

# Dredging Solutions

## Product Datasheet



# WFS

ENERGY & ENVIRONMENT

### REAL-TIME ENVIRONMENTAL MONITORING IN SUPPORT OF THE DREDGING INDUSTRY

WFS through-water radio technology supports the dredging industry by reducing cost of monitoring, reducing down-time, delivering environmental best practice and ensuring compliance with legislation.

WFS Seatext® can be integrated with standard monitoring instrumentation to deliver real-time data without cables or telemetry buoys,

WFS solutions offer real benefits for industry and the environment.



### BENEFITS DELIVERED BY WFS SYSTEMS



#### HOW DOES REAL-TIME MONITORING SAVE MONEY?

By delivering real-time turbidity and oxygen data dredging operations can be managed to remain within compliance limits at all times, reducing the risk of unplanned outages.

Monitoring by sampling introduces significant delays; real-time monitoring reduces down-time.



#### ROBUST AND RELIABLE DATA COMMUNICATION

Cables can become twisted and damaged in active waterways; wireless reduces the risk of system failure.

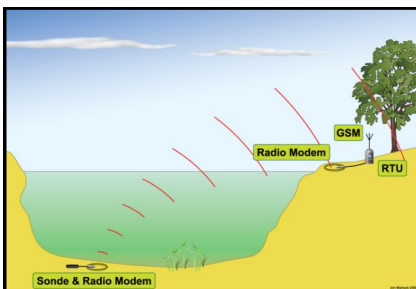
Unlike acoustic systems, WFS radio technology is unaffected by acoustic noise, turbidity, mud or ice and will operate in shallow water as well as congested waterways such as harbours, ports, and estuaries.



#### EASY TO CONNECT TO STANDARD INSTRUMENTATION

Seatext® interfaces to industry-standard sensors for monitoring a range of parameters including turbidity, salinity, depth, and current.

WFS has experience of system integration and has worked to augment the functionality of many of the commonly-deployed oceanographic and environmental devices.



#### REMOVE VISIBLE MONITORING INFRASTRUCTURE

WFS radio systems allow transmission through water, air and ground, removing the need for cables and buoys. Seatext® is therefore covert, poses no hazard to navigation, and is less susceptible to damage.

By replacing much of the usual infrastructure, wireless monitoring can reduce the cost of operations.

WFS Seatext® for monitoring of dredging operations

## REAL-TIME ENVIRONMENTAL MONITORING IN SUPPORT OF THE DREDGING INDUSTRY

### Functional overview

- Real time monitoring and control of marine instrumentation
- Wireless connection between instrument and surface buoy
- Option to communicate directly from submerged to land
- Robust communication in shallow, turbid, and tidal water

### Technical overview

- Serial inputs support data gathering from multiple devices
- 100bps radio link through water and air
- Omni-directional antenna
- Power management function for long-term deployment
- GSM/GPRS link to control system and web interface



WFS Seatext® modem

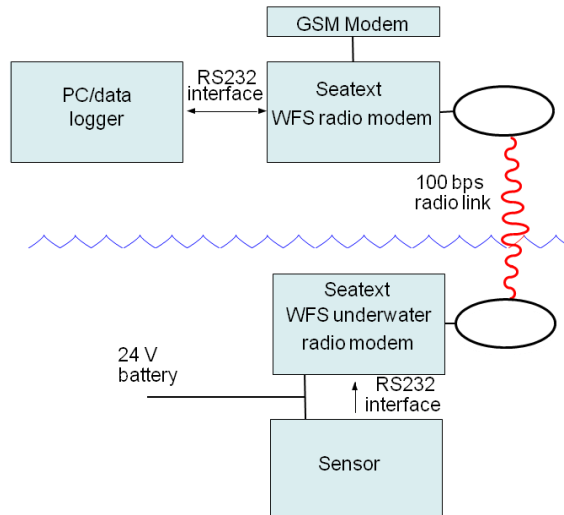


Diagram of Seatext® modem set up to transmit data from water to shore. The modem can be easily integrated with third party systems, in this example connecting to a laptop, GSM modem and environmental sensor.

### ADDITIONAL FEATURES

- Immunity to thermal layers
- Fast propagation
- Can be connected in a network
- Mesh networking
- GSM option

### BENEFITS

- Robust in all conditions
- Two way communications
- Can be interfaced to text entry terminal
- High tolerance of water conditions
- Reduction in Doppler shift
- Extended coverage
- Global access

### TECHNICAL SPECIFICATIONS

#### Performance

- Data rate = 100 bits/sec half duplex
- Multiple units uniquely addressable
- Modems can be connected in a network

#### Antenna

- 40mm loop
- Options available for extended range

#### Power Requirements

- 18-28V external power supply
- 4W receive / 16W transmit / 5mW sleep

#### Data

- RS 232 data interface

#### Environmental

- Operating temperature -10°C to +35°C
- 50m rated enclosure (other depths available)

FOR FURTHER INFORMATION PLEASE CONTACT



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