MINSOFT LIMITED
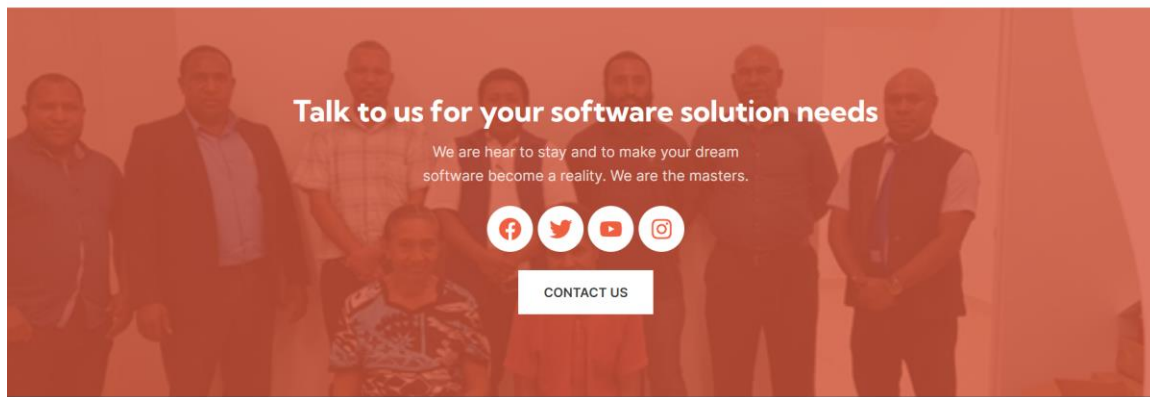
ASSET TRACKING

GENERAL PRODUCT INFORMATION

GENERAL PUPOSE OF THIS DOCUMENT

This document aims to provide some basic information about our smart *Asset Tracking Management Software* and its application in Papua New Guinea. Unlike the traditional fixed assets solution, our smart asset tracking management software enables an organization to keep track of its critical assets throughout its life.

Our smart software combines the power of GPS, IoT and RFID using the same asset code module to provide critical information about an asset. Our software provides a 30-day trial period during which a client can use one or a combination of the service features.

WHO WE ARE

We are a nationally owned software engineering and design company based in Port Moresby. We have been in the software research and development in Papua New Guinea for over 10 years. For more information visit our website at https://minsoft.com.pg.

Talk to us for your software solution needs

We are hear to stay and to make your dream software become a reality. We are the masters.

CONTACT US

ABOUT OUR ASSET MANAGEMENT SYSTEM

Our smart web-based cloud **Asset Tracking Software Solution** has two types of asset tracking technologies. We have collaborated directly with the device manufacturers to integrate these technologies into our smart software, so the software is supported and maintained locally in Papua New Guinea.
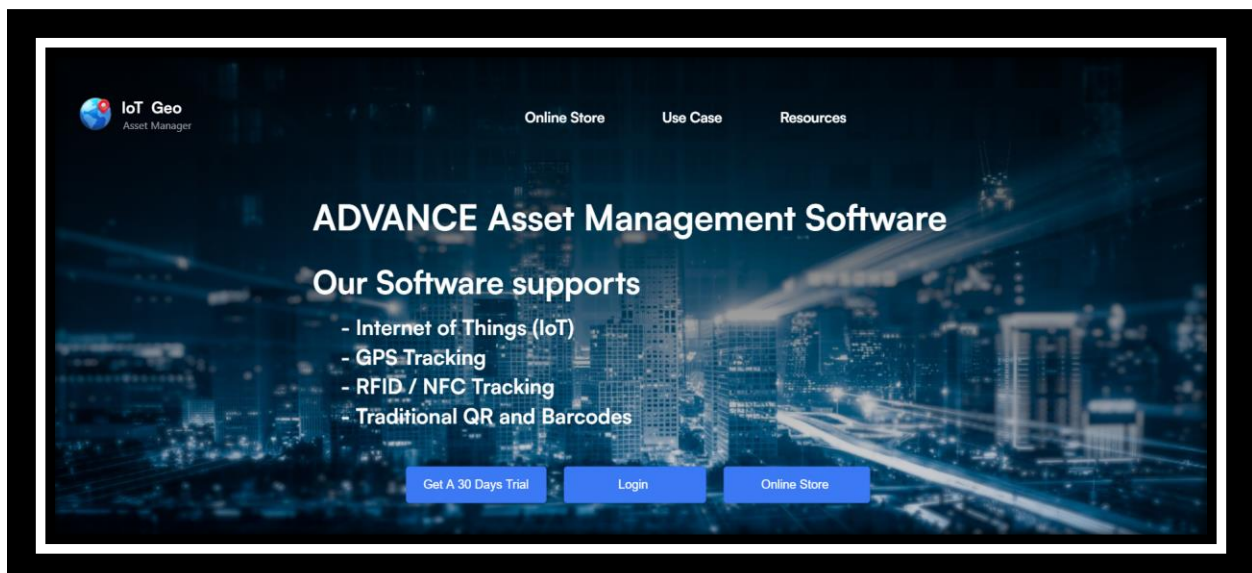
1. **GPS IoT Technology**
   *Combines the power of Global Positioning System (**GPS**) and Internet of Things (**IoT**) empowering GPS tracking technology by making it smarter, more connected, and adaptable to various applications and industries.*

2. **RFID Technology**
   *Radio-frequency identification (**RFID**) is a fascinating technology that uses electromagnetic fields to automatically identify and track objects.*

In this document, we provide a high-level use case applications of these two technologies and, how it can help safeguard its critical asset yielding to continuous cost savings and high return on investment.

