VIKING Buoy

Meteorological and Oceanographic Monitoring

The **Viking Metocean Buoy** is designed to serve the scientific community in their research and monitoring of coastal and offshore environments. Its customizable payload and remotely-programmable instrumentation controller allow operators to adapt to changing conditions and data collection requirements.

Tried-and-true reliability has been proven in the Atlantic and Pacific oceans for more than 10 years by the Canadian government, and in the summer of 2019, the University of Southern Mississippi took delivery of the first Viking to start monitoring off the coast of Mississippi in the Gulf of Mexico.

- Continuous monitoring of the buoy's position, pitch & roll, and battery level provide peace of mind to the operators via alarm warnings and reports transmitted to land.
- Designed to be easily serviceable with clear access to instrument bays.
- Winch controller uses data from buoy instruments (Buoy Controller) to assess safe profiling conditions.
- Modular design allows individual instruments to be serviced, upgraded, or removed as needed.

Air

- Wind
- Rain
- Temperature
- Humidity
- CO_2

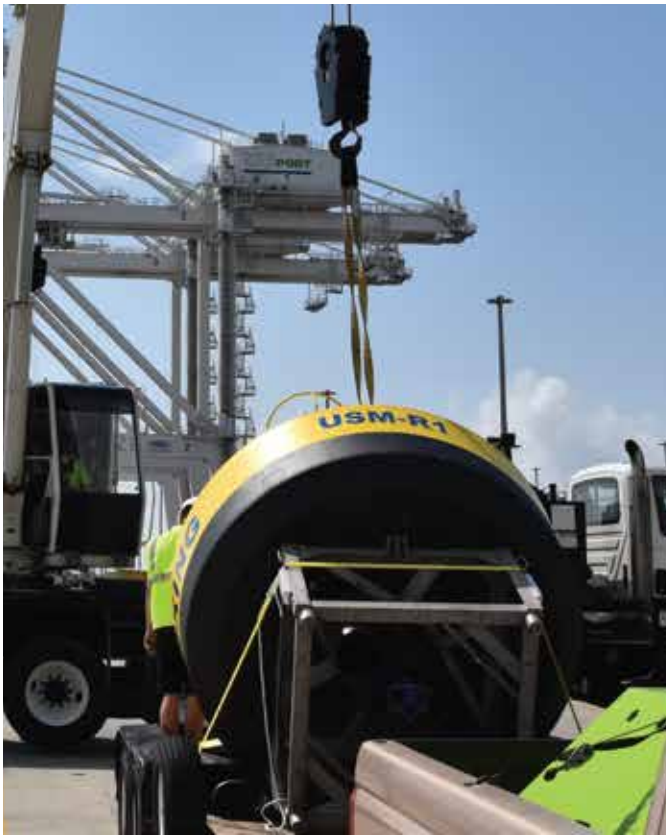
Water Surface

- Temperature
- Wave Height & Period
- Salinity (Conductivity & Temperature)
- pH
- CO_2
- Surface Current
- Radiance
- Irradiance

Water Column

Automated Intelligent Profiler

- Conductivity
- Temparature
- Depth
- O_2 Saturation
- Fluorescence
- Down to 350m



Deploying at the Marine Research Center, The University of Southern Mississippi, USA

The unique single-anchor mooring design facilitates deployment and recovery and increases reliability in harsh sea conditions.

VIKING Buoy

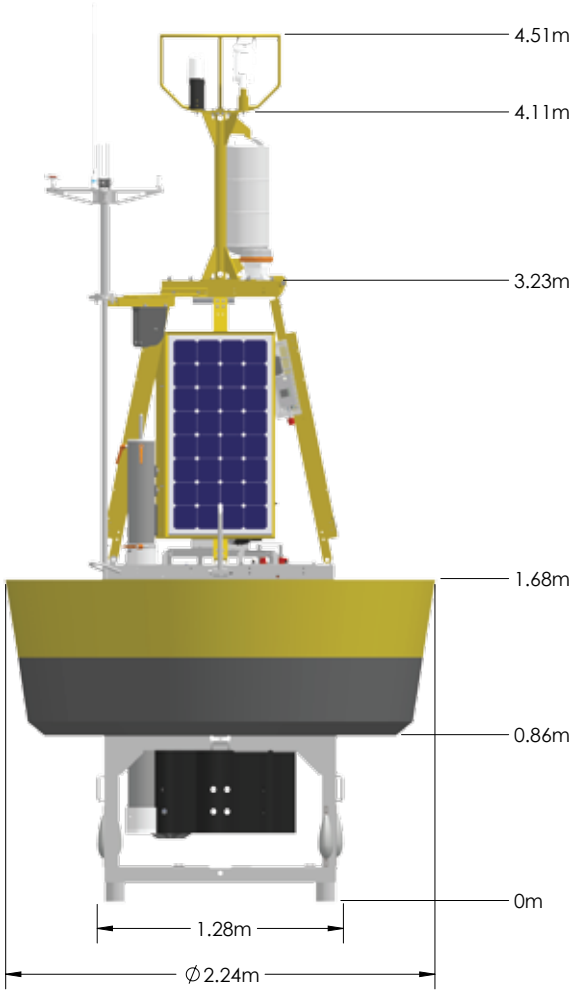
Meteorological and Oceanographic Monitoring

Default Instrumentation Payload

Moored Platform :

RBR*maestro*³ featuring up to ten channels for:

- Conductivity, Temperature, Depth (CTD) : WOCE accuracy, inductive (non-pumped)
- pH : Idonaut (marine or freshwater)
- Biogeochemical : SEA-BIRD ECO Puck Triplet
- Irradiance : SEA-BIRD OCR-504 UV Multispectral Radiometer
- Dissolved Oxygen (optical) : RBR*coda* T.ODO
- pCO_2 : Turner C-sense
- Photosynthetically Active Radiation (PAR) : LI-COR Quantum 192SA & Spherical 193SA
- Alternate sensor configurations supported
- Wave Meter (Height, Period): MTE Instrument Wave Monitor
- Weather Station: Vaisala WXT536
- ADCP : Nortek Signature Series



Automated Intelligent Profiler :

RBR*concerto*³ featuring up to five channels for:

- Conductivity, Temperature, Depth (CTD) : WOCE accuracy, inductive (non-pumped)
- Dissolved Oxygen (optical) : RBR*coda* T.ODO|fast (~1s time constant)
- Fluorescence : Turner Designs Cyclops-7F
- Sampling up to 8Hz or 16Hz
- Alternate sensor configurations supported
- Down to 350m depth
- Fully configurable automated profiling (frequency, depth, speed, pause periods)
- Profiler speed range 0.5 to 0.2 m/s

Communication :

Communication Services	Operating Range	Operating Fee	Link Throughput
Satellite	Worldwide	Requires paid service (IRIDIUM)	4.8 kbps max
Cellular modem	Local	Requires paid service	TBD