missed opportunities for leveraging big data value.



R12L Standard 4-Wire
GPS Tracker

Topology Diagram



How It Works

R12L is a cost-effective standard 4-wire GPS tracker. It supports real-time tracking and route playback for vehicle positioning. Geo-fencing helps regulate service and parking areas.

Remote immobilization enables asset protection, while external power monitoring provides battery alerts for timely maintenance.

Ideal for shared mobility providers to manage assets, dispatch vehicles, and define operation zones.



Real-Time & Multi-Mode Positioning

- Supports BDS + GPS + LBS tracking to monitor vehicle location and movement in real time, enabling full visibility for shared two-wheeler operators.

Tamper & Power Cut Alarm

- Tamper and power-off alerts immediately notify operators of abnormal events, helping prevent theft or unauthorized interference.

Geo-Fencing & Parking Compliance

- Enforces designated parking zones. Users cannot lock the vehicle if parked outside the geo-fenced area.

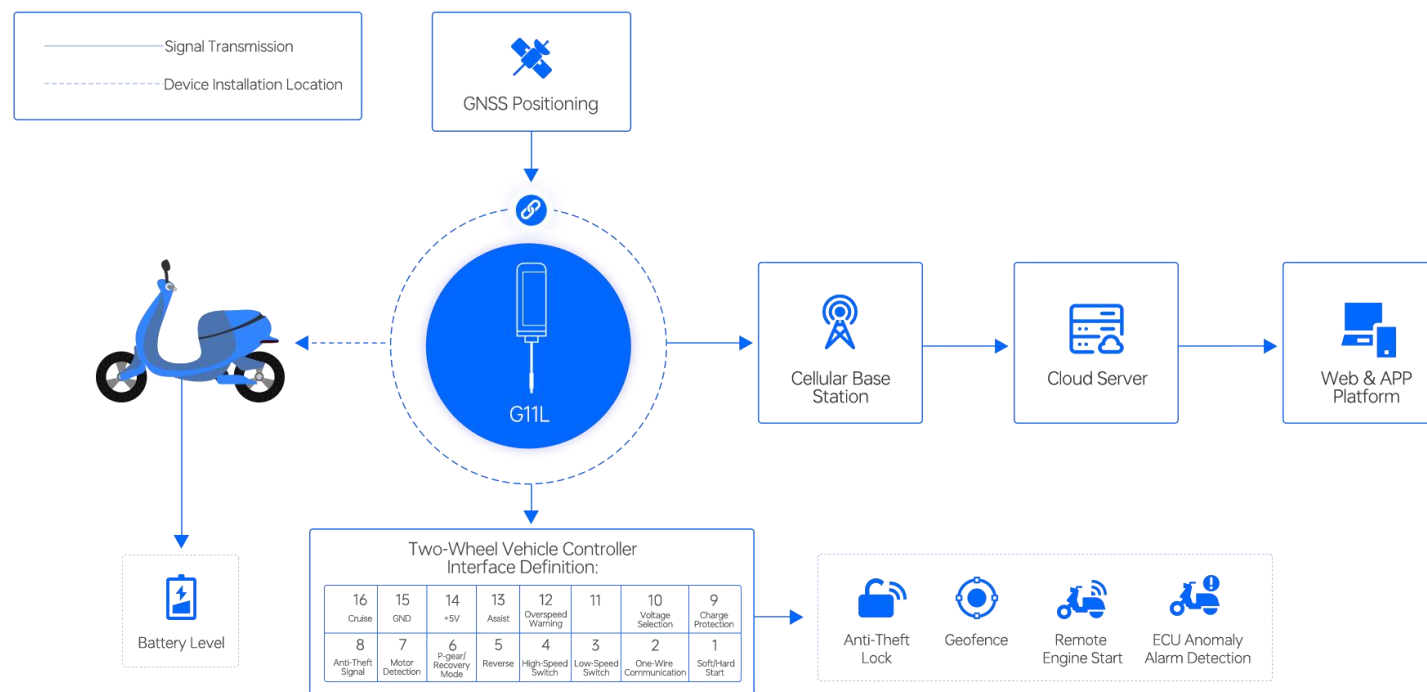
Driving Behavior Detection

- Detects behaviors such as rapid acceleration, hard braking, sharp turns, and collisions, enabling data-driven insights and operational improvements.



G11L IP67 6-wired GPS Tracker

Topology Diagram



How It Works

G11L is an IP67 waterproof 6-wire GPS tracker. It provides real-time vehicle location and trip history, supporting operational cost calculation. Geo-fencing helps enforce service and parking zones. The remote immobilization function enables asset protection, while external power monitoring sends battery alerts to maintenance personnel. Driving behavior analysis assists in accident investigation and liability determination.

