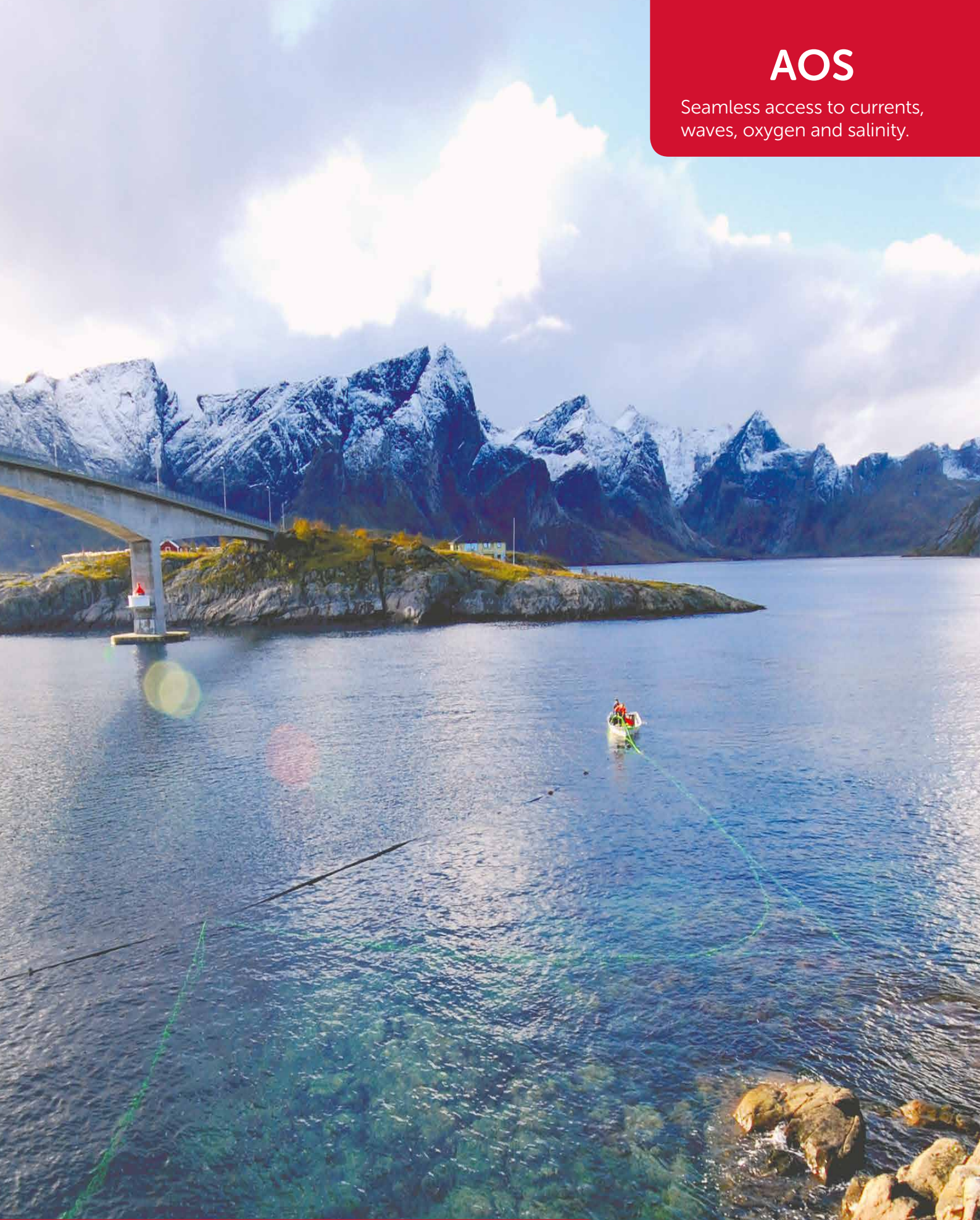


AOS

Seamless access to currents,
waves, oxygen and salinity.