Our GPS IoT software provides solutions for the following applications.

1. GPS IoT Asset Tracking
2. Remote Sensor Monitoring
3. Indoor/ Outdoor Asset Management
4. Supply Chain Visibility
5. Fleet Management and Vehicle Tracking
6. Heavy Equipment and Plant Management and Tracking
7. Bins and Container Tracking
8. Trailer Tracking

GPS Asset Tracking Devices

Build a better GPS Asset Tracking solution with integration-ready and globally scalable IoT hardware.

IoT Asset Manager
Learn more >
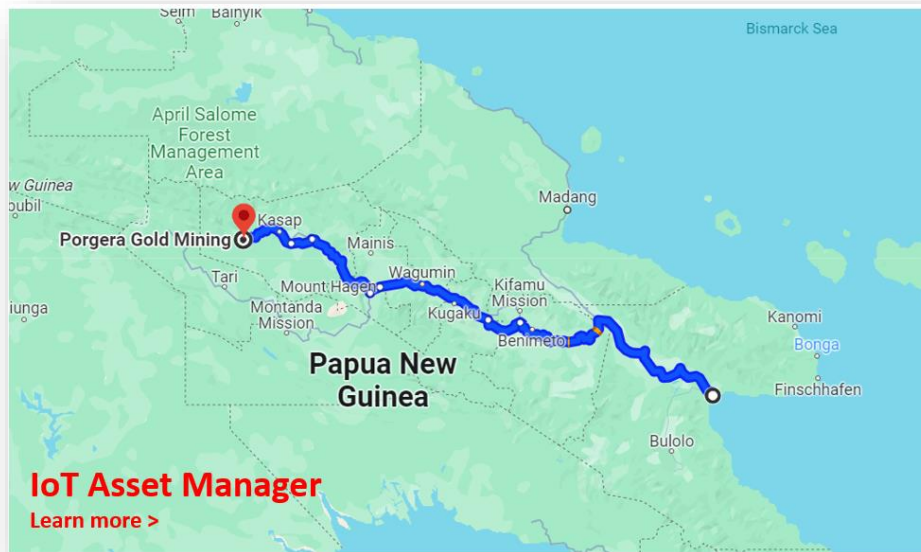
Features

- ✓ **GPS Asset Tracking Devices**
- ✓ **Multi-Technology Asset Tracking Solutions**
- ✓ **Solutions for Powered and Non-Powered Assets**
- ✓ **Send Data Anywhere**
- ✓ **Take Control of Device Settings**

Fleet Tracking and Management

Integrate our vehicle and truck GPS tracking devices into existing fleet management platforms to improve ROI and reliability. Capture more actionable data points in real-time with advanced Driver ID features, driver behavior monitoring, geofencing, temperature monitoring, and more.

Equipment, Parts, and Accessories

Asset tracking devices for high-value equipment such as earthmovers, attachments, bobcats, loaders, tractors, and more. Improve equipment visibility and utilization across worksites with wired or battery-powered devices. Maintain compliance and capture run-hours to schedule preventative maintenance.

Rental Equipment

Manage and protect your business rental equipment across locations with your own asset tracking system designed to improve productivity and churn rates. Track run-hours to bill customers based on usage. Receive alerts if equipment is

Trailers and Dollies

Our long-life battery-powered asset tracking devices can be covertly installed on trailers to provide location and movement-history data for up to 10 years on a single set of batteries. Receive location updates when trailers are on the move and conserve battery

|	
used outside of agreed-upon hours or locations.	life when they aren't with Digital Matter's movement-based tracking technology.
Bins, Containers, Pallets, Returnables Covertly install long-life battery-powered GPS asset tracking devices on non-powered assets of all shapes and sizes to monitor location and movement. Set up near real-time movement alerts if assets move when they shouldn't.	**Cold Chain and Asset Condition Monitoring** Collect critical asset location with condition data such as temperature, humidity, moisture, vibration, and more by integrating any third-party Bluetooth tag or sensor with select devices.
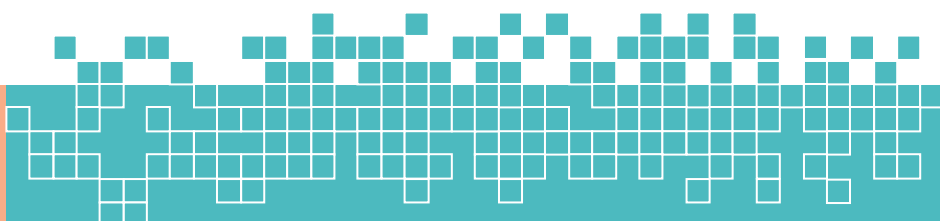
Outdoor / Indoor Asset Tracking
Build a smarter Outdoor / Indoor GPS asset tracking solution with Edge devices.