The device supports remote ignition via connection to the ignition switch, enabling keyless vehicle start. It also detects ECU anomalies and promptly notifies the operations team for timely maintenance.



Real-Time Monitoring Multi-Mode Positioning

- Track vehicles via Beidou + GPS + LBS multi-mode technology, enabling shared bike companies to monitor bicycle position and movement in real time

More Optional Installation Locations

- IP67 protection rating, Bulgin connector offers better waterproof performance, providing more installation location options for greater convenience.

Anti-Theft Alarm Driving Behavior Detection

- To prevent criminals from stealing shared bikes, the anti-tamper and power-off alarms will immediately notify administrators upon detecting abnormalities in the vehicle while simultaneously activating the anti-theft lock. The system also supports driving behavior detection (e.g., sudden acceleration, sharp deceleration during turns, collisions) and provides enterprises with big data analysis to formulate management improvement strategies.

Supports Remote Start

- Supports remote start without the need for additional accessories.

GEO Fence Parking Specifications

- Requires users to park shared e-bikes within designated areas. Vehicles parked outside the fence cannot be locked.

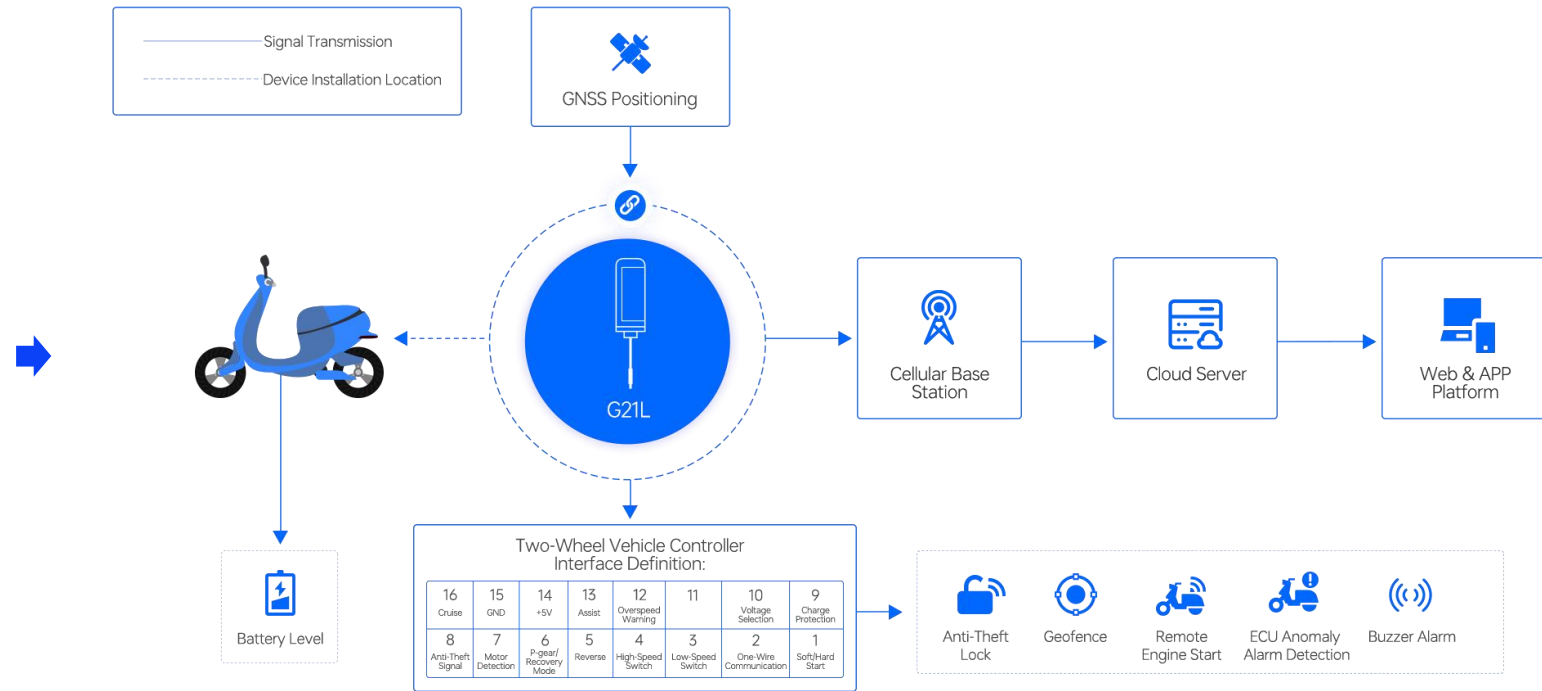
Vehicle Anomaly Alert Notification

- Supports detecting abnormal vehicle alerts, reporting to the server, and sending notifications via APP.