CURRENT AND WAVE MEASUREMENTS IN THE OCEAN, LAKE AND LABORATORY



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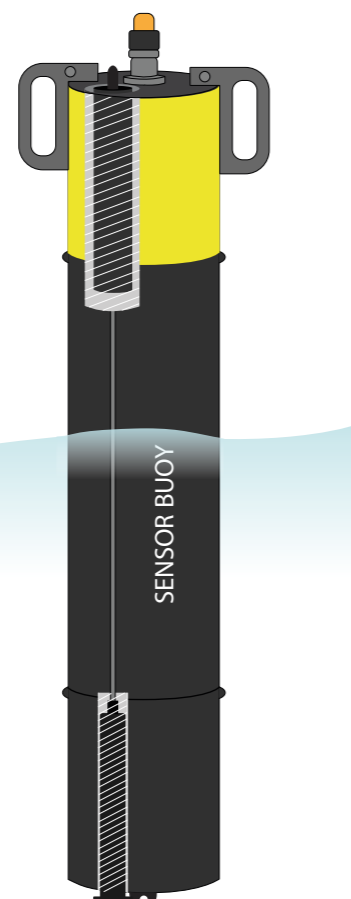
True innovation makes a difference

HOW THE AOS SYSTEM WORKS



SENSOR BUOY AND INSTRUMENTS

The Nortek AOS offers online access to Nortek instruments from virtually any location worldwide. Battery power and satellite communication ensures do-it-yourself and cost effective, real time data transfer - from anywhere on the planet.



BUOY SPECIFICATION

Diameter:	400mm
Length:	2500mm
Weight:	~40kg
Material:	Polyethylene (PE)
Buoyancy:	215kg
Max wave height (Hs):	2.0m
Max current:	1.0m/s
Max deployment depth:	150m

NORTEK INSTRUMENTS

AQUADOPP PROFILER

Acoustic frequency:	0.4MHz	0.6MHz	1.0MHz	2.0MHz
Maximum profiling range:	60-90m	30-40m	12-20m	4-10m
Cell size:	2-8m	1-4m	0.3-4m	0.1-2m

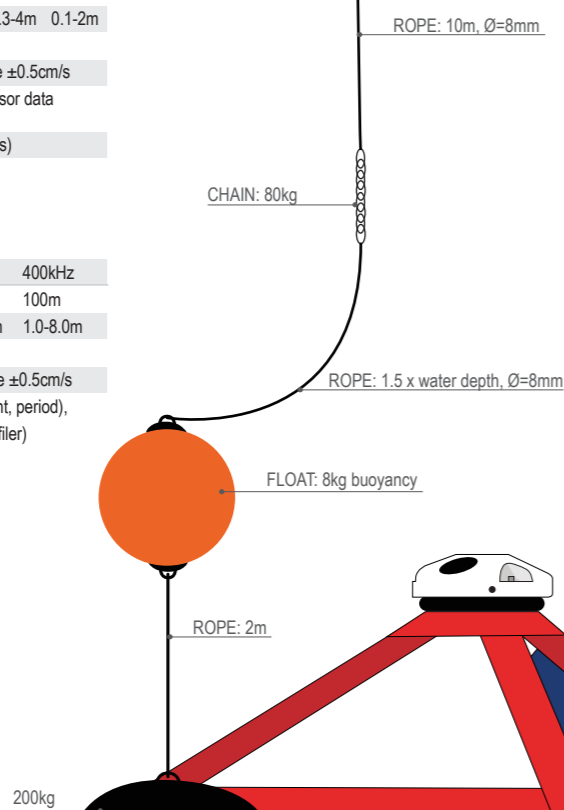
Accuracy:	1% of measured value ±0.5cm/s
Data products:	Speed, Direction, Sensor data

Cell zero (optional for 0.6MHz and 1MHz transducers)
Cell zero acoustic frequency: 2Mz

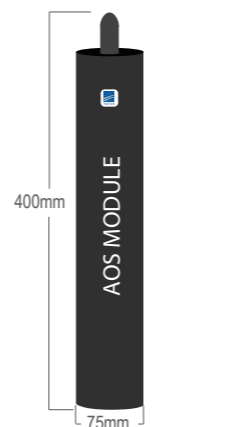
AWAC WITH PROLOG

Acoustic frequency:	1MHz	600kHz	400kHz
Maximum profiling range:	30m	50m	100m
Cell size:	0.25-4.0m	0.5-8.0m	1.0-8.0m

Accuracy:	1% of measured value ±0.5cm/s
Data products:	Wave (direction, height, period), Current data (see profiler)



AOS MODULE AND SENSORS



AOS MODULE

Std. temperature range:	-25 – 60 °C
AOS Voltage input:	9-15V
Transmit interval :	>= 5min
Sleep mode:	1.3mA@12V
Configuration:	Remote through web
Battery (AOS box):	300Wh
Data products:	GPS position, battery and temperature

Also available as AOS box:



INTERFACES

NORTEK INTERFACE

Voltage output:	12V (Raw power)
Protocol :	RS232/proprietary
Max cable length:	50m