Remote Sensor Monitoring

Learn more ›
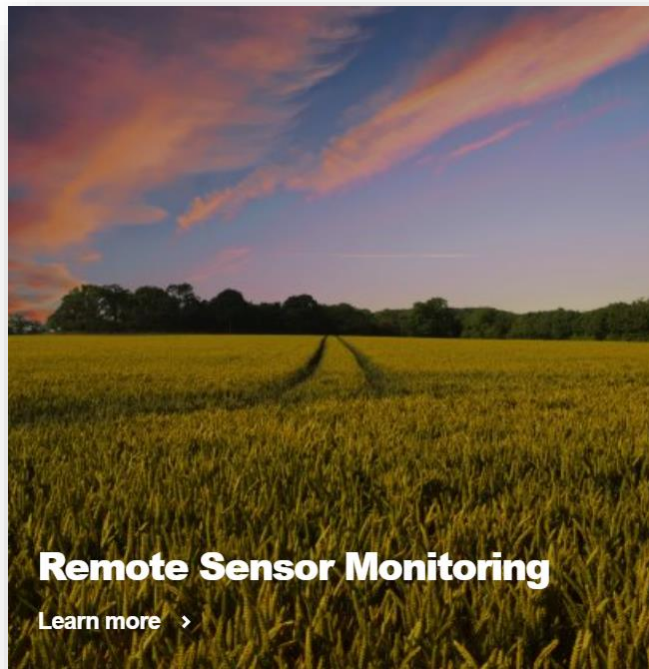
Features

① Choose Your Sensors

The versatile Hawk architecture caters for plug-and-play I/O Cards that define the 9 inputs/outputs, offering limitless options for interfacing to sensors.

② Choose Your Power

Power the Hawk with a large internal rechargeable LiPo battery, external power including solar, or 2 x D Cell LTC batteries.

③ Choose Your Housing

Select from our ultra-rugged Hawk housing options or build your own.

④ Choose Your Endpoint

Securely send data to any end platform via TCP Direct or HTTPS Webhook.

Tank Level and Quality Monitoring

Manage tank levels and quality through wireless IoT sensor monitoring to gain real-time information about fluid levels, temperature, and pressure. Accurately monitor to prevent overfilling or underfilling of tanks to reduce the risk of spills or equipment damage.

Weather Stations

Collect critical weather information with the IoT data logger to build a smarter and more efficient weather station. Capture real-time data on temperature, humidity, precipitation, wind speed and direction, cloud cover, atmospheric pressure, and more with accurate IoT sensor monitoring.

Water Management and Metering

Manage water supplies and metering through IoT sensor monitoring. Ensure adequate water supplies are available during periods of high demand or emergencies.
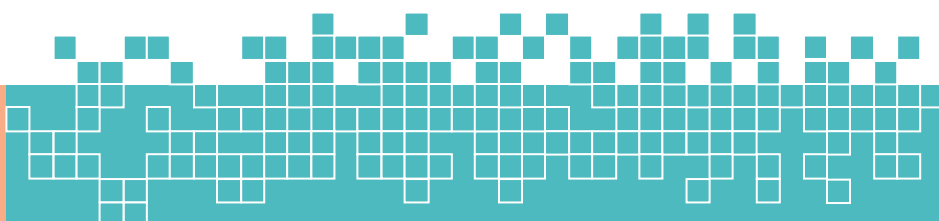
Remote Pump Management

Efficiently monitor and manage geographically dispersed pumps using our IoT data logger. Gain valuable insights into asset performance and streamline operations from a centralized platform.

Soil Moisture and Quality Monitoring

Monitor soil moisture levels to optimize irrigation, reduce water waste, and improve crop yield. Make informed decisions about when and how much to irrigate and when to conserve water using IoT sensor monitoring technology.

Pulse Counting

IoT sensor monitoring devices for pulse counting to accurately measure and log events such as the frequency of water flow, energy consumption, or any other event that can be quantified by pulses.
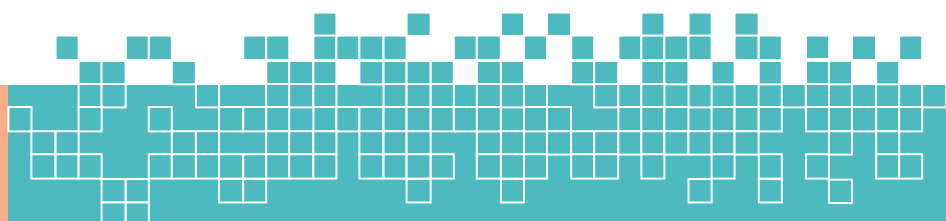
Outdoor / Indoor Asset Tracking
Build a smarter Outdoor / Indoor GPS asset tracking solution with Edge devices.
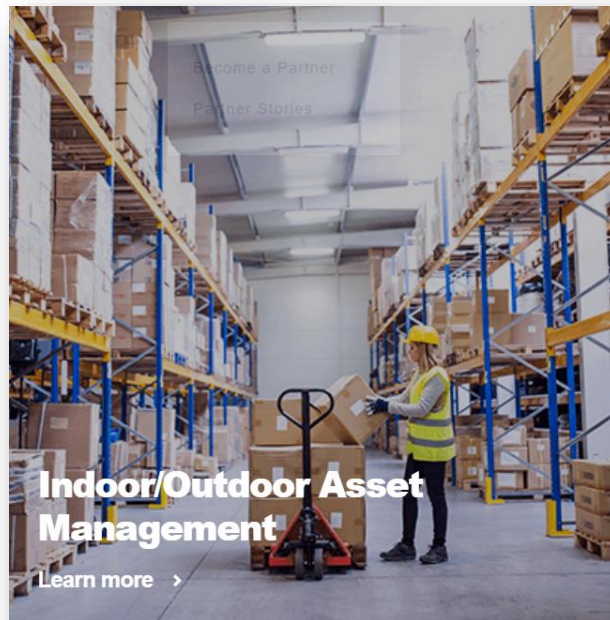
Features

Device Features

Derive more value from your outdoor/indoor asset management solution with built-in movement-based and condition monitoring features.