G21L IP67 9-wire GPS Tracker

Topology Diagram



How It Works

G21L is a 9-wire GPS Tracker with IP67 waterproof rating. It provides real-time vehicle location tracking and trip history, facilitating cost calculation for operation platforms. Use the electronic fence function to regulate operations within specified areas and standardize parking areas.. Combined with the remote lock function, it enables effective vehicle asset monitoring and protection. The device can obtain external power status and alert maintenance personnel in time for battery charging. Driving behavior analysis supports accident investigations and assists in determining liability. By connecting to the ignition switch, it enables remote ignition, allowing keyless vehicle startup. It also supports ECU abnormality detection and alerts maintenance staff promptly for vehicle servicing. Additionally, it supports one-click SOS emergency alerts, and when paired with a buzzer, it can provide vehicle-finding sound alerts and abnormal alarm notifications.



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- Supports detecting abnormal vehicle alerts, reporting to the server, and sending notifications via APP.
- Supports buzzer anti-theft alarm.



Version	Basic	Intelligent Intermediate	Intelligent Advanced
Model	R12L	G11L	G21L
Key Features	<ul style="list-style-type: none"> • GNSS Positioning • Vehicle Locking • Dangerous Driving Alerts 	<ul style="list-style-type: none"> • GNSS Positioning • Vehicle Locking • Dangerous Driving Alerts • Alarm Detection • Remote Start 	<ul style="list-style-type: none"> • GNSS Positioning • Vehicle Locking • Dangerous Driving Alerts • Alarm Detection • Remote Start • Buzzer Alert • Vehicle-finding Sound Alert
Network Types	4G + 2G	4G + 2G	4G + 2G
Positioning Methods	GPS + GLS + LBS	GPS + GLS + LBS	GPS + GLS + LBS
Battery Capacity	100 mAh	300 mAh	300 mAh
Protection Rating	IP65, Cross Screw	IP67, Hex Screw	IP67, Hex Screw
Operating Temperature	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C
Dimensions	L 80 × W 32 × H 15 mm	L 98.5 × W 38 × H 17 mm	L 98.5 × W 38 × H 17 mm
Battery Life (No External Power)	About 1 hour	About 4.5 hours	About 4.5 hours



Pet Safety Management Solution

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Guangzhou SEEWORLD Technology Co., Ltd.

AUG 2025





Pet Safety Management Market Overview



Global pet population is projected to reach **980** million by 2025, with cats and dogs dominating the market. The global pet industry is expected to hit **\$35** billion (approximately RMB 250 billion). As pet localization technology becomes widespread, **65%** of pet owners have used or plan to use tracking devices to ensure pet safety, while **72%** consider such devices essential for security. With accelerated technological innovation, intelligent GPS devices are becoming mainstream, meeting demands for precision and multifunctionality.

Market Status	Analysis	Supporting Data
Market demand growth	With the increase in the global pet population and the enhancement of pet owners' awareness of pet safety, the market demand for pet positioning and anti - loss products continues to grow, especially in big cities and high - risk areas.	The global pet population is expected to reach 980 million by 2025, with pet cats and pet dogs occupying the major market share. (Source: APPA) The global pet market size is projected to reach \$35 billion (approximately RMB 250 billion) by 2025. (Source: MarketsandMarkets)
Application of pet positioning technology	Pet positioning technologies (such as GPS, RFID, Bluetooth, etc.) are increasingly being applied in the field of pet anti - loss. They help pet owners keep track of their pets' real - time locations and reduce the risk of pets getting lost.	65% of pet owners said that they have used or plan to use pet tracking devices. (Source: Statista) Pet safety management and anti - loss products are expected to account for 20% of the global pet market. (Source: MarketsandMarkets)
Enhanced safety management demand	As the pet industry becomes more standardized, the demand for pet safety management is gradually increasing. Pet anti - loss products have become an integral part of daily pet management, especially when going out or walking pets.	72% of pet owners believe that pet tracking devices are essential tools to ensure pet safety. (Source: Euromonitor)
Accelerated industry technological innovation	With the development of the Internet of Things technology, pet positioning devices are becoming increasingly intelligent. In addition to the positioning function, they also offer additional features such as health monitoring and behavior analysis.	50% of pet tracking devices already have health monitoring functions, such as exercise volume and body temperature. It is estimated that this proportion will reach 70% by 2025. (Source: Frost & Sullivan)
Intensified market competition	As market demand rises, competition in the pet positioning and anti - loss industry is intensifying. Major brands are launching innovative products to meet the diverse needs of consumers.	80% of consumers stated that when choosing pet tracking products, they value accuracy, battery life, and multi - functionality the most. (Source: Grand View Research)