SENSOR INTERFACE

Voltage output:	9V
Protocol:	RS485/Modbus
Max cable length:	100m
Number of sensors:	Up to 8

POWER

Voltage input:	9-15V
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PONSEL TURBIDITY SENSOR

Range:	0-4000 NTU
Accuracy:	< 5%
Power (when measuring):	820µA@12V
Max depth:	50m
Sensor method:	Optical IR nephelometry
Data products:	Turbidity and temperature

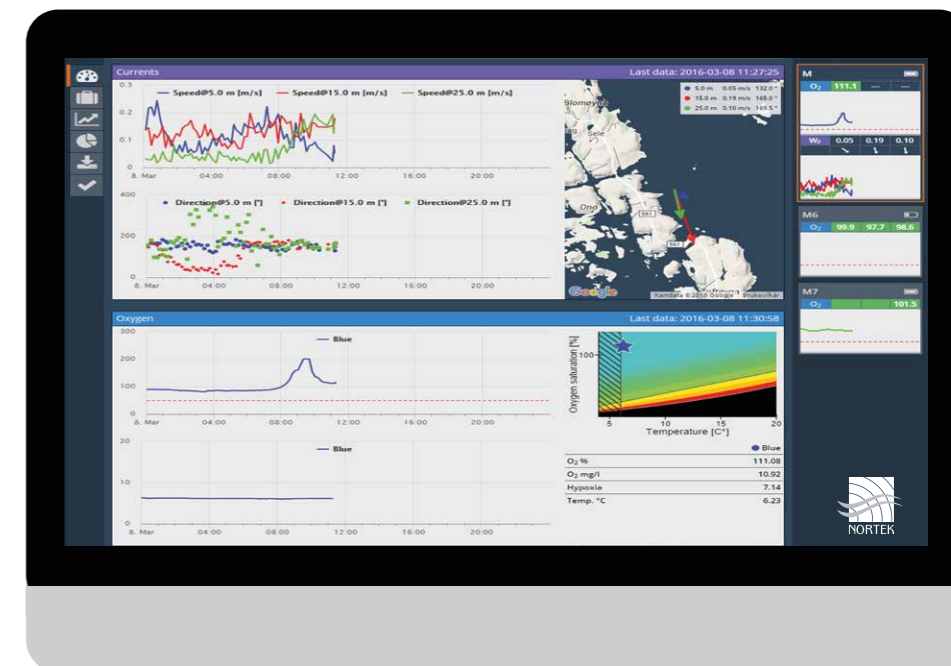
INSITE-IG OXYGEN SENSOR

Range:	0 – 25ppm (~0 – 200 %)
Accuracy:	1% of reading or 0.02ppm
Drift:	<1% per year
Power (when measuring):	6mA @ 12 V
Max depth:	50m
Sensor method:	Optical
Data products:	Oxygen and temperature

PONSEL CONDUCTIVITY SENSOR

Range:	0 – 70ppt
Accuracy:	<5% of total range
Power (when measuring):	15.5mA@12V
Max depth:	50m
Sensor method:	Inductive
Data products:	Conductivity and temperature

ONLINE CLOUD SERVICE



Web

You have access to your AOS data through a cloud hosted web application. From your account, you get quick access to charts, data details and export. The service includes map overviews and alarm system for notification by email or SMS.

Dredging

Dredging are typically project driven and will be reflected in the dedicated application solution. Specialized view and reports will help you understand the situation. Moreover, with automatic alarms for high turbidity levels you are in control of the situation.

The AOS system can also be configured remotely from within your website. If you need to integrate the data with your own website a REST JSON interface is available, and with a flick of a switch, you can make the views publically available.

Ports

The application offer specialized dashboard with overview of your port. With the ability to make parts of your website public available the data can easily be shared with sailors and other key personnel.

Features

Display	Charts, maps, details, mobile friendly
Export	Excel and CSV
Integration	REST JSON
Alarms	Email and SMS
Configuration	Custom setting and remote AOS setup

Measurement interval for			Average power consumption	Est. battery lifetime
GPS	Oxygen	Profiler		
6 hours	10 minutes	-	45mW	270 days
6 hours	-	30 minutes	41mW	300 days
12 hours	10 minutes	-	32mW	390 days

Notes

Notes

Why choose Nortek AOS?

- Easy access to data on currents, waves, oxygen and salinity.
- No need for complex system integration.
- A complete solution.

Who is it for?

- Professionals who need measurement data but don't have access to marine infrastructure.
- User who do not have their own system to gather and display data.


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