OBSCAPE

Water & Environment

Water & Environment

Monitoring our environment plays a crucial role in our lives, from confirming metweather conditions, fresh waterbody dynamics, environmental research to the temporal changes in our natural and urban environments. To stay in control and avoid potential catastrophe, continual real-time monitoring of natural and man-made environments is essential.

Obscape provides an affordable, easy to use and convenient means to measure environmental parameters and transmit real-time water & environment-based data via a telemetry system. Whether you are monitoring freshwater systems, the effects of industrial processes, weather events, power generation environments or a natural habitat; our easy-to-deploy, rugged and affordable Power & Telemetry Module (PTM) ensures remote site visits and operational costs, are kept to a minimum.

When integrated to a specific sensor the versatile PTM transforms into an Obscape Core Product: Weather Station, Level Gauge, Time-Lapse Camera, HQ Camera, CT Station, Water Quality Station, ADCP Station and Rain Gauge.

The Obscape Core PTM range provides a solid base for sustainable monitoring when paired with the powerful and intuitive Obscape Data Portal to provide easy access to accurate measurements of baseline behaviour changes in the environment.

Real-time observations via the secure, free-to-use Data Portal ensures accurate and structured data is always available and can be accessed from any location on your mobile phone or laptop, worldwide. In addition, alert notifications and report generation can be automated, and allows informed and viable decisions to be made. All Data Portal features, and access is completely free of charge for the lifetime of the device.

Power and Telemetry Module

Obscape's Power & Telemetry Module (PTM) is a highly convenient all-in-1 datalogger.

The PTM was designed to function in both urban and remote environments. With a rugged all-weather housing, built-in solar panels and cellular modem, the PTM can be integrated with a specific sensor from our industry standard range to transform into a PTM Core Product. Alternatively, Obscape can also integrate most 3rd party sensors into a plug-and-play real-time monitoring solution.

The options for pairing external sensors are endless. It is up to your imagination what shape the PTM will take. From measuring water quality to tracking plastic pollution, the choice is yours.

Affordable, solar powered, robust and completely wireless; Obscape's PTM Core Products communicate in real time through a 4G (with 2G fallback) GSM connection (Satellite may be available on request) through to the secure and Free-to-Use Obscape Data Portal.

KEY FEATURES

- Various communication protocols
- Completely wireless
- Real-time data
- Solar powered

- Real-time data up to 4G (upgradable to Satellite)
- Rugged design
- Multiple mounting options
- Versatile data portal included

REAL-TIME ENVIRONMENTAL OBSERVATIONS

Environmental monitoring plays an important role in many fields. Whether you are reducing the impact of natural disasters, managing complex water systems, maintaining a marine protected area or growing crops, observations from the field will provide key information for executing your task in the most optimal way. Offline observations result in a significant time delay before you have access to your data. Getting a wired internet connection in place can be challenging and costly. Obscape's Power & Telemetry Module is the ultimate solution to address these challenges. It literally brings your sensors to life by providing them with wireless, maintenace free and solar powered real-time telemetry.
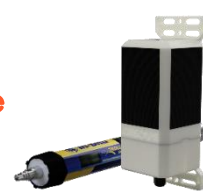
PTM CORE PRODUCTS

Time Lapse Camera

Rain Gauge

Level Gauge

Water Quality Station

HQ Camera
(forward facing available)

Weather Station

CT Station

ADCP Station

🌡 WATER LEVEL GAUGE

Water level monitoring plays an important role in monitoring natural or man-made water features. Obscape's Level Gauge delivers real-time water level measurements. It records the water level using a highly accurate radar sensor. Since the instrument is mounted above the water surface, deploying it in the field is easy.

WATER LEVEL GAUGE - FEATURES & BENEFITS

- Accurate water level data
- technology
- No underwater components
- Radar Completely wireless
- Real-time data
- Radar Based Sensor 60 GHz

- Range: up to 40 meters
- High Accuracy 2mm
- Solar powered
- GSM/ 4G telemetry
- Multiple mounting options
- Versatile data portal included

WATER LEVEL GAUGE - APPLICATIONS & USES

The incredible up to *40 metre range* of the Level Gauge covers even the most extreme water level variations. Its robust design and positioning above the water surface make it suitable for application in any environment. *The Obscape Level Gauge can measure and monitor water* levels & tides of: *rivers, estuary tides, lakes, catchment areas, dams,culverts & hydro structures.*

☁ RAIN GAUGE

Obscape's Rain Gauge delivers real-time rainfall measurements. Its industry-standard rain collector is connected to Obscape's Power and Telemetry Module to create a completely wireless real-time rain gauge. A network of Rain Gauges will yield valuable insights into the dynamics of your water system.