Pain Points in Pet Management



With the rise of the pet economy, an increasing number of households now own pets. In scenarios such as daily pet care and outdoor walks, losing pets has become a major concern for many pet owners. Additionally, there is growing attention towards monitoring pets' health conditions. Existing pet tracking devices on the market face challenges including short battery life, inaccurate positioning, and complex usability. Users are seeking more efficient, convenient, and precise solutions to address these pain points.

The Pet Loss Problem

- Each year, over 10 million pet dogs and cats worldwide go missing or are stolen.
- Despite numerous missing pet notices, the chance of reunion remains less than 20%.

Pet Health Management

- As family members, pets now receive increased attention to their health status.
- High medical costs are a concern, with the average annual medical expenditure per cat and dog reaching ¥2,390 and ¥2,786 respectively in 2023.

Frequent Charging

- Some devices have insufficient battery life, requiring frequent charging.
- Settings logic leads to rapid power drain, increasing the risk of loss.

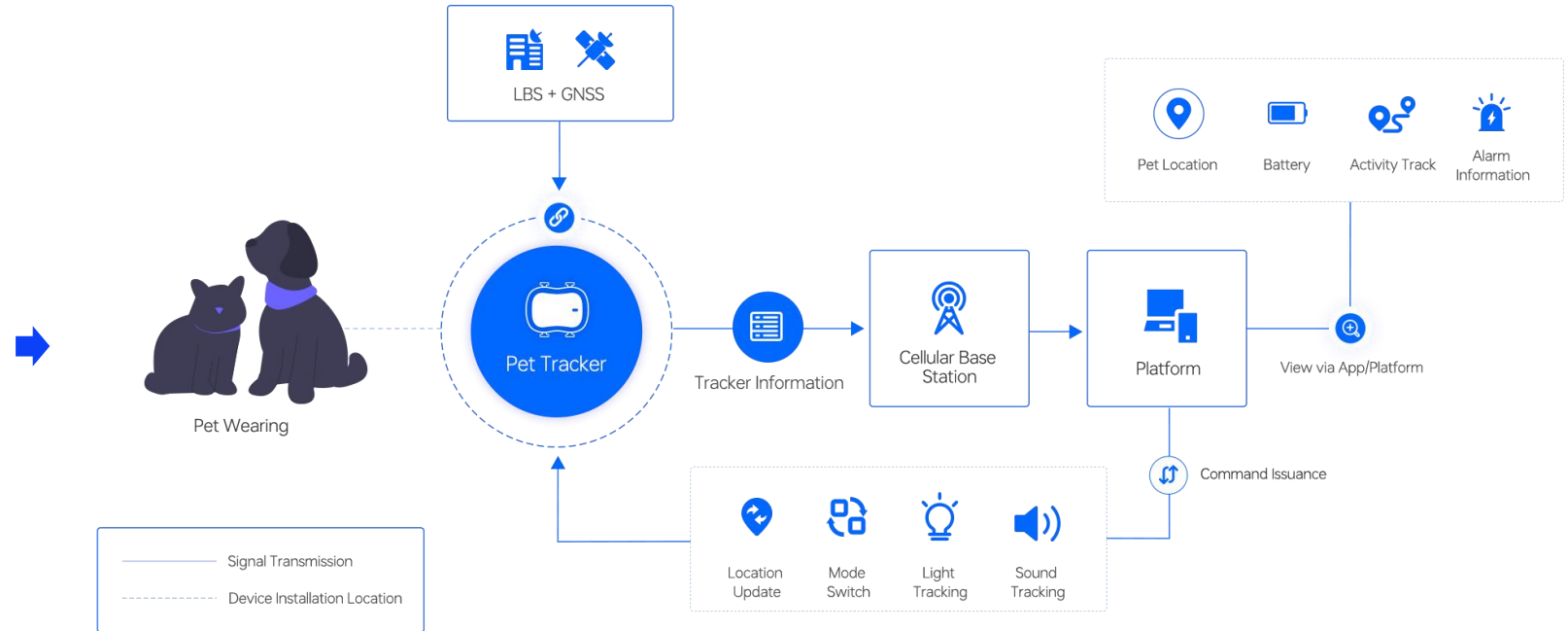
Unable to Locate Pets Accurately

- The complex environments of pets' frequent activity areas, such as indoor settings or locations with numerous obstructions, result in severe GPS signal interference.