Asset Location	Asset Movement	Theft Recovery	Impact Detection	Run Hour Monitoring
Tilt Detection	Rotation Counting	Sensor Monitoring	Geofencing	

Supply Chain and Logistics

Manage critical supply chain assets as they travel indoors to outdoors with near-real-time location and movement history, movement and impact alerts, sensor monitoring, and more to enhance traceability and transparency. Provision Edge devices to report more frequently when supply chain assets are on the move and conserve data and power usage when stationary.

Connected Packaging

Add outdoor / indoor GPS asset trackers to high-value and/or returnable packaging to monitor location, delivery routes, handling, and arrival. Integrate with third-party Bluetooth® sensors to capture other key package conditions such as temperature, moisture, shock, vibration, and much more.

Rental Vehicles and Equipment

Manage and protect your business rental equipment across locations with your own wire-free, outdoor / indoor asset tracking system designed to improve productivity and churn rates. Track run-hours to bill customers based on usage. Receive alerts if equipment is used outside of agreed-upon hours or locations.

Supply Chain Visibility

Supply Chain Tracking Systems
Integrate a supply chain tracking system to strengthen supply chain management with real-time location and condition monitoring.
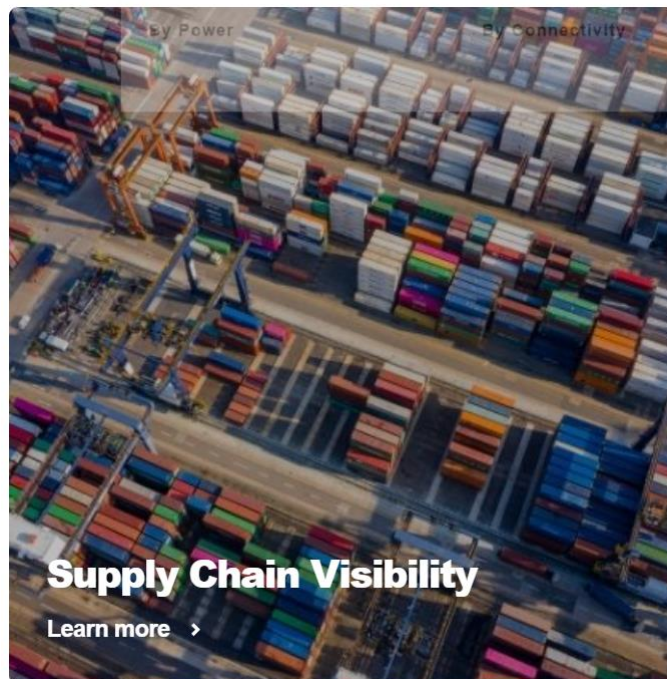
Features

- ✓ **High-precision Supply Tracking for Transparency & Traceability**
- ✓ **Logistics & Supply Chain Management with IoT Technology**
- ✓ **Benefits of Integrating Supply Chain Tracking Technology**

From manufacturing and shipment monitoring technology to delivery supply chain tracking, supply chain management solutions provide essential insight and data to optimizing the storage, movement, and hand-off of assets within a supply chain and with supply chain partners.

Manage Critical Assets

High precision GPS in supply chain management ensures that stakeholders and managers receive accurate reporting with up-to-date locations of all equipment, vehicles, assets, and goods. Trustworthy location data allows for quicker response times and more accurate measurements of the location to optimize production plans, shipping schedules, and delivery dates.

Identify Problems

Key insights gathered through supply chain management solutions allows for the identification and pinpointing of problems and opportunities to increase efficiency at every step of the process and the journey of goods.

Reduce Risk

Supply chain software technology reduces risks and costs associated with loss of goods by theft or misplacement with accurate and real-time tracking by utilizing recovery mode to ensure assets are quickly and safely located and retrieved.

Monitor Sensitive Cargo

A detailed supply chain tracking system monitors the storage and transportation conditions of assets with smart sensors that detect a range of environmental conditions including temperature, humidity, and moisture to ensure that assets and goods meet compliance requirements and can be actively monitored with supply chain quality management software.

Fleet Management GPS Tracking
Integration-ready and globally scalable GPS fleet tracking solutions for businesses.

