willog

Supply Chain
Monitoring Solution

Supply Chain Monitoring Solution

Willog's logistics monitoring solution offers a comprehensive way to intuitively monitor product location and condition at every stage of the logistics process. Based on our self-developed sensor devices and platform, we collect and analyze various data such as temperature, humidity, and shock that can affect product quality during transportation. This enables companies to ensure the safe transport and storage of goods, while also addressing various issues in the logistics process by enhancing overall visibility.
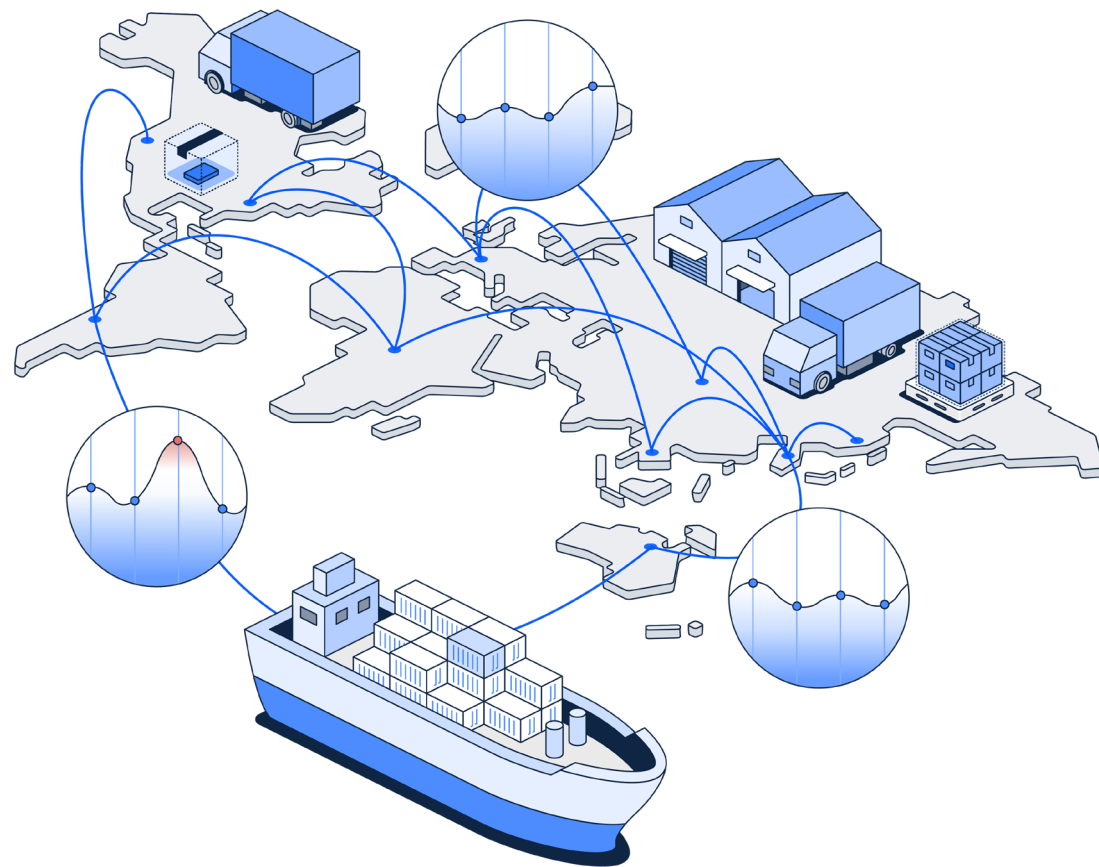
What are the key benefits of adopting this?