P5 Pet GPS Tracker

Topology Diagram






How It Works

The P5 device features built-in GPS positioning, mobile communication, and pet posture detection capabilities. Based on predefined modes, it transmits the pet's current location and activity data collected by the device to the server at specific intervals. Users can monitor their pet's real-time location, historical movement trajectories, device battery status, and activity metrics through the app. This achieves both pet loss prevention and health monitoring.

Additionally, users can leverage the app's pet locator function to instantly track location updates, remotely trace their pet, and activate the device's audible and visual cues for swift and precise pet retrieval in complex nearby environments.



Use Cases

- 
Outdoor Excursions
- 
Pet Adventures
- 
Monitoring for Boarding and Rescue Organizations



Users operate the app to utilize the product's corresponding features, view status information such as pet location.

Batch device management and monitoring can be performed on the platform side.

	P5 Pet GPS Tracker
Image	
Network Type	4G
Positioning Technology	GPS+LBS+WiFi
Positioning Accuracy	<10m
Location Acquisition Time	Hot start: <15s (avg.) Cold start: <60s (avg.)
Dimensions	L63.5mm*W38mm*H18.5mm
Weight	38g
Battery Capacity	800mah
Protection Rating	IP67
Operating Voltage	DC 3.1V-4.3V
Working Modes	Tracking Mode / Daily Mode / Power-Saving Mode
Battery Life	Up to 30 days



Comfortable Wear

- **Ultimate Size Optimization:** Designed with meticulous attention to size, offering a better fit for pets compared to products with similar performance.
- **Ergonomic Curvature:** The shell features a specially contoured design at the contact area to snugly conform to your pet's neck.
- **Lightweight Construction:** Weighing as little as 38g, it reduces physical strain on your beloved pet.
- **Versatile Compatibility:** Secure attachment via rubber straps ensures compatibility with most collars, eliminating the hassle of frequent collar replacements.



Efficient Protection

- Satellite positioning and WiFi home positioning with light/sound alerts for quick pet location
- Set up geofences to monitor your pet's homecoming status and prevent access to hazardous areas
- 180-day activity playback to track movement history
- Ensure pet health safety through exercise duration and sleep pattern monitoring



Super Long Battery Life

- Free from battery anxiety with intelligent algorithms that reduce daily power consumption.
- Featuring WiFi and Bluetooth power-saving features, battery life lasts up to 20 days.



Logistics Vehicle Management Solution

—
Guangzhou SEEWORLD Technology Co., Ltd.

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Logistics Vehicle Monitoring Market Overview



The global logistics market is experiencing rapid growth and is projected to reach \$**12.3** trillion (approximately RMB 85 trillion, according to current exchange rates) by 2025, with AI-enhanced logistics management systems accounting for approximately **20%** of this market. As logistics companies increasingly prioritize efficiency and safety, **78%** have adopted GPS positioning and cargo tracking systems, while intelligent route planning and dispatching have become core tools for enhancing operational efficiency. Currently, **55%** of companies utilize driver behavior analytics, a figure expected to rise to **70%** by 2025.

Market Status	Analysis	Supporting Data
Market Demand Growth	With the rapid development of global e-commerce and the fast-moving consumer goods (FMCG) industry, there is a surging demand for intelligent logistics management – especially in vehicle positioning, cargo tracking, and route optimization.	The global logistics market is expected to reach \$1.23 trillion by 2025 (approx. RMB 8.5 trillion), with smart logistics management systems accounting for 20%. (Source: McKinsey & Company)
Vehicle Positioning and Cargo Tracking	As the logistics industry increasingly demands real-time vehicle positioning and cargo tracking, GPS and IoT technologies help improve transportation efficiency and ensure transport safety.	78% of logistics companies already use GPS positioning and cargo tracking systems, and this figure is expected to exceed 90% by 2025. (Source: Statista)
Intelligent Route Planning and Optimization	Smart route planning optimizes transportation routes, reduces fuel and operational costs, and enhances overall logistics efficiency – becoming a key tool for improving delivery performance.	65% of logistics companies have already begun investing in smart route planning and optimization systems, planning to do so within the next three years. (Source: Gartner)
Driver Behavior Analysis	By monitoring real-time driver behavior, such as speed, sudden braking, and fuel consumption, companies can assess driving habits and safety risks, helping reduce accident rates and improve driver safety.	55% of logistics companies are using driver behavior analysis technologies, and this number is projected to exceed 70% by 2025. (Source: Frost & Sullivan)
Market Competition and Technological Innovation	With increasing market competition, logistics companies are investing in technological innovations across vehicle management, transportation optimization, and driver behavior analytics to improve service quality and competitiveness.	70% of logistics companies indicate that innovations such as autonomous driving and AI-powered route optimization will be key to staying competitive in the future. (Source: DHL Trend Report)



Pain Points in Logistics Vehicle Management



End-to-end supervision of logistics vehicles throughout the entire transportation process involves vehicle management and driver management. Among these, driver dispatch management, attendance management, and compliance with safe driving protocols remain the most challenging aspects to regulate.

