OBSCAPE | ENVIRONMENTAL OBSERVATIONS

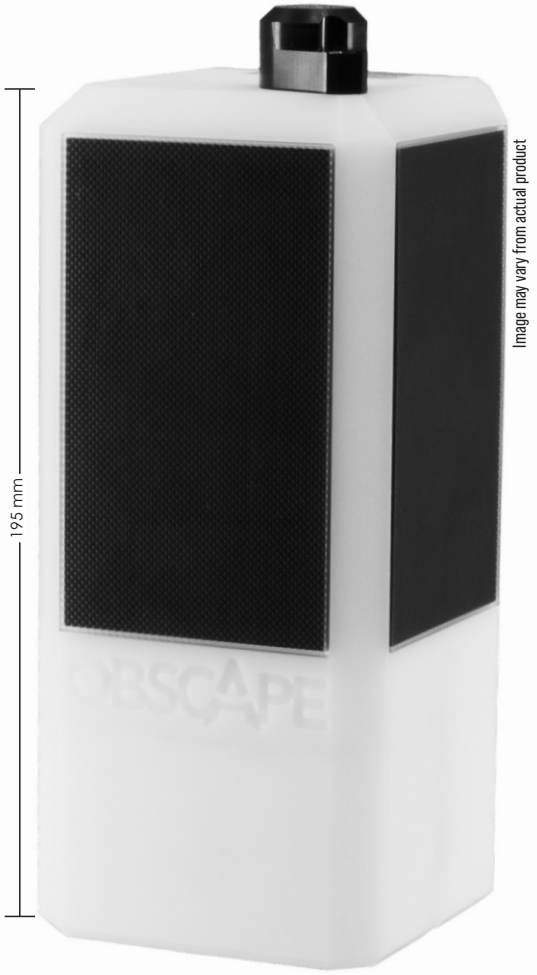
// DATA SHEET

Wave Monitoring

Radar Wave Gauge

WAVE MONITORING ANYWHERE

The **Radar Wave Gauge** offers an innovative and precise solution for real-time wave measurements. Equipped with a millimetre-accurate, industry-leading radar sensor, it measures water surface elevation directly, bypassing the limitations of pressure-based methods. Its impressive 40-meter range ensures reliable performance, even under extreme water level variations. With no submerged components, the **Radar Wave Gauge** eliminates the need for costly and labor-intensive underwater installations. Designed for versatility, it can be easily mounted on fixed structures such as platforms, piers, jetties, poles, or bridge decks, making it a practical and efficient choice for wave monitoring across various applications.



KEY FEATURES

01 **Accurate Wave Data:** Provides precise and reliable measurements for effective monitoring

02 **No Underwater Components:** Radar technology - minimising wear and tear while enabling deployment in challenging environments

03 **Reliable Connectivity:** Data transfer via cellular network ensures seamless access

04 **Compact & Robust Design:** Durable, weatherproof housing built for tough conditions

05 **Integrated Data Portal:** User-friendly portal for efficient data management and analysis

PURCHASE INCLUDES

- Free access to the **Obscape Data Portal**
- Mounting brackets
- SD card - can also be run in offline mode

Optional:
1) Satcom upgrade for continuous connectivity beyond cellular range
2) Cellular global SIM - Includes €100 of data credit

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RADAR WAVE GAUGE TECHNICAL SPECIFICATIONS

SPECS	
HOUSING SIZE	195 mm height x 87 mm width x 87 mm depth
WEIGHT	2 kg
PRIMARY POWER SOURCE	External power source required: 6 V
CONNECTIVITY	Cellular (4G with 2G fallback)
CELLULAR DATA LOAD	~8 kB per message
REAL-TIME DATA INTERVAL	30 minutes – 24 hours (User selectable)
BATTERY TYPE	1 x Lithium-ion battery
NOMINAL VOLTAGE	3.7 V

PARAMETERS	
VERTICAL REFERENCE	Specified by user
MAXIMUM RANGE	40 m
SAMPLING INTERVAL	30 minutes
BURST LENGTH	24 minutes (7168 samples at 5 Hz)
TELEMETRY DATA QUEUE	In the event of temporary connection outages, a data queue ensures data is sent once connection is restored
INTERNAL SAMPLING FREQUENCY	5 Hz
FILTERED FREQUENCY RANGE	0.05 - 1 Hz (1 - 20 seconds)
DIAGNOSTIC PARAMETERS	Battery voltage, internal temperature and atmospheric pressure, signal strength

SENSOR	
RADAR SENSOR	InnoSenT iSYS-6030
SENSOR ACCURACY	0.1% of measured range

DATA STORAGE	
CLOUD STORAGE	Free access to the **Obscape Data Portal** for real-time and historical data, sensor configuration, alerts
ON-BOARD SD CARD	Data stored to the on-board SD card as a backup - or for cases where data connection is absent

DATA OUTPUTS

	CELL	*SATCOM	SD CARD
Water level	✓	✓	✓
Significant Wave Height (Hm0 [m])	✓	✓	✓
Maximum Wave Height (Hmax [m])	✓	✓	✓
Peak Wave Period (Tp [s])	✓	✓	✓
Mean Wave Period Tm0,1[s]	✓	✓	✓
Mean Wave Period Tm0,2[s]	✓	✗	✓
Mean Wave Period Tm-1,0[s]	✓	✗	✓
Mean Wave Period (Tavg[s])	✓	✗	✓
Maximum Wave Period (Tmax [s])	✓	✗	✓
Swell Wave Height (Hsw [m])	✓	✓	✓
Swell Wave Period (Tsw [s])	✓	✓	✓
Variance Density Spectrum (Puu [m2/Hz])	Only in real-time spectrum mode		✓
GPS Coordinates (Lat, Lon)	✓	✓	✓

*Optional Upgrade

Direcitonal coefficients are not included

Satellite subscription services and credits available on request

DATA ACCESS

SEAMLESSLY CONNECT FIELD DATA & OFFICE OPERATIONS

01 **Real-time data:** Wave and water level data
02 **Download:** CSV file, graphs, PDF report
03 **Forwarding:** JSON API or HTTP post
04 **Notifications:** Offline, low battery, parameter threshold exceedance

OPTIONAL SATCOM UPGRADE

SATCOM SPECS	
ANTENNA SIZE	Height 74.2mm / Diameter 66.5mm
NETWORK	Iridium
DATA LOAD	1 satellite credit per message
MONTHLY COST	Line rental and SATCOM credits


Image may vary from actual product

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