Real-Time Status Monitoring

Collect and monitor location and condition data of cargo in real-time at every stage of logistics, allowing for immediate response before any issues arise

Status Prediction and Preventive Actions

By analyzing the collected data, early detection of anomalies allows for preventive measures to be taken, thereby preventing quality degradation

Cost Efficiency

Proactively addressing or swiftly resolving issues helps reduce unnecessary costs and improves overall logistics efficiency

Asset Management Optimization

Accurately tracking the location and condition of assets enhances efficiency in asset management and operations

Accurate Analysis and Reporting

Comprehensive data analysis helps identify areas for improvement in the logistics process, enabling the development of efficient operational strategies

Compliance and Quality Assurance

Adhere to logistics and transportation regulations while meeting regulatory requirements and maintaining quality standards

What are the key features?

Real-Time Data Collection

Gather real-time status information such as temperature, humidity, shock, and location, using sensor devices

Integrated Data Provision

Deliver combined shipping and in-transit data through a single platform

Data Visualization

Present collected data visually through dashboards and reports

PDF Report Generation

Create and provide PDF reports based on the collected data

Easy Information Access

Easily retrieve necessary information using a wide range of filtering options

Real-Time Alerts

Set deviation alert thresholds to send real-time notifications via e.g. MMS when deviations occur

Flexible Data Integration

Offer various data integration methods tailored to the specific needs of your organization

Box(Bio) Monitoring

This monitoring solution is designed to tackle the complex shipping needs of the biotech and fresh food industries. It continuously monitors product temperature during transit, ensuring optimal delivery conditions. Compliance with GMP/GSP and biological regulations guarantees that products are always maintained at the highest standards.

Industry Verticals	Pharmaceutical, Fresh Food Manufacturers, Pharmaceutical/Fresh Food Distributors, Logistics Providers and 3PL	
Supported Devices	Real-Time	T71, T1, S1
	Non-Real-Time	V2, V3
	Gateway	C2

Key Features

- **Real-Time/Non-Real-Time temperature data collection and monitoring inside the box**
- **Integration with client/delivery service systems**
- **Real-Time alerts via MMS for deviation events**
- **Customized report generation**

Warehouse Monitoring

To ensure products are stored in optimal conditions safely, temperature and humidity in refrigerated, frozen, and ambient warehouses are continuously monitored to maintain the proper environment and prevent quality degradation. Additionally, during the validation processes for GMP, GSP, and HACCP certifications. The necessary temperature data is accurately and efficiently collected and managed, thereby shortening the verification process. This approach not only meets legal requirements but also strengthens customer trust, enabling safe and efficient warehouse management and operations.

Industry Verticals	Pharmaceutical manufacturing facilities, Pharmaceutical and biotech engineering companies, Food distribution warehouses	
Supported Devices	Real-Time	T70, T71, T1, M1
	Non-Real-Time	V2, V3
	Gateway	C2

Key Features

- **Collection and monitoring of temperature and humidity data in spaces**
- **Real-Time anomaly detection via a status dashboard**
- **Compatibility with all Real-Time and Non-Real-Time devices within the space**
- **Installation of multiple sensor devices and monitoring by specific area**
- **Comparative analysis of collected data over different periods for monitoring purposes**
- **Real-Time alerts in case of anomalies (via MMS in mobile phone)**
- **Customizable reports tailored to customer needs**

Global Logistics Monitoring

From the start of transportation to its completion, temperature, humidity, as well as external impacts and tilts are monitored in real-time to maintain product quality and analyze and prevent causes of damage. Additionally, based on real-time data, immediate issue response can minimize damage and enhance the efficiency of logistics operations.

Industry Verticals	High-end electronics manufacturing and distribution companies, Chemical goods import/export companies, Food import/export companies	
Supported Devices	Real-Time	T70, T71, T1, M1, S1, V5
	Non-Real-Time	V2, V3
	Gateway	-

