

## Sub-bottom Profiling System with Combined Chirp/CW Side Scan Sonar *Fully Integrated, Cost-effective, Compact Solution*

### **Applications, Performance, Specifications**

The HMS-625 Multi-Sonar Tow System is designed for applications that require high resolution sub-bottom imagery in depths of up to 2,000m. This combined side scan and sub-bottom survey tool offers a fully digital platform capable of collecting high resolution chirp or CW side scan with sub-bottom data, as well as a range of customer selected sensor data. The long range, high resolution side scan and sub-bottom chirp data as well as the ancillary sensor capability provide the surveyor with a cost effective solution over multiple sensor surveys resulting in savings in both instrument cost and survey time.

#### **Single Workstation**

*Topside system consists of:*

- *Chirp/CW side scan sonar, operating at 100/400 kHz simultaneously, allows 1000 meter or greater swath, with resolution equivalent to much higher frequency systems at longer ranges.*
- *Chirp/CW based sub-bottom profiler, operating in the 1 to 10 kHz region, allows for extended sediment penetration with greatly improved resolution over conventional CW systems.*
- *Range, Gain, TVG, image correction, color palette, and other programmable parameters are under user friendly software GUI control. True 24-bit data acquisition.*

#### **Single Rugged Tow System — TTB-635**

*The TTB-635 is a fully integrated digital platform with high performance Chirp side scan/sub-bottom transducer arrays, digital multiplexor, subsea electronics, and RS-232 and power ports for optional sensors.*

- *Ruggedized, stable tow vehicle includes pitch, roll and heading sensors, optional position responder/ transponder, plus other customer selected sensors.*
- *Broad band Chirp match filter processing, combined with a narrow side scan sonar horizontal radiation pattern provides optimal cross-track and along track resolution.*
- *Horizontal beam width of 1° at 100kHz and .3° at 400kHz*
- *Tow system will operate in depths up to 2000 meters and features low-maintenance construction*



# SYSTEM SPECIFICATIONS

## TOWFISH

Sonar Frequency	100 / 400 KHz
Maximum Operating Depth	2,000 meters
Range	25 to 500 meters each channel
Side Scan CHIRP frequency Range	Simultaneous 100 KHz and 400 KHz CHIRP or CW
Side Scan Transducers	Multi-element array, dual channel 100 / 400 KHz, Horizontal beam width of 1° at 100kHz and .3° at 400kHz; Vertical beam 60°
Sub-bottom Transducer	2X2 Transmit projector array; dipole dual hydrophone array; 30° conical radiation pattern
Frequency Resolution Processing	Selectable CHIRP bands from 1KHz to 10KHz (2 KW output), synchronous with side scan Calibrated transmit waveform stored in memory; CHIRP or CW signal processing True 24-bit data acquisition
Standard Sensors	Built in depth (pressure), heading, pitch, roll
Optional Input	Magnetometer input optionally available
Construction	Stainless steel, polyethylene
Length	208.7 cm (82 inches)
Front Cross Section	38.4 cm X 53.3 cm (15.125 in X 21 in)
Weight in air	Approximately 158 Kg (350 lbs)
Weight in water	Approximately 45 Kg (100 lbs)

## TOPSIDE DATA ACQUISITION COMPUTER

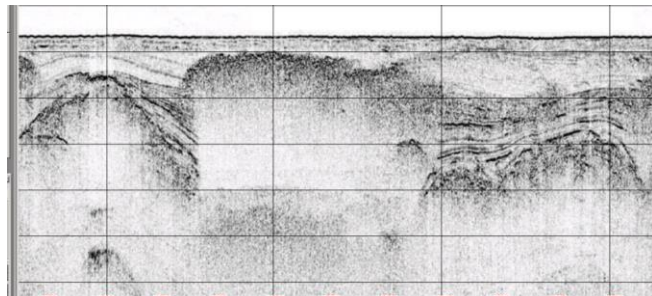
Operating System	MS Windows OS
Storage	Large internal hard drive, writeable CD/DVD
Network Interface	100/1000 base T Ethernet (compatible with ADSL communication interface)
I/O Ports	Four (4) RS-232 serial I/O ports
Display	20" Flat Panel LCD Display with video output for second display

## TOPSIDE TRANSCIVER

Power Supply	Auto-sensing 100-240 VAC; output 380 VDC maximum
Network Interface	Ethernet
Dimensions	2U Rack Mount 48.3 cm (19 inches)

## CABLES

Deck Cable (Kevlar)	75 meter coax
Armored Tow Cable	coax



**SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**

23sept2015

**Falmouth Scientific, Inc.**

1400 Route 28A, PO Box 315, Cataumet, MA 02534-0315

[fsi@falmouth.com](mailto:fsi@falmouth.com) • Tel: 1-508-564-7640 • Fax: 1-508-564-7643 • [www.falmouth.com](http://www.falmouth.com)