Solution Datasheet

ellenex

DIESEL DELIVERY MANAGEMENT SYSTEM

Efficient diesel delivery management to remote areas is essential for timely, safe, and cost-effective operations, maximizing productivity and minimizing logistical challenges…

CHALLENGE

Delivering diesel to remote areas presents several challenges. First and foremost, the lack of reliable internet connectivity can hinder real-time monitoring, making it difficult to gather and transmit data from remote locations. This can result in delays in identifying potential issues such as fuel theft, leaks, or low fuel levels, leading to costly downtime or equipment damage. Additionally, the remote locations may have limited or no access to electricity, making it challenging to power monitoring equipment or sensors. Harsh environmental conditions such as extreme temperatures, rugged terrain, and exposure to natural elements can also impact the durability and performance of monitoring equipment. Furthermore, remote areas are often susceptible to theft and vandalism, which can compromise the integrity of monitoring systems. Lastly, the cost of implementing and maintaining monitoring solutions in remote areas can be prohibitive, including the installation and maintenance of infrastructure, equipment, and communication systems. Overall, the complexities of delivering diesel to remote areas require innovative solutions that can overcome limitations in connectivity, power supply, environmental conditions, security, and cost-effectiveness.

DMSD
Diesel Delivery Management System

SOLUTION
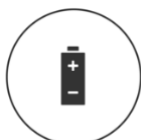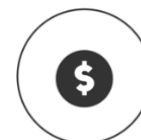
Battery Operated	Ruggedised Design	Easy Install	Pre-Configured	Secure	Quick ROI

Ellenex solution comes with two sensors to mount on the delivery tanker equipped with GPS to monitor the location of delivery tanker and well as level sensor on the destination storage tank on the client site. Our diesel delivery solution is distinguished by its battery-powered design, rugged construction, easy installation, pre-configured settings, secure communication, and rapid return on investment (ROI). Operating autonomously without relying on external power sources, it can withstand adverse weather conditions, requiring minimal technical expertise while ensuring data privacy. With real-time monitoring, it optimizes diesel management, reduces costs, and enables fast ROI for diesel delivery operations. Ellenex's solution is a dependable and efficient choice for remote and challenging environments where diesel delivery is required.

In contrast to numerous alternatives in the market, Ellenex's remote diesel delivery solution has a proven track record of reliable performance over extended periods. Moreover, it offers seamless integration with other monitoring solutions through its API, enabling adaptability and interoperability with various systems for efficient diesel delivery operations.

TECHNOLOGY

Ellenex employs cutting-edge communication technology by utilizing the LTE Cat M1 protocol, which operates on 4G and 5G cellular networks, making it suitable for mobile and stationary diesel tank monitoring applications. However, what sets it apart is its remarkably low power consumption and superior penetration rate, specifically designed for industrial solutions.

Narrowband Internet of Things (NB-IoT) and LTE Cat M1 are advanced communication technologies that offer significant advantages for diesel tank monitoring. These technologies provide efficient and reliable connectivity for IoT devices, allowing for seamless communication between our sensor and remote monitoring systems. NB-IoT and LTE Cat M1 are known for their low power consumption, enabling prolonged battery life for the devices, which is crucial for remote or hard-to-reach areas such as diesel tanks. Moreover, these technologies offer excellent penetration capabilities, allowing for reliable communication even in challenging environments, such as underground or remote locations where diesel tanks are often located. Additionally, NB-IoT and LTE Cat M1

provide secure and scalable connectivity, enabling robust and cost-effective solutions for diesel tank monitoring in various industrial sectors, including agriculture, utilities, logistics, and more.