Inefficient Fleet Supervision

- Low vehicle utilization rate
- Difficulty in tracking usage duration and mileage
- Challenges in controlling private use of official vehicles

Crude Driver Assessment

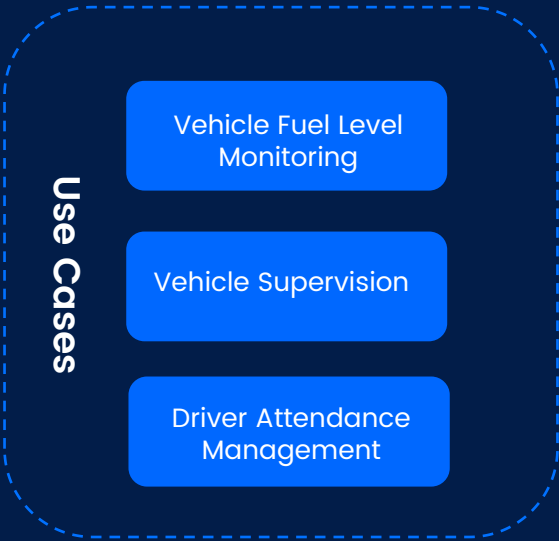
- Delayed data feedback
- Data collection relies primarily on monitoring
- Unclear driver performance metrics

Difficult Safety Supervision

- Frequent unsafe driving behaviors
- Unable to issue timely warnings/alerts
- High vehicle accident rate

Chaotic Vehicle Cost Accounting

- Persistently high fuel costs
- Difficult verification of fraudulent claims
- Challenges in statistical analysis



Platform:

Match the corresponding driver based on the driver ID reported by S5L, and enter the driver's attendance report. Meanwhile, calculate the transportation fuel consumption synchronously according to the original vehicle fuel sensor data, combine it into a fuel volume report, and include the vehicle trajectory.

Device
Automatically
Reports driver ID
information and
location data



Upload original
vehicle fuel level
data



Departure:



Place the RFID card reader at the front of the vehicle and connect it to S5L via serial port. The driver starts the vehicle by swiping the RFID card to confirm their identity.

Transportation process:

Install the RFID device next to the vehicle dashboard, install S5L in the fuse box, and connect the RFID, relay, and S5L. Verify whether it is a legitimate driver through the RFID.

Transportation process:

Connect S5L to the original vehicle fuel sensor via serial port. Combine the AD value of the original vehicle fuel sensor in the positioning packet and report it to the positioning platform every 10 seconds.

	S5L	RFID Sensor
Image		
Network Type	4G+2G	/
Positioning Mode	GPS+LBS+GLONASS	/
Number of Lines / Line Length	10 wires	1m
Operating Voltage	9-90V	Connect UART
ACC Detection	Support	
Collection Interval	10s	



Intelligent Efficiency Enhancement

- The fleet uses GPS to achieve real-time location tracking and route tracing. Managers can check the vehicle's location, speed, and direction at any time.
- By analyzing historical data and real-time route information, optimal driving routes can be planned, reducing idle time and improving transportation efficiency.



Efficient Management & Attendance

- Integrates RFID for intelligent driver attendance monitoring with data visualized in reports and supports one-click export.
- RFID is also linked with internal relay control to restrict unauthorized power usage, ensuring only authorized personnel can drive.
- Real-time positioning data helps in monitoring abnormal routes and prevents private vehicle use under the guise of official business.



Reducing Fleet Costs

- By combining the S5L device with remote fuel sensors, it monitors vehicle fuel consumption and mileage in real-time.
- The data is compiled into comprehensive reports (including fuel usage), allowing fleet companies to analyze transportation performance and trends, thus reducing overall operational costs.