Key Features

- **Real-Time data collection and monitoring of temperature, humidity, impact, and tilt**
- **Real-Time location tracking across the entire transportation route**
- **Integrated management of data collected from multiple sensor devices**
- **Anomaly pattern analysis based on the collected data**
- **Real-Time alerts for issue situations (via MMS)**
- **Transportation status dashboard and customizable reports for customers**
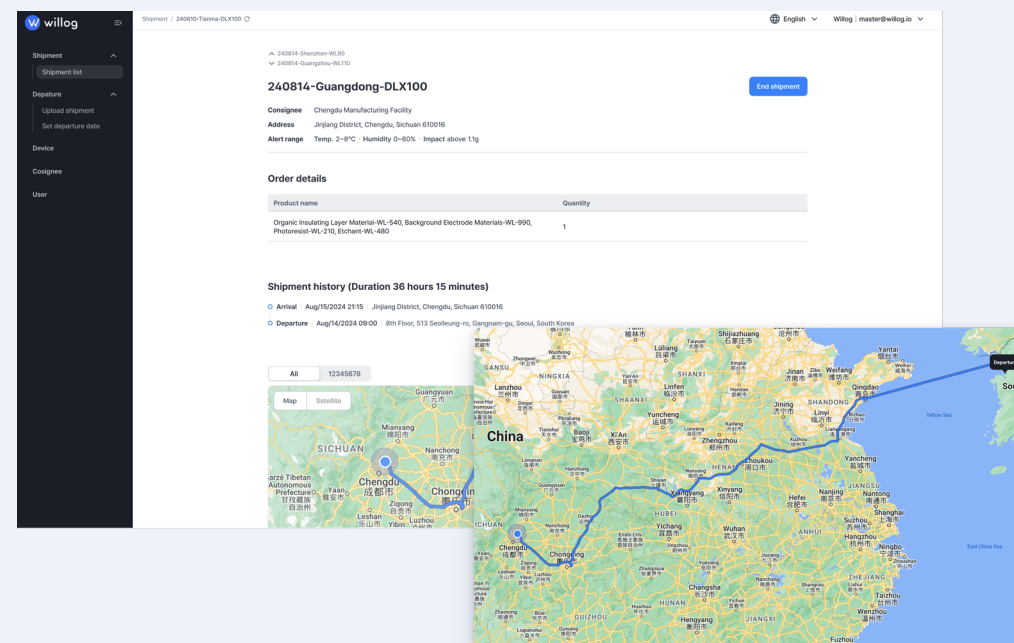
Fleet Monitoring

Integrating vehicle-installed devices with an app ensures product quality and provides accurate delivery times through real-time data. Track and monitor multiple vehicles in real-time, optimize routes to reduce costs, and enhance vehicle management efficiency. Compliance with safety standards minimizes legal risks, ensuring reliable logistics operations.

Industry Verticals	Logistics and distribution companies, Refrigerated and frozen food manufacturing and distribution companies	
Supported Devices	Real-Time	T71, T1, M1, S1, V5
	Non-Real-Time	V2, V3, N2
	Gateway	A1

Key Features

- **Real-Time collection and monitoring of temperature, humidity, and location data**
  *Option to collect specific point-in-time data in non-real-time as needed
- **Integrated management of data collected from multiple sensor devices**
- **Real-Time alert system for anomaly detection**
- **Measurement status dashboard and customizable report generation**
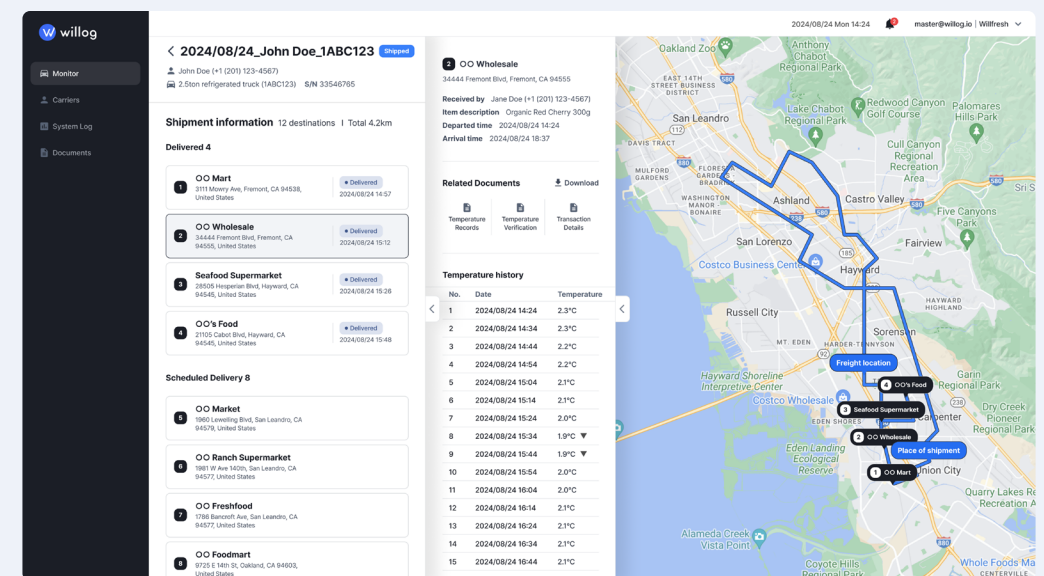
Real-Time Sensor Devices

T70

Collected Data		Temperature, Humidity, Shock, Location
Type / Communication		LTE
Dimensions		65*103*18.5mm
Measuring Range	**Temperature**	-30ºC ~ +70ºC -22ºF ~ +158ºF
	Humidity	20 ~ 80%
Battery Life		3 months (Typ.)
IP Rating		IP64
Interval		Variable (Measurement, Transmission)
Use Count		Multi-Use

Use Cases	Box(Bio)	Warehouse	Global Logistics	Fleet
		○	○	

T71

Collected Data		Temperature, Humidity, Shock, Location
Type / Communication		LTE
Dimensions		65*103*18.5mm
Measuring Range	**Temperature**	-30ºC ~ +70ºC -22ºF ~ +158ºF
	Humidity	20 ~ 80%
Battery Life		3 months (Typ.)
IP Rating		IP64
Interval		Variable (Measurement, Transmission)
Use Count		Multi-Use

Use Cases	Box(Bio)	Warehouse	Global Logistics	Fleet
	○	○	○	○

T1

Collected Data		Temperature, Humidity, GPS, Shock, Tilt
Type / Communication		LTE
Dimensions		65*115*20mm
Measuring Range	**Temperature**	-40ºC ~ +80ºC(Ultra-Low Temperature: -200ºC ~ +200ºC) -40ºF ~ +176ºF(Ultra-Low Temperature: -328ºF ~ +392ºF)
	Humidity	20 ~ 90%
Battery Life		3 months (Typ.)
IP Rating		IP55
Interval		Variable (Measurement, Transmission)
Use Count		Multi-Use

Use Cases	Box(Bio)	Warehouse	Global Logistics	Fleet
	○	○	○	○

M1

Collected Data		Temperature, Humidity, GPS, Shock, Tilt
Type / Communication		LTE
Dimensions		65*115*20mm
Measuring Range	**Temperature**	-40ºC ~ +80ºC(Ultra-Low Temperature: -200ºC ~ +200ºC) -40ºF ~ +176ºF(Ultra-Low Temperature: -328ºF ~ +392ºF)
	Humidity	20 ~ 90%
Battery Life		3 months (Typ.)
IP Rating		IP55
Interval		Variable (Measurement, Transmission)
Use Count		Multi-Use

Use Cases	Box(Bio)	Warehouse	Global Logistics	Fleet
		○	○	○

S1

Collected Data		Temperature, Humidity, Shock, Tilt
Type / Communication		LTE
Dimensions		65*115*20mm
Measuring Range	**Temperature**	-40ºC ~ +80ºC(Ultra-Low Temperature: -200ºC ~ +200ºC) -40ºF ~ +176ºF(Ultra-Low Temperature: -328ºF ~ +392ºF)
	Humidity	20 ~ 90%
Battery Life		3 months (Typ.)
IP Rating		IP55
Interval		Variable (Measurement, Transmission)
Use Count		Single-Use

