

Through-water Radio Modem

The **seatooth®** range uses the latest in radio frequency (RF) technology to enable transmission of a **high rate of data** over a short range (and low data rates over a medium range), through-water and ground and **highly accurate navigation** at short range.

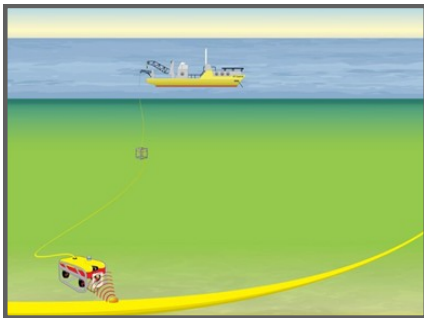
seatooth® transmits **data, power and compressed video** reliably in challenging environments where traditional underwater communications methods can suffer poor performance such as in **littoral or shallow waters, in congested environments (ports & harbours) or in water with high turbidity levels.**

seatooth® signal **can penetrate water, air, across the air/water interface and even through solid material** (seabed, ground, harbour walls, ice) to allow two-way, reliable communications and data transfer at high data rates and with low latency.

seatooth® is easily integrated with third party equipment, connects to existing communications infrastructure (GSM, GPRS, VHF, UHF, Web) and does not interfere with acoustic sensors or sonar.

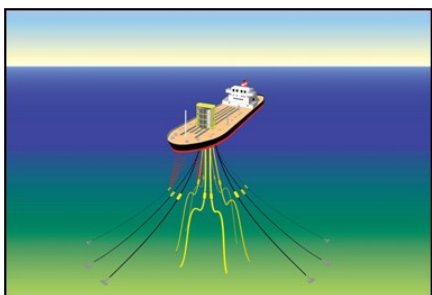


TARGET APPLICATIONS



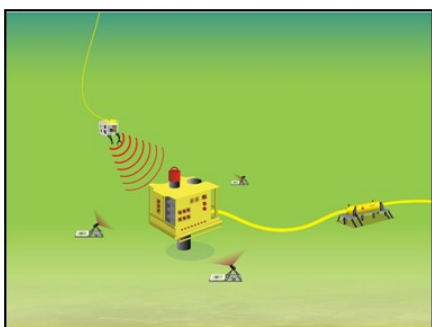
seatooth® S100: low power consumption

- Integration with ROVs, AUVs, sensors and control systems
- RFID tagging of subsea assets
- Low cost subsea connectors
- Down-hole wireless connectors
- BOP wireless networks
- Sensor data harvesting



seatooth® S200: low data rate

- Well-head networking
- Monitoring risers and mooring lines
- Under-ice operations



seatooth® S300: high data rate

- Data transfer using low cost eyeball ROVs
- High reliability subsea connector
- Wireless camera
- UUV/ROV/AUV communications
- Inter-asset communications
- AUV docking solutions

Through-water Radio Modem

TECHNICAL SPECIFICATIONS

	seatooth® S100 85mm x 191mm	seatooth® S200 200mm x 150mm	seatooth® S300 250mm x 150mm
RF Data rate	1.2 kbps full duplex	100bps	25 - 156 kbps 1 mbps option available on request
Acoustic Data rate	100 bps as standard option, other acoustic modems available on request		
Range	up to 1.5m through seawater	up to 30m through seawater	2m – 10m through seawater
Antenna	inside housing	Hybrid loop/Solenoid Options available for extended range	0.5 m Squariel (standard) 0.1m – 1m (custom)
Power Requirements	24V external power supply or rechargeable internal batteries 0.001W receiving / 0.6W transmitting / 0.0003W Sleep 5 years life from internal batteries (standby only)	18-28V external power or battery pack to specific application 4W receiving / 16W transmitting / 5mW Sleep	Each unit: Transmitting 24Vdc, 660mA Receiving 24Vdc, 190mA Supply can be from external battery packs or from interface to third party supply
Power Transfer	Options 10 W – 1 KW		
Data Interface	RS232 Serial interface 1.2 k baud	RS232 data interface	Interface Transparent Ethernet Compatible with TCP/IP & UDP packets
Depth rating	Depth rated to 350m 4000m available on request	Depth rated to 350m 4000m available on request	Depth rated to 350m 4000m available on request
Environmental	Temp. operating -10 to + 35°C Temp. storage -20 to + 50°C		



CONTACT US

WFS Subsea

7 Houstoun Interchange Business Pk.
Livingston,
Edinburgh
EH54 5BW, UK

Tel: +44 (0) 845 862 6600

WFS Subsea

Tritech House,
Peregrine Rd, Westhill Business Park,
Westhill, Aberdeen,
AB32 6JL, UK

T: +44 (0) 845 862 1584

WFS Subsea

15720 Park Row, Suite 500,
Houston, TX 77084
USA

Tel: +1 (832) 460 4435