SIS-1625 Dual Frequency Side Scan and Chirp Sub-bottom Profiler

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The SIS-1625 Seafloor Imaging System has quickly become the industry standard for shallow water (<2000M) seafloor survey operations. This field proven, highly versatile survey tool offers a fully digital platform capable of collecting high resolution chirp side scan/sub-bottom data. The high resolution, extended range chirp data and multiple data sensor capability provide the surveyor with a significant savings in instrument cost and survey time. This system also offers 12 and 24VDC with a total of 50 watts available instrument power and (4) RS-232 lines of communications for customer selected sensors.

Applications

- *Cable / Pipeline Route Surveys*
- *Habitat Studies & Sea Floor Classification*
- *Engineering & Scientific Studies*
- *Object Detection*
- *Channel Clearance*

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The TTV-290 series of tow vehicles is designed for hydrodynamic stability in most sidescan towing applications. The sidescan transducer bays are designed to offer 0, 10, 20, and 30 degrees downward looking positions for optimum performance in a variety of different applications. The stainless steel midplate construction provides users a rigid and stable platform to mount additional sensors. The high visibility yellow polyethylene covers are designed to handle years of use. These new and improved shells are more resistant to impact than earlier models, and are easy and cost effective to modify or replace.

TTV-295 Tow Vehicle

SUBSEA UNIT

TTV-295	Tow Vehicle The TTV-295 offers dual frequency (100/400 kHz) Side Scan Transducers, