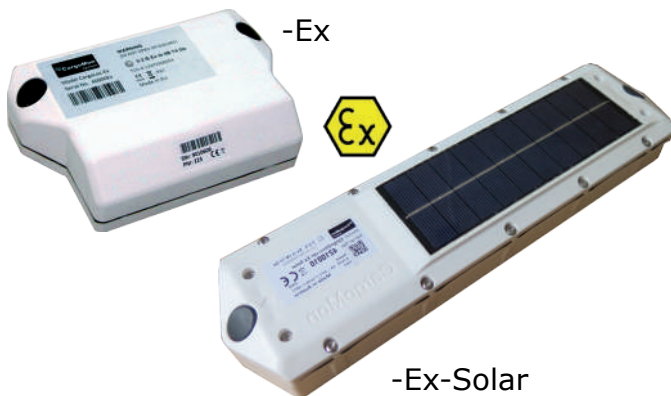


CargoObserver-Ex and -Ex-Solar



CargoObserver-Ex/-Ex-Solar is a GSM and GPS based highly save tracking system for use in explosive environments. With the solar variant a long year operation of up to 10 years is feasible even in harsh environments as the device operates from -40°C to +85°C with ATEX certification for an ambient temperature of 65°C, which is 25°C above standard.

The primary battery version CargoObserver-Ex covers ATEX Zone 1 and 2 and can be mounted also in partly hidden areas.



The behavior of the CargoObserver-Ex units can be fully parameterized remotely in order to meet the unique customer requirements even as they change over time. The very energy efficient solution is the result of several years of research and development with University and Industrial partners. Well known international enterprises trust on the reliability and the long life cycle of our overall system solution.



Key Product Features

Position Monitoring

- Precise localization with high sensitive multi-GNSS receiver
- Configurable Move and Stop reports
- -Ex-Solar: High update-rate real-time mode
- Device based geofencing alarms
- Route monitoring with Ex-Solar

Sensors

- 3-axis acceleration sensor
- Tamper detection
- Integrated temperature sensor
- Mileage recording on rail wagons
- Cable based sensors upon request

ATEX

-Ex: II 2 G Ex ib IIB T4 Gb

-Ex-Solar: II 3 G Ex ic IIB T4 Gb

Advantages

Unsurpassed long battery life

- Maintenance free up to 10 years*

Full cost control

- Operating modes adjustable via web
- Lowest total cost of ownership
- All-Inclusive data service with fixed monthly rates and no hidden costs

Flexible and quick to deploy mounting

- Mounting in partly covered areas
- Installs in seconds with magnets or tape
- Alternative theft-proof screw mounting

CargoObserver-Ex/-Ex-Solar allow for effective and safe monitoring of tank trailers and rail wagons in explosive environments

* Valid for Solar Variant, Primary Cell lifetime in the order of 3-6 years at typical settings and mileages

CargoObserver-Ex and -Ex-Solar



Technical Specification

Physical

Dimensions -Ex/(-Ex-Solar)	100x142x38mm (282x74x35 -XL)
Weight -Ex/(-Ex-Solar)	490g (730g - XL)
Mounting Options	Screw or Magnet Mount

Environmental Conditions

Operating Temperature	-40°C until +85°C
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Communication

GSM	Quadband
Frequency Range	850/900/1800/1900 MHz
Communication	GPRS with SMS Fallback
3G/4G upon request	for special regions with no GSM

Sensors

GPS / GNSS	GPS, optional Glonass, Galileo
3-Axis Acceleration	+/- 16g
Temperature	Integrated
Wire-based Sensors	Analog/Digital Inputs

Power Supply and Lifetime

Battery -Ex	Lithium based primary cell
Battery -Ex-Solar	Lithium-Ion Areospace Cell
Battery Lifetime -Ex	3-5 years at typical settings

Standards

EN61000-6-2, EN61000-6-4, ETSI EN301 489-1, EN301 489-7
EN600-79-0, EN60079-11 ATEX

Customers Benefits

Faster finding of assets and real-time overview of assets location and distribution among sites.

Better control of intermodal transports, allows more timely handover at rail to road connection points.

Optimized Supply Chain Management reduces long term goods pass time and downtime.

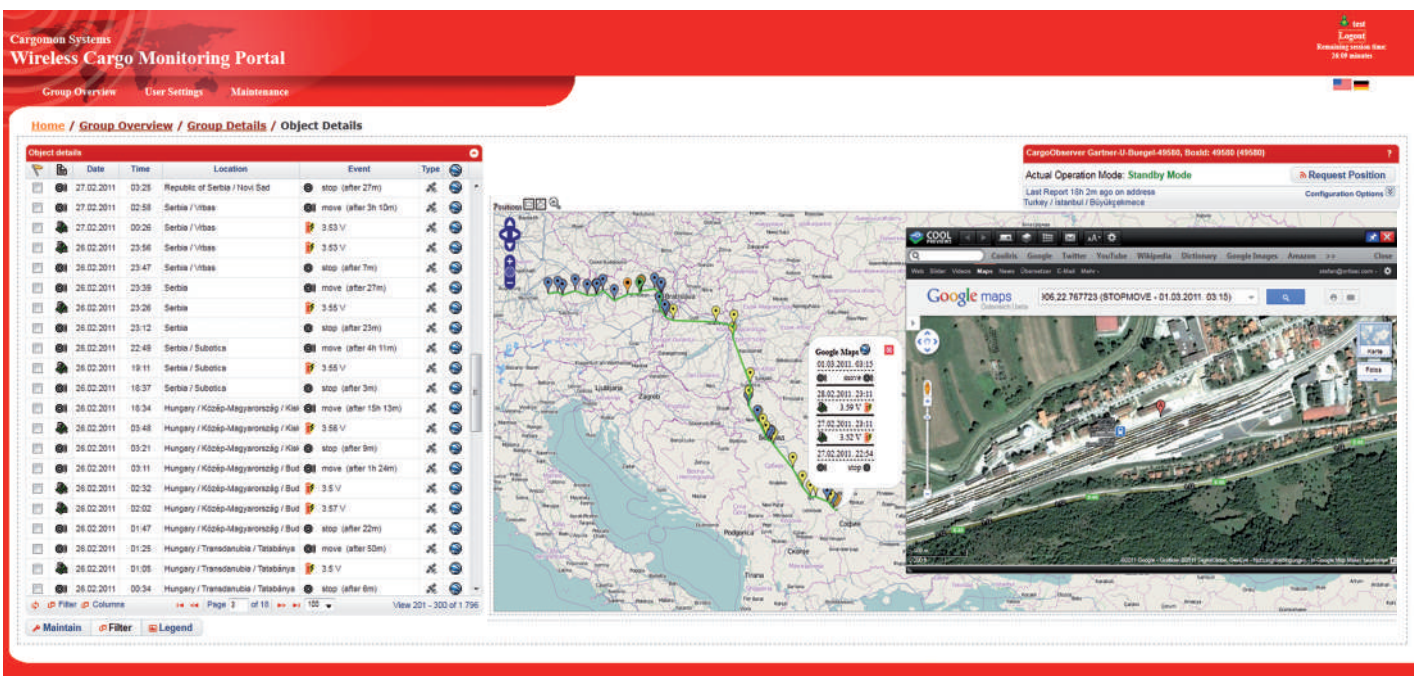
Higher utilisation of assets and hence reduction of total assets or higher turnover per asset.

Possibility to offer **location information** to your customers.

Higher security by monitoring geofencing areas and transport routes.

Flexible Integration into Existing IT:

The All-In-One Data Service from CargoMon delivers customized asset data directly to your existing IT System without added cost.



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