Fleet Management and Vehicles

Learn more ›
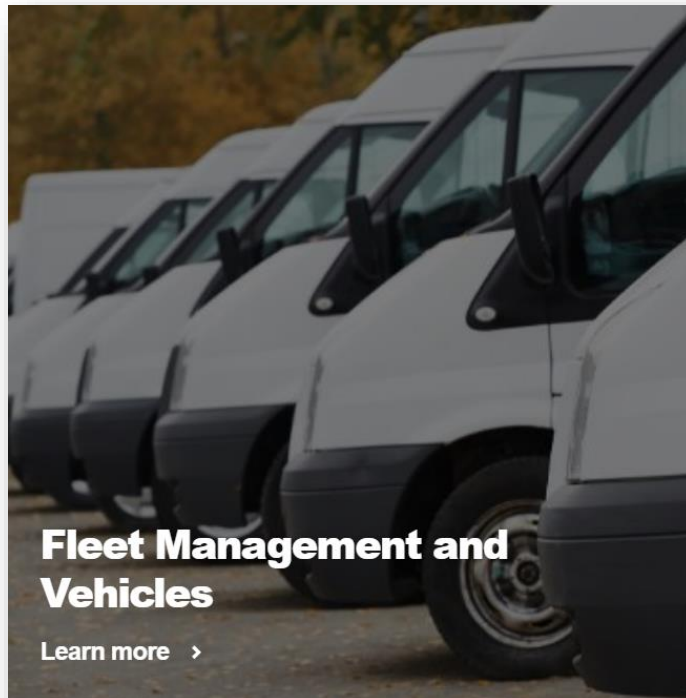
Features

- ✓ Robust and Reliable GPS Fleet Tracking Devices
- ✓ Robust and Reliable GPS Fleet Tracking Devices
- ✓ Wired and Battery-Powered Solutions
- ✓ Track More with Bluetooth® Low Energy
- ✓ Fast and Flexible Integration
- ✓ Configure and Customize

Real-Time Location Tracking

See where the vehicles in your fleet are in real-time and report on the trip history. Capture and analyze critical data points to improve and optimize fleet utilization and management strategies.

Driver Behavior Monitoring

Our fleet tracking devices can monitor speeding, harsh acceleration, braking, cornering, idle times and more to improve safety and prevent unnecessary wear on vehicles. Configure accident and rollover alerts triggered by extreme changes in velocity and orientation of vehicles or equipment.

Driver Identification

Determine who is operating the vehicles in your fleet, where, and how long with a variety of Driver ID options including iButton®, 1-Wire®, RFID, Wiegand, and RS232 interfaces to suit access control, driver behavior monitoring, and digital logbook applications.

Preventative Maintenance

Set up scheduled maintenance alerts based on vehicle usage such as ignition and movement detection, time and distance traveled, idle times, and more to reduce fleet maintenance, repair costs, and vehicle and equipment downtime.
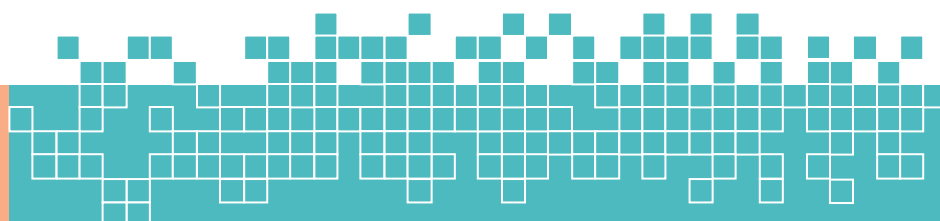
Theft Prevention and Recovery

Configure timely movement alerts and quickly switch to Recovery Mode in the case of loss, theft, unauthorized or after-hours use.

Remote Immobilization

Our Fleet management devices with digital outputs can be connected to a relay to safely immobilize vehicles and equipment in the case of theft, abuse, or unauthorized usage.

GPS Trackers for Equipment
Track and manage equipment of all sizes with versatile and rugged
GPS equipment tracking devices.
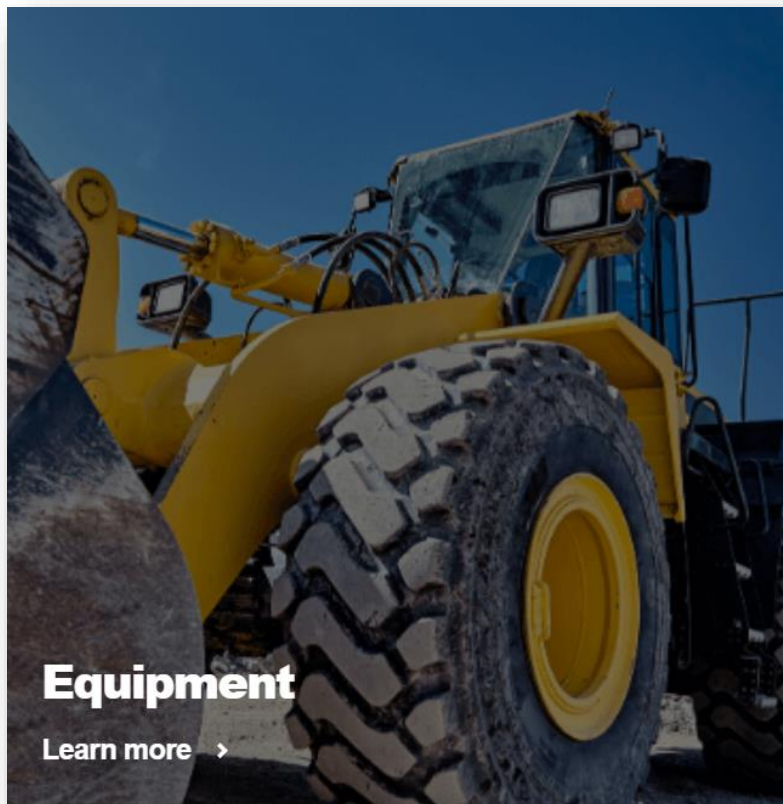
Features