Use Cases	Box(Bio)	Warehouse	Global Logistics	Fleet
	○		○	○

V5

Collected Data		Temperature, Humidity, Shock, Location
Type / Communication		LTE
Dimensions		61*103*23.8mm
Measuring Range	**Temperature**	-30ºC ~ +70ºC -22ºF ~ +158ºF
	Humidity	20 ~ 80%
Battery Life		3 months (Typ.)
IP Rating		IP64
Interval		Variable (Measurement, Transmission)
Use Count		Single-Use

Use Cases	Box(Bio)	Warehouse	Global Logistics	Fleet
			○	○

Non-Real-Time Sensor Devices

V2

Collected Data	Temperature, Humidity			
Type / Communication	QR, BLE			
Dimensions	65*100*15mm			
Measuring Range — Temperature	-40ºC ~ +80ºC -40ºF ~ +176ºF			
Humidity	20 ~ 80%			
Battery Life	1 year (Typ.)			
IP Rating	IP54 / IP55(P)			
Interval	Variable (Measurement)			
Use Count	Multi-Use			
Use Cases	Box(Bio)	Warehouse	Global Logistics	Fleet
	○	○	○	○

V3

Collected Data	Temperature, Humidity			
Type / Communication	BLE			
Dimensions	65*110*15mm			
Measuring Range — Temperature	-40ºC ~ +80ºC(Ultra-Low Temperature: -200ºC ~ +200ºC) -40ºF ~ +176ºF(Ultra-Low Temperature: -328ºF ~ +392ºF)			
Humidity	20 ~ 90%			
Battery Life	1 year (Typ.)			
IP Rating	IP54 / IP55(P)			
Interval	Variable (Measurement)			
Use Count	Multi-Use			
Use Cases	Box(Bio)	Warehouse	Global Logistics	Fleet
	○	○	○	○

N2

Collected Data	Temperature, Humidity			
Type / Communication	BLE, NFC			
Dimensions	52*90*5mm			
Measuring Range — Temperature	-40ºC ~ +80ºC -40ºF ~ +176ºF			
Humidity	20 ~ 80%			
Battery Life	90 Days (Max)			
IP Rating	IP56			
Interval	Variable (Measurement)			
Use Count	Single-Use			
Use Cases	Box(Bio)	Warehouse	Global Logistics	Fleet
				○

Gateway

C1

Collected Data	Automatic Data Reception			
Type / Communication	LTE, WIFI, Ethernet			
Dimensions	120*120*30mm			
Use Cases	Box(Bio)	Warehouse	Global Logistics	Fleet
	○	○		

A1

Collected Data	Vehicle Route GPS Tracking			
Type / Communication	LTE			
Dimensions	70*70*20mm			
Use Cases	Box(Bio)	Warehouse	Global Logistics	Fleet
				○

*Connects to a tachometer for use as a vehicle temperature recorder

Products from various industries are reliably delivered to customers through Willog.

Many companies already benefit from
the safe transportation environment it provides.

Abbott	BAYER	HYUNDAI	KIA	POSCO INTERNATIONAL
coupang	CORNING	LX Pantos	GS Retail	LOGISALL
CJ	CJ LOGISTICS	OSSTEM IMPLANT	YONGMA LOGIS	DONG-A ST
GEOYOUNG	GC Wellbeing	DONGJIN SEMICHEM CO.,LTD.	Dong Sung CHEMICAL	OVIS
Alcon	KOLON PHARMA	Ubridge	Chong Kun Dang Pharm.	DH PHARM
UNIMED PHARM INC.	Hana Pharm Co., Ltd.	Whan In Pharm.	Dongkwang Pharm	Myungmoon Pharm. Co., Ltd.
BCWORLD PHARM	SHIN POONG PHARM. CO. LTD.	HANLIM PHARM. CO.,LTD.	ECOVICE	Kurly

www.willog.io | sales@willog.io

Headquarter | 06158 9F, 507, Samseong-ro, Gangnam-gu, Seoul, Republic of Korea
U.S. Branch | 3003 North First Street, San Jose, CA 95134, US