SENSOR TECHNICAL SPECS

•	Measurement Range:	3.5	m
•	Accuracy: (combined linearity, hysteresis, repeatability)	±0.25 (typ.)	%Span
•	Resolution:	±0.01	%Span
•	Temperature Coefficient of Zero:	≤±0.02	%FS/°C
•	Temperature Coefficient of Span:	≤±0.02	%FS/°C
•	Long Term Stability (1 year):	≤ 0.2	%Span
•	Compensated Temperature:	-10 ~ +70	°C
•	Battery Lifetime:	50,000+ readings and 10,000+ transmission	
•	Materials:	O-ring: Viton, Body: SS316L, Diaphragm: SS316, Oil: Silicon, Enclosure: POM, cable: Polyurethane	
•	Weight:	550	g
•	Protection Rate:	IP66, UV Protected	-
•	SIM Card Type	4FF Nano-SIM, from any Network Provider	
•	Firmware Update:	Over The Air	
•	Sampling Period:	Configurable via downlink (default 4 hours)	
•	Communication Bands	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 and B39	
•	Antenna:	Internal (Default)/ External (customised options available)	

PLATFORM FEATURES

Ellenex's software platform is a comprehensive and user-friendly solution specifically designed for diesel delivery management. The platform offers a wide range of features tailored for diesel delivery operations, including real-time data visualization, customizable alerts and notifications, historical data analysis, and predictive analytics. It provides users with a holistic view of their diesel delivery assets, allowing them to make data-driven decisions for optimal fuel management. The platform is accessible via web browsers and mobile devices, providing convenient remote access to critical information anytime, anywhere. Ellenex's software platform is designed with a user-centric approach, offering intuitive navigation and a user-friendly interface for easy setup and configuration. With its advanced features and ease of use, Ellenex's software platform empowers users to effectively monitor and manage their diesel delivery operations in remote areas, ensuring efficient and sustainable fuel resource management.

- Encrypted ultra-low power communication protocol
- Advanced device inventory
- Integration APIs for enterprise systems
- Multi-tenant role-based access control
- Data export and import
- White-label platform for enterprise runs on private account

DMSD
Diesel Delivery Management System

- Variable alarm setting for high and low thresholds and multi-channel alerting
- Sampling and transmission interval configuration
- Transmission condition configuration
- Other configurations and customisation available on request

Encrypted & ultra-low power	Integratable
Multi-tenant	Scalable
Low cost	Action management