Standardized & Compliant Driving

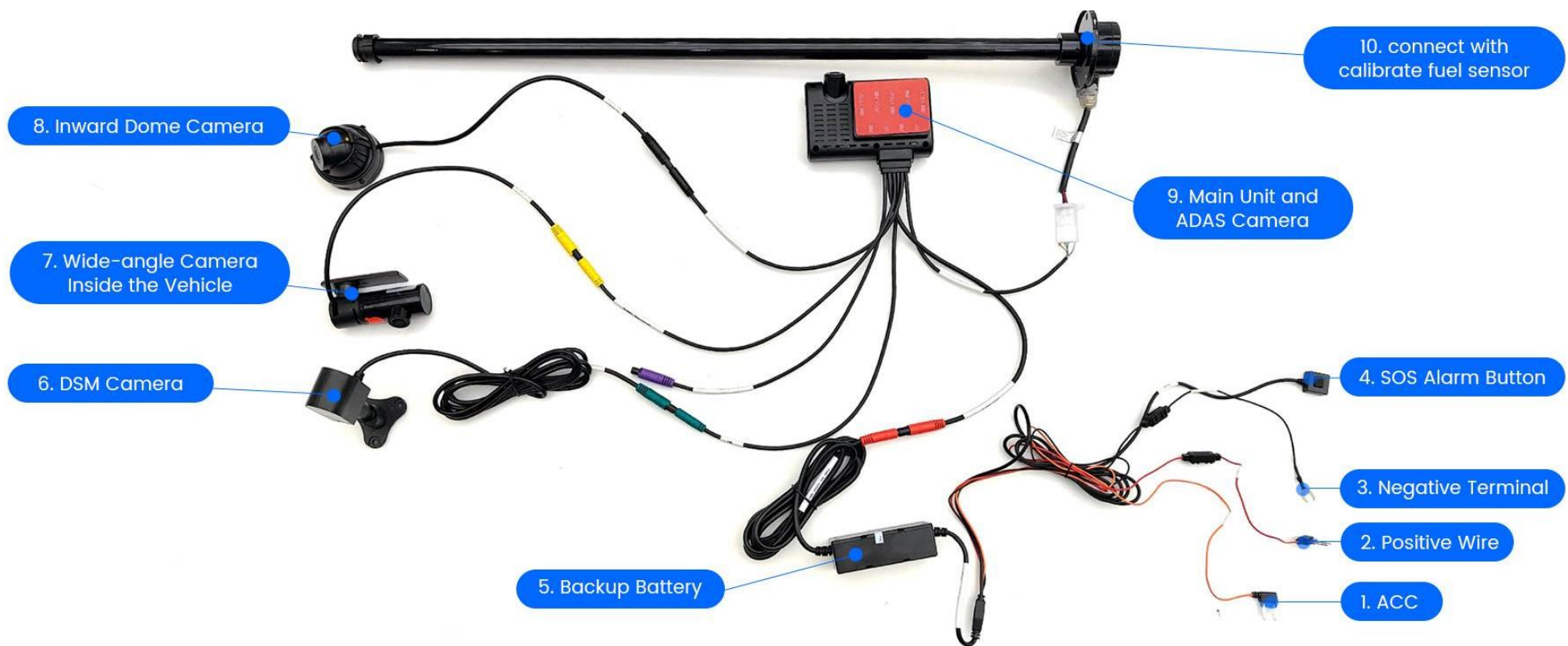
- The S5L device has built-in alerts for harsh acceleration, sudden braking, and sharp turns.
- It encourages safe driving behavior and enables real-time alerts to internal fleet managers, helping improve supervision and safety of driving conduct.