RAIN GAUGE – FEATURES & BENEFITS

- Accurate rainfall intensity measurements
- Industry-standard rain collector
- 0.2 mm resolution
- Robust design
- Completely wireless

- Real-time data
- Solar powered
- GSM/ 4G telemetry
- Multiple mounting options
- Versatile data portal included

RAIN GAUGE – APPLICATIONS & USES

Rainfall is a vital process in catchment areas, but can also trigger flooding disasters. Rainfall intensity can vary strongly over time and at different locations in the water system. In order to determine the input of water into the water system and to stay informed in disaster situations, a network of rain gauges is a basic necessity for any catchment monitoring program. Obscape's Rain Gauge is the perfect instrument to provide you with the latest rainfall data from any location. The Obscape Rain Gauge is robust, wireless and unobtrusive, making it easy to deploy, both in urban and remote environments including: reservoirs, water works, dams, shorelines, landscapes, manufacturing facilities and processing plants.

TIMELAPSE - CAMERA

Obscape's Time-Lapse Camera is a robust, fully wireless solution that delivers time-lapse images to your desktop in real-time. It allows you to have a look at your area of interest at any time of the day, wherever you are. Power is supplied through built-in solar panels, while images are transmitted in real-time using a 3G GSM connection. Its wireless nature & optional camouflage pack makes the Obscape Time Lapse Camera sustainable & very suitable for discrete monitoring of remote areas.

TIME LAPSE CAMERA - KEY FEATURES & BENEFITS

- **Up to 5MP resolution**
- **Real-time data**
- **Completely wireless**

- **Solar powered**
- **GSM/ 4G telemetry**
- **Multiple mounting options**

TIME LAPSE CAMERA - APPLICATIONS & USES

Due to its wireless nature and compact housing, our Time-Lapse Camera is easy to deploy in any environment. Obscape Time-Lapse Cameras are ideal for dense coverage of spatial and temporal dynamics, allowing you to keep a close watch on everything that happens in your area of interest including construction works, urban smart Cities, water treatment plants, catchment management, storm water systems, the natural environment, industrial production facilities & processing plants.

WEATHER STATION

Obscape's Weather Station supplies you with real-time weather data. This robust and user-friendly device combines Obscape's Power and Telemetry Module with an industry-standard weather sensor. Built-in solar panels and the GSM connection guarantee easy hassle-free installation & monitoring in any environment. The Obscape Weather Station can measure weather events in your location, compare with historical records, or set alarms. Take your environmental monitoring to the next level with the Obscape Weather Station.

WEATHER STATION - KEY FEATURES & BENEFITS

- **Comprehensive weather data**
- **GSM/ 4G telemetry**
- **Multiple mounting options**
- **Versatile data portal included**
- **Completely wireless**
- **Real-time data**

Measured parameters include:

- Wind speed, direction and gusts
- Rainfall
- Air temperature
- Atmospheric pressure
- Vapor pressure
- Relative humidity
- Lightning strikes & distance

WEATHER STATION - APPLICATIONS & USES

The Obscape Weather Station should be a standard asset of your environmental monitoring setup. It provides a wide range of weather parameters in: rural areas, bulitup urban landscapes, shorelines, hydro structures, dams, rivers, rivers, eustary tides, lakes, catchment areas,calverts and resevoirs.

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📷 HQ – CAMERA

Take your camera projects up a gear with this 12-megapixel sensor. The incredible High Quality (HQ) Camera module offers a higher resolution 12 megapixels, and the ability to record image bursts of up to 10 images at a user-defined framerate. Especially when the time-lapse imagery is used as input for operational computer vision algorithms, the superior image quality of the HQ Camera is to be preferred.

TIME LAPSE CAMERA - KEY FEATURES & BENEFITS
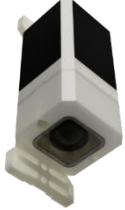
- **Up to 12.3MP image quality**
- **Downward & forward facing options**
- **Completely wireless**
- **Solar powered**
- **Image bursts at user-defined framerate**
- **Real-time data up to 4G**
- **Multiple mounting options**
- **Versatile data portal included**

TIME LAPSE CAMERA - APPLICATIONS & USES

The operational 10 to 60-minute interval of the HQ Time-Lapse Camera allows for monitoring of processes that gradually evolve on timescales of 10 minutes and up. Examples of such processes include sediment dynamics in rivers, on beaches and in dune areas, construction works, traffic intensity, parking lot occupancy or cloud formation. The ability of the device to collect image bursts at a known framerate yields a whole range of additional applications, such as velocity estimation of cars or water surfaces.

The downward-looking version of the HQ Time-Lapse Camera was developed particularly for monitoring debris/litter on water surfaces when mounted on a bridge deck. Paired with automatic litter detection software, the camera will keep a close watch on pollution rates of the river surface over time.

✏️ CT STATION

Obscape's CT Station is the ideal all-in-one solution for real-time conductivity, temperature and salinity measurements. It combines the robust Obscape Power & Telemetry Module with a low-maintenance toroidal CT probe.