- ✓ Improve Equipment Visibility and Utilization with IoT
- ✓ Solutions for Powered and Non-Powered Equipment
- ✓ Track More for Less with Bluetooth® Low Energy
- ✓ Fast and Flexible Integration

Equipment Tracking Device Features

'Deploy Once' Battery Life

Reduce OPEX costs with industry-leading battery life and performance. Our battery-powered devices GPS devices for equipment are engineered from the ground up to achieve maximum battery life with ultra-low power consumption.

Rugged & Weatherproof

IP68-rated housing ensures GPS trackers for construction equipment can withstand impact, fine dust, high-pressure spray, and brief submersion.

Easy Install

Multiple installation options for covertly securing GPS tracking devices for equipment with screws, bolts, cable ties, rivets, and more.

Theft Recovery

Track lost or stolen equipment with equipment theft tracking devices that switch to Recovery Mode, activating real-time tracking for equipment retrieval.

Run Hour Monitoring

GPS tags for equipment capture run hours based on movement to better understand and optimize equipment utilization.

Preventative Maintenance

Set proactive maintenance reminders based on run hours and distance traveled to reduce equipment downtime and repair costs.

Tip Detection & Rotation Counting

Axis angle reporting, tip detection and rotation counting.

Periodic or Movement-Based

Receive location updates regularly throughout the day and/or when equipment moves with smart adaptive tracking technology.

Impact Detection

Configure equipment monitoring and impact-detection alerts when g-forces are exceeded by a user-defined threshold.

Advanced Geofencing

Create custom geofences with equipment location tracking and receive alerts when assets enter or leave specific locations. Geofences can also be downloaded directly to devices for enhanced location-based behaviors.

Bin and Container Tracking

GPS Tracking for Shipping Containers

Implement GPS tracking for shipping containers with our long-lasting, battery-powered asset tracking devices.
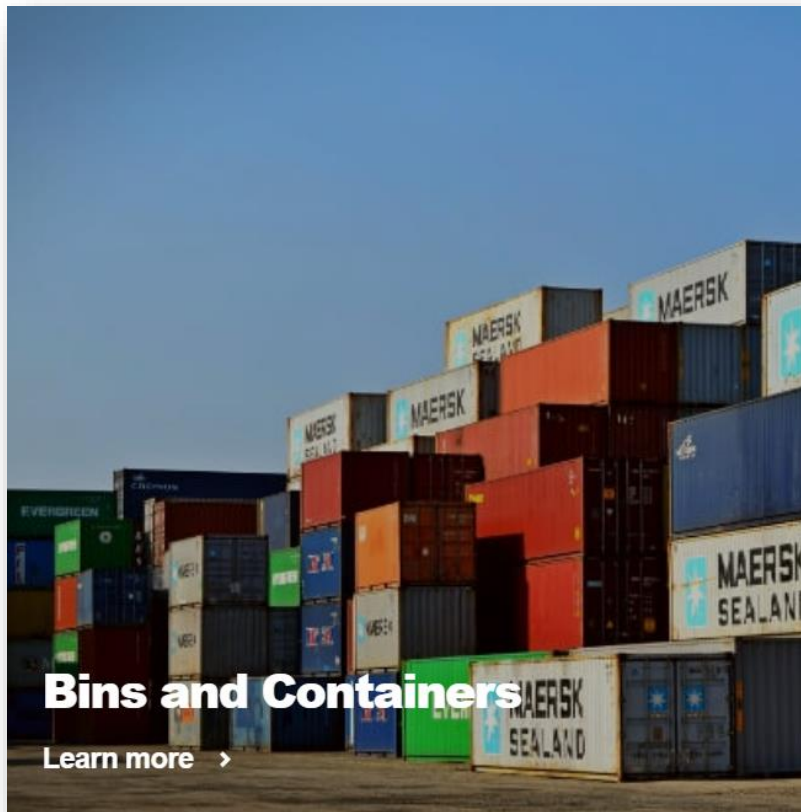
Features

- ✓ Build a Better Container Tracking Solution
- ✓ "Deploy Once" Low-Power Design
- ✓ Smarter Movement-Based Tracking
- ✓ Integrate with Any Container Tracing Software
- ✓ Configure and Customize

Container GPS Tracking Device Features

Global Connectivity

Cellular (2G, 4G LTE-M/NB-IoT), LoRaWAN®, Sigfox and Bluetooth® Asset Tracking Solutions.

Long Battery Life

Over 10+ years of battery life with built-in battery life management. Battery life monitoring removes any guesswork from the process of operation. Battery life indicators and alerts ensure your IoT container tracking is seamless with continuous data.

Indoor / Outdoor

GNSS, Wi-Fi AP MAC Address Scanning, and Cell Tower location solutions. Track critical assets indoors and outdoors with one device and eliminate the need for expensive RTLS gateways or beacons.