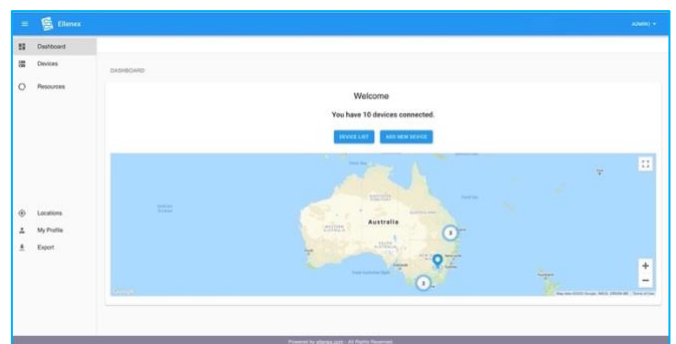| |
|---|
| Dynamic alerting |
| Composable& API first |
| Resource monitoring |
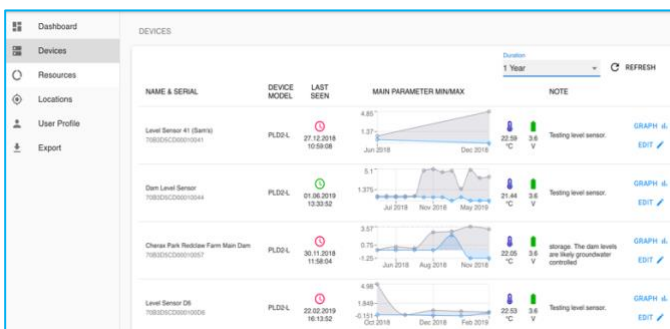
Single shot data visualisation of devices
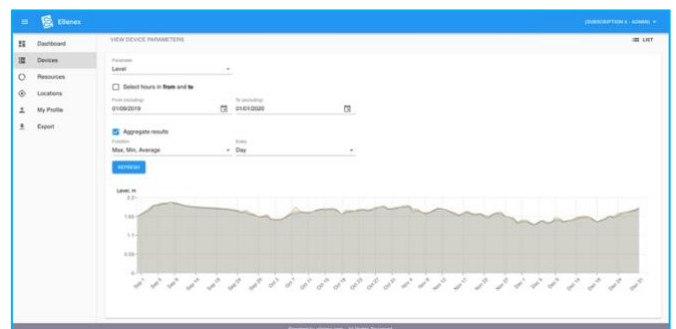
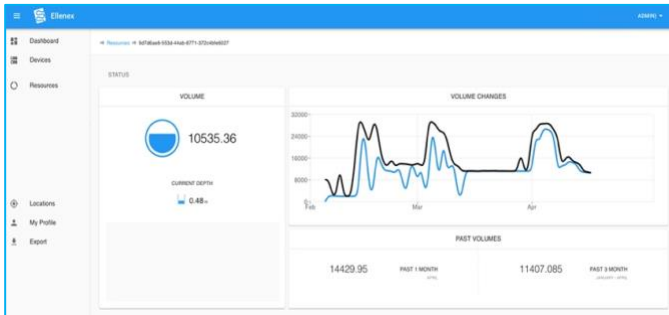Easy historic data analysis
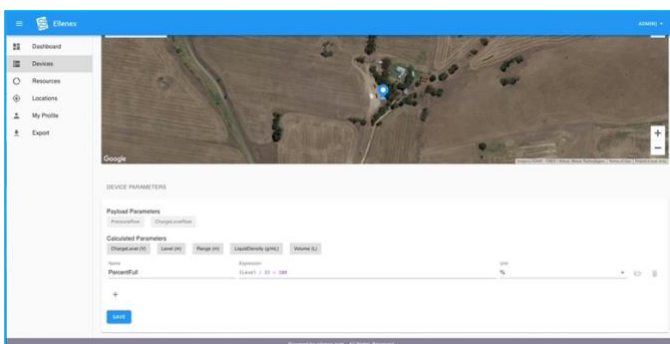
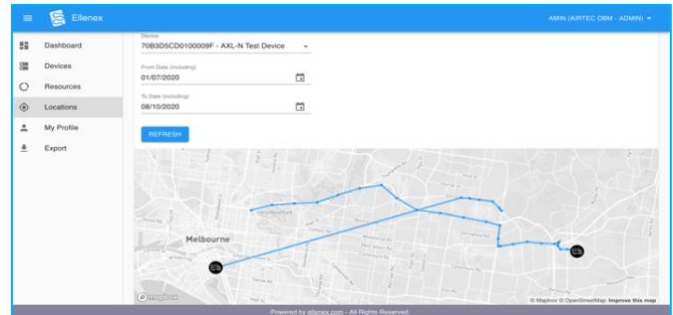Asset location indication and complex formula

device list visualisation on map

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Volume calculation and prediction

Asset location monitoring (for mobile assets)

INTEGRATION OPTIONS

Ellenex's tank level monitoring solution sets itself apart with its pre-configured and plug-and-play design, eliminating the complexities of configuration, programming, and connection to the platform. This unique approach ensures that users can start monitoring their diesel tanks quickly and easily without any technical hassles. Additionally, Ellenex offers seamless integratability at both the network and platform levels, allowing for easy integration with any network or visualization/analysis platform. This competitive advantage makes Ellenex's solution highly adaptable and compatible with existing systems, providing users with flexibility and convenience in managing their diesel resources effectively.

INDUSTRIES SERVED

Agriculture & Farming

Mining & Construction

Oil & Gas

ORDERING PROCESS

Ellenex offers simple and easy way to order the solution from any location on earth with narrow band cellular coverage. Please visit our sales portal (www.ellenex.shop) or contact us to discuss your application. This is the first step to experience a reliable IoT solution at scale.

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INTEGRATED IOT SOLUTIONS

Email:	sales@ellenex.com
Web:	www.ellenex.com
Platform:	https://ellenex.net/
Sales Portal:	www.ellenex.shop