While traditional CT probes suffer from rapid bio-fouling, compromising their accuracy and maintenance interval, the toroidal CT probe of Obscape's CT Station was specifically designed to minimise marine growth.

CT STATION - KEY FEATURES & BENEFITs

- **Conductivity, temp., salinity**
- **minimal biofouling**
- **Completely wireless**
- **Real-time data**
- **Solar powered**
- **Real-time data up to 4G**
- **Multiple mounting options**
- **Versatile data portal included**

WEATHER STATION - APPLICATIONS & USES

Where oceanic and inland waters meet, the interaction of fresh and saline water create an intriguingly complex environment. A salt wedge intruding into an estuary or harbour basin can start dominating the hydrodynamics and may have a significant impact on sediment transport. Diverse and unique habitats can form through the interplay of salinity, tides and waves. Observations of conductivity, water temperature and salinity form the starting point for getting insight into these natural dynamics. Whether you are monitoring aquatic habitats, estuarine hydrodynamics or salt intrusion, the Obscape CT Station will suit your needs.

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WAVEBUOY

Wave measurements are an indispensable part of any MetOcean or Limnology project. The Obscape WaveBuoy is based on recent advances in solar power, sensor and data technology, ensuring a rugged, light-weight, reliable and affordable wave buoy.

The Wave Buoy uses a combination of motion sensors and an electronic compass to measure the directional wave field with high accuracy. This yields the directional wave spectrum and all parameters that can be derived from it, such as the 1-dimensional energy-density spectrum and a range of bulk wave parameters (significant wave height, peak wave period, peak wave direction, etc.).

Purchase includes Free use of the Data Portal, for the lifetime of your WaveBuoy and 5,000 free satellite communication credits to get you started!

Designed to make your life easy: no receiver station needed. Solar powering Li-On batteries, a simple mooring solution, deployable by hand and transportable as check-in luggage.

KEY FEATURES

- Real-time data
- Solar-powered
- Full spectrum of wave parameters
- Directional wave spectrum
- GPS position & watch circle
- Low purchase & operational costs

- Sat Comms, GSM 4G telemetry
- Compact & light weight
- Easy to deploy & service
- Suitable as check-in luggage
- Li-On ong battery life

MAIN APPLICATION AREAS

- Marine & Coastal engineering
- Floating Solar Farms
- Oceanographic research
- Environmental monitoring
- Work compliance monitoring
- Limnology research

ACCURATE, FULLY DIRECTIONAL WAVE DATA

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📈 DATA PORTAL

The Obscape Data Portal is one of our core products because of the great value it brings to easily view and analyse observations in real-time. The secure and powerful Obscape Data Portal is web-based and developed by Obscape to support integral monitoring and management of entire water systems.

The Obscape Data Portal provides a full turnkey solution that aims to report information about both the environment being observed and the instruments deployed in your catchment area. It supports configuration of your Obscape devices both on site and remotely. The observations can be accessed from anywhere through your desktop, laptop or mobile device. An unrestricted license for the data portal is included free of charge with the purchase of any Obscape product.

The Obscape Data Portal is your ultimate tool to unify the office and the field. Apart from offering data management functionality, the portal will also help you to monitor and maintain your devices operationally.

DATA PORTAL - KEY FEATURES & BENEFITS

- **Real-time data**
- **Report generation**
- **Integral data management**
- **White labelling**

- **Data forwarding**
- **Maintenance log**
- **Monitoring alerts**

DATA PORTAL - INTEGRAL DATA MANAGEMENT

The Obscape Data Portal does more than just visualising your real-time observation data. It includes tools for data management and analysis, such as a variety of data downloads, flagging invalid data points, comparing data across all your measurement stations, and viewing historic statistics of your dataset. Furthermore, you can register for periodic data reports in PDF format that are delivered to you by email.

While we strive to make the Obscape Data Portal into your ultimate data management tool, you might wish to include your real-time observations into your company's own data management systems. Therefore, the data portal offers two means of data forwarding:

An API that returns data in the widely supported JSON format
An HTTP posting service that posts data to a user-defined URL.

By specifying your custom reference ID for all your measurement stations, compatibility with your internal data management system is guaranteed.

DATA PORTAL - OPERATIONAL MAINTENANCE

Carrying out operational monitoring entails more than just sitting back and watching the data roll in. Field operations are an indispensable part of your job, as instruments need to be deployed, recovered and at times maintained. Your Obscape equipment has been designed to be resistant, robust and low-maintenance. Additionally, the Obscape Data Portal offers several tools to monitor the status of your devices, issue automated email alerts, retrieve your GPS-tracked devices and document your field operations.

DATA PORTAL WHITE LABELING

Obscape has the capability to rebrand the data portal with your own corporate identity. We provide the possibility to upload a custom logo, specify a custom colour scheme and create a custom URL for direct access to the data portal. Reports will bear the company name and logo of choice. The Data Portal supports full bespoke turnkey solutions to your monitoring needs.

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