LTE-M/NB-IoT Network Roaming

Supports automatic roaming between LTE-M and NB-IoT networks with minimal delay and marginal impact on battery life or performance (roaming SIM required).

Rugged & Weatherproof

Our container tracking IoT devices feature IP68-rated housing, which offers superior protection for all shipping container tracking devices and ensures they reliably operate in the most rugged conditions.

Periodic or Movement-Based

Receive location updates regularly throughout the day or only when movement occurs with smart adaptive tracking technology with shipping container GPS trackers.

Sleep Mode

Stationary devices enter sleep mode, switching the update rate to only once per day until movement occurs to conserve battery life and optimize data usage.

Impact Detection

Configure impact-detection alerts when g-forces are exceeded by a user-defined threshold.

Theft Recovery

Switch to Recovery Mode in the case of theft or loss to activate live-tracking at 30 second intervals for container retrieval.

Sensor Monitoring

Interface with a range of sensors such as temperature, humidity, moisture, depth and more.

Advanced Geofencing

Create custom geofences and alerts if a container enters or leaves specific locations. Geofences can also be downloaded directly to the device for enhanced location-based behaviors.

Easy Install

Multiple installation options for covertly securing devices to containers with screws, bolts, cable ties, rivets, and more.

Container Tracking Application

Streamline Operations

Real-time digital data reporting made available by tracking shipping containers also saves crucial time and streamlines inventory processing, checking, and auditing, eliminating the need for manual log books and administrative overhead.

Reduce Theft

Reduce losses from losing track of containers and the potential for theft by actively monitoring and tracking the location of containers and equipment, and by reviewing container history tracking. Recovery mode features enable you to live-track at 30-second intervals so you can pinpoint and quickly recover crucial assets with container tracking system software.

Create Virtual Boundaries

Flexible configurations and advanced geofence capabilities provide the opportunity to set parameters and locations and virtual borders, as well as location-based behaviors with container GPS tracking devices. This means that as your assets make transit, you can receive updates and notifications if a container or other asset is moved from a predetermined location, or may detect unauthorized use through the container tracking app to enhance security

Improve Customer Relationships

Foster deeper relationships with your clients and customers with the ability to provide and report on the exact location of shipping containers as well as offering accurate predictions on estimated times of arrival. Showing them how shipping containers are tracked and providing insight into the process proves your shipping solutions are highly digitized, dependable, and focused on customer

GPS Trailer Trackers

Track, manage, and recover with integration-ready, battery-powered and wired.

Trailers

Learn more ›
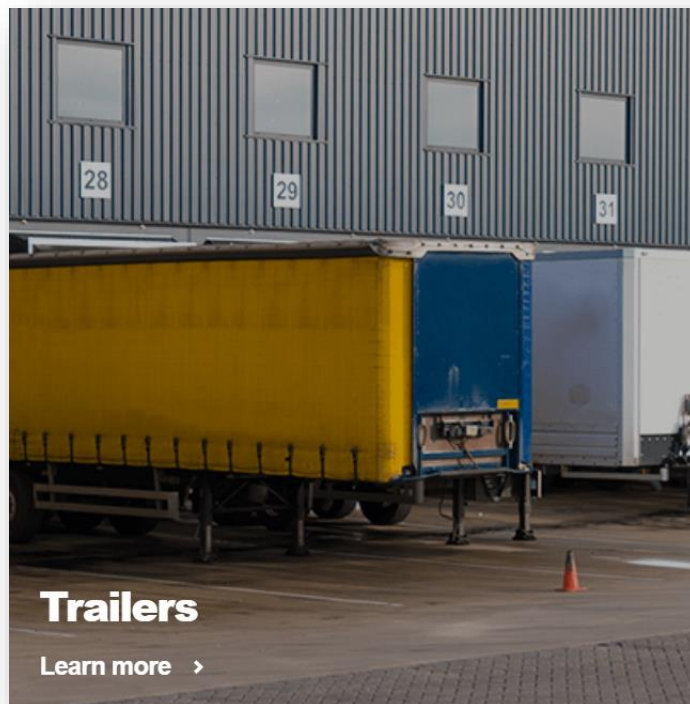
Features

- ✓ Improve Trailer Tracking and Utilization
- ✓ Track More with Bluetooth® Low Energy
- ✓ Fast and Flexible Integration

Trailer GPS Tracker Features

Global Connectivity
Cellular (2G, 4G LTE-M/NB-IoT), LoRaWAN®, Sigfox and Bluetooth® Asset Tracking solutions.

Long Battery Life
Our trailer trackers are powered by off-the-shelf batteries with over 10 years of battery life, featuring built-in battery life monitoring for battery low and battery critical alerts.

Rugged & Weatherproof

IP68-rated housing ensures devices and trailer trackers can withstand rough environments, impact, fine dust, and brief submersion.

Periodic and Movement-Based

Receive trailer location updates regularly throughout the day and/or when movement occurs with smart adaptive tracking technology.

Theft Recovery

Switch to Recovery Mode in the case of theft or loss to activate near real-time tracking for trailer and asset retrieval.

Run Hour Monitoring

Capture run hours based on movement to understand and optimize trailer and asset utilization.

