HyPORT

Real-time Oceanographic Monitoring System

Marine | Oceanography | Meteorology

General Description

HyPORT is a fully integrated real-time oceanographic monitoring system designed to assist with port operations including vessel scheduling, movements and cargo optimization.

Using a seabed mounted Acoustic Wave And Current Profiler (AWAC), the system measures current speed and direction through the water column from near seabed to near surface. In addition to currents, the AWAC provides directional wave and tide data.

Typically, the AWAC is located adjacent to the shipping channel with the measured data being sent via a robust underwater cable to a nearby channel beacon, breakwater or buoy where data is then forwarded via 4G IP communications or a point to point radio modem connection.

The 4G IP connection provides seamless access to the AWAC instrument allowing full remote diagnostics and configuration of the instrument.

Data measured by the HyPORT system is often coupled to under keel clearance software to assist with safely managing vessel loading and transits in and out of the port.

KISTERS offers field services like installation, integration and maintenance, too.

Applications

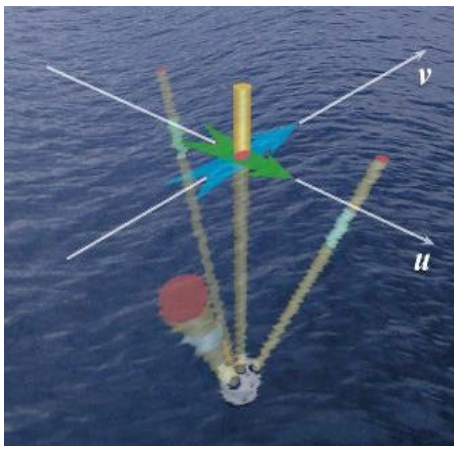
HyPORT is especially suitable for

- Commercial ports and harbours
- Coastal facilities and waterways
- Offshore production platforms
- Aquaculture management

Features

- Wave, current and tide measurement from a single instrument
- Robust seabed and beacon mooring system
- Efficient servicing via quick release and access of AWAC from seabed frame
- Standard 4G IP or UHF communications; adaptable to other comm. systems incl. LoRa mesh, satellite, direct serial, ethernet
- Optional connectorless power and data cabling system
- Easy inclusion of meteorological or water quality sensors





	Height (metres)	Peak Period (sec)	Mean Period (sec)	Direction (deg. from)
Sea	0.53	6.1	2.9	145
Swell	0.29	8.8	10.0	141
Total	0.61	6.1	3.5	

	Height (metres)	Period (sec)
Maximum Individual Wave	1.10	6.7

Sea Temperature at Sea Bed (°C)	17.9

	Latitude	Longitude	Distance	Bearing
Deployment Location	35° 02' 04.80" S	117° 55' 49.80" E		
User's Present Location	31° 51' 29.98" S	115° 53' 53.06" E	401 km	152°



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Technical Specifications

System	– Acoustic frequency: 1 Mhz – Number of beams: 4	– Depth cell size: 0.4 - 2 m (15.7 to 78.7”)
Typical Configuration	– Waves: 2048 pts at 2 Hz – Current cells: 10 of 2 m (78.7”) cells	– Current average: 1 minute – Full cycle: 20 minutes
Current Profile	– Maximum range: 30 m (98.4 ft) – Number of cells: 2 – 40	– Maximum output rate: 1 sec
Waves	– Data types pressure and AST – Max. sampling: 2 Hz	– Samples / burst up to 2048
Sensors	Temperature, compass, pitch & roll, pressure	
Power	– DC supply 9 to 16 VDC – Power 1 Watt (typical)	

System Inclusions & Options

Included	– 1Mhz AWAC instrument – Elevated seabed frame – Frame peripheral anchor weights – Quick release mounting module for AWAC – AWAC antifouling protective dome – 50 m (164 ft) underwater cable	– Standard frame to beacon mooring hardware – Topside system enclosure – 100 W solar power supply – 4G IP communications modem – AWAC / Seaview cloud based software module
Optional	– Cyclonic anchoring system – Orphion for AWAC connectorless power and communications system – Atmocean cloud based data presentation - mobile	– Combination weather station – Water quality monitoring system – Tag-it marine receiver for tagged marine animal alerts

KISTERS’ Custom Solutions for Marine Appications

Are you looking for a tailor-made solution, ready to deploy? KISTERS’ engineering and fabrication workshop and experienced engineering staff have the ability to provide customized solutions for any marine appication.
Please contact KISTERS for details.



Specifications are subject to change without notice. Weights and dimensions are indicative. - © KISTERS | 09.2024

Reseller

KISTERS Australia I sales@kisters.com.au I kisters.com.au
KISTERS Europe I hydromet.sales@kisters.eu I kisters.eu
KISTERS New Zealand I sales@kisters.co.nz I kisters.co.nz
KISTERS North America I kna@kisters.net I kisters.net

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