Solution 2 | Intelligent Video Monitoring Terminal



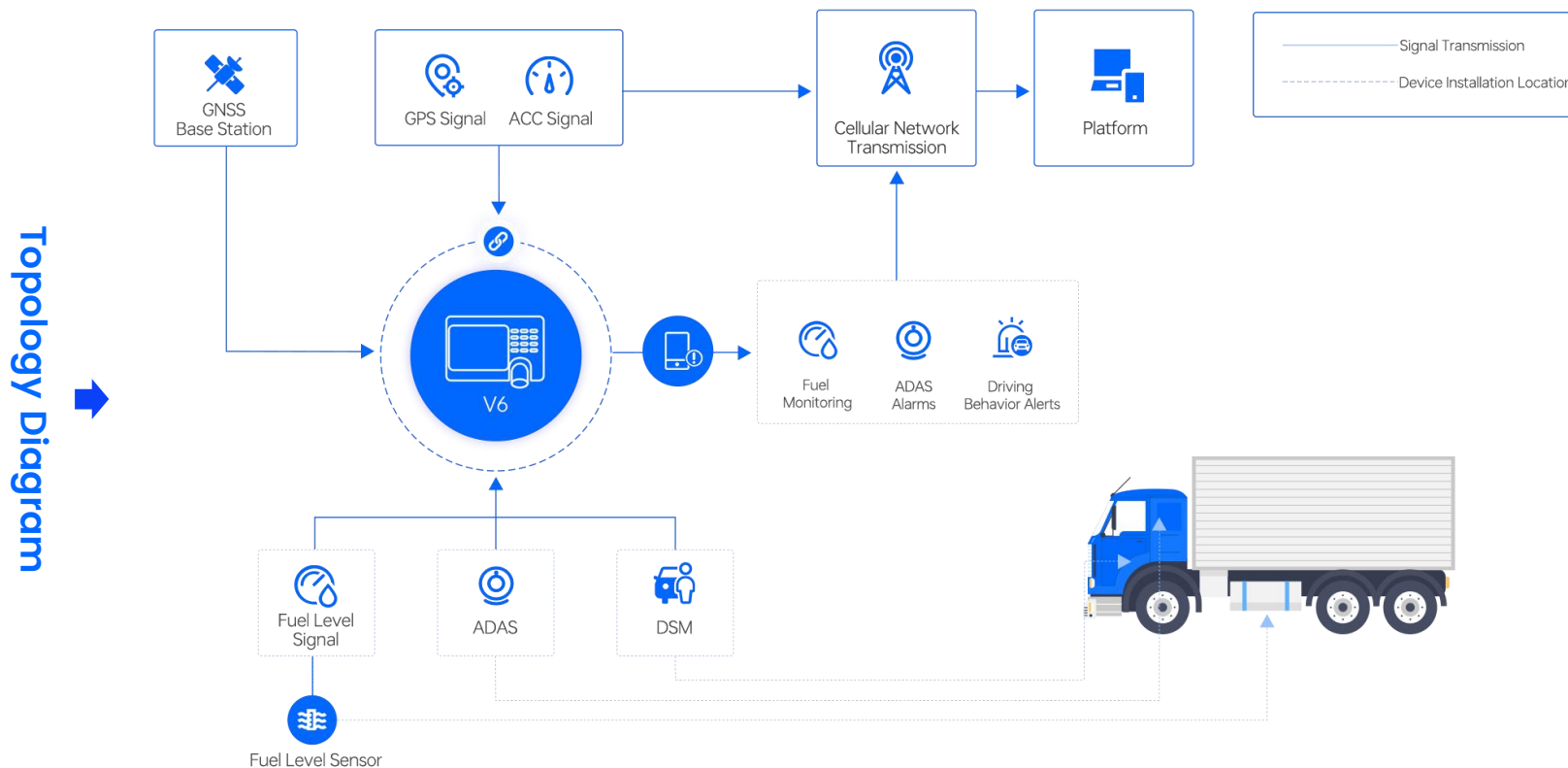
V6 is a smart video monitoring terminal that integrates 4G communication, real-time positioning, DMS, and ADAS monitoring into a single device. Linked to an IoT cloud platform, it enables real-time tracking of logistics fleet vehicles and live video monitoring of driver behavior, ensuring comprehensive oversight of logistics operations and enhancing driving safety. Additionally, the product is compatible with fuel sensors for real-time monitoring of vehicle fuel data.

V6





V6 Intelligent Video Monitoring Terminal



How It Works

The fuel level sensor is a capacitive sensing device connected to the intelligent video monitoring terminal via an RS232 serial cable. It is secured to the fuel tank through drilled holes and transmits fuel level signals by detecting height readings from the central float within the sensor.

Additionally, the V6 intelligent video monitoring terminal supports the connection of four cameras: two algorithm-enabled units for DMS and ADAS, and two standard cabin cameras. This configuration achieves 360° surveillance coverage of the vehicle's front, interior, and rear compartments. The system further enables two-way voice intercom and broadcasts audio alerts through its built-in acoustic module.



Enhancing Safety Management

- Through the DMS in-vehicle camera and data analysis technology, V6 enables real-time monitoring and analysis of drivers' behaviors. Managers can access data on driver distractions, smoking, fatigued driving, phone use, and other risky behaviors at any time. The system intelligently identifies drivers with poor driving habits and provides targeted training and guidance recommendations to improve drivers' safety awareness.

Precision Cost Control

- V6 accurately measures fuel delivery and consumption through capacitive sensors. By integrating platform fuel reports, it precisely analyzes fleet fuel consumption and refueling patterns, identifies abnormal fuel usage data, and thereby optimizes transportation operational costs for enterprise fleets.

Intelligent Dispatching


- Fleet managers can leverage V6's real-time positioning and two-way communication functions, integrated with the IoT platform's data hubs, to implement optimized regional dispatching. Simultaneously, by utilizing the platform's live traffic updates, they can dynamically optimize vehicle routes and adjust dispatch strategies in real time, thereby enhancing fleet operational efficiency.



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to make the world more efficient

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