Preventative Maintenance

Set proactive maintenance reminders based on distance traveled with GPS for trailer tracking to reduce trailer downtime and repair costs.

Impact Detection

Receive impact-detection alerts when trailers are involved in accidents, abused, or misused.

Advanced Geofencing

Create custom geofences and alerts if a trailer enters or leaves specific locations. Geofences can also be downloaded directly to the GPS locator for trailer devices for enhanced location-based behaviors.

Easy Install

Multiple installation options for covertly securing devices to trailers with screws, bolts, cable ties, rivets, and more.

Flexible Configuration

Configure device parameters such as heartbeat rate, movement and accelerometer settings, and more to fit any GPS utility trailer tracking application.

Trailer GPS Tracking Resources

Our GPS trackers for trailers provide durable, accurate, and reliable tracking with unique features and applications that seamlessly integrate with your current trailer fleet. Critical features for any GPS tracking system for trailers can extend beyond the standard to capture the details of your trailer's operations from the start to the endpoint of the delivery.

Battery-Powered and Wired Solutions

Select from the largest range of battery-powered GPS tracking devices for trailers featuring up to 12 years of battery life for reliable

Battery Life Monitoring

Configure critical battery-low and battery-critical alerts. Regardless of whether your trailers are on-site or en-route, incredibly long battery life and

and wire-free trailer tracking. We also offer a comprehensive range of powered GPS tracking solutions where the device is wired to permanent power for real-time trailer tracking.

Movement-Based Tracking

Trailer tracker devices can also be configured for stationary updating and reporting as well as movement-based tracking, so you can get the data you need, when you need it, and allow the GPS tracker for semi-trailer device to enter sleep mode to conserve battery and data usage when not in transit


Run Hour Monitoring

Adding GPS to equipment trailers also provides run-hour monitoring and smart adaptive tracking technology. Run hour monitoring allows your business to capture and report run hours and locations to more effectively manage the use of your trailers

timely alerts reduce the hassle of, or failure to change or recharge batteries, so your trailer tracker is always powered when you need it

Theft Prevention and Recovery

Trailer anti-theft GPS can be switched to stolen trailer tracker recovery mode in the event of loss or theft. In addition, global connectivity provides immediate and accurate near real-time tracking reports to help immediately find and recover lost or stolen trailers.

Preventative Maintenance

Lower costs with preventative maintenance trailer tracking solutions that provide maintenance reminders when a trailer has traveled a set distance. Maintenance alerts allow your business to more efficiently manage repair
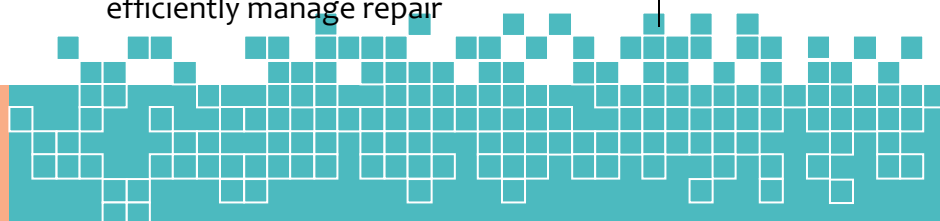
and reduce underutilization — eliminating wasted time, and uncovering opportunities to optimize your fleet routes and operations.

Jostle Mode

Custom configurations such as jostle-based tracking on devices enable highly accurate run-hour tracking, rapid movement alerts and rejects reporting false trips, increasing the accuracy of your data and conserving battery life.

schedules, organize and reduce trailer downtime, and lower the expense of managing downtime and repairs throughout the entirety of your trailer fleet.

Advanced Geofencing

RFID Technology Applications

Unlike the GPS IoT Technology, the RFID is more suitable for office, shops, warehouse, and indoor applications.

1. Advanced: 0-30m long range reading, -85db sensitivity, 1000 tag/second fast rate.
2. Humanist: RJ45/Wiegand/RS232/RS485 interfaces, support Bluetooth / Wi-Fi extensible.
3. Various: 1, 2, 4, 8 and 12/16/24 ports optional, IMPINJ R2000/E710 chip optional.
4. Applications: Customization services, asset management, inventory, warehouse management, access control, personal tracking, vehicle management tracking etc.
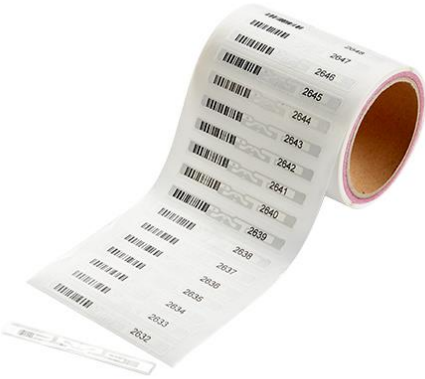
Major Components of the RFID System

RFID Fixed Reader	Allows the reader to be mounted to a wall to track assets being moved in and out of an office, shop, and warehouse.

RFID Hand Reader

Allows a device operator to point the handheld reader over the assets for asset tracking.

RFID Tags

We have different types of RFID tags for UHF paper labels, UHF anti-metal labels, UHF Vehicle Tages, Wet Labels, Cars etc.

RFID Tag Printer

Allows for printing of RFID tags to be placed on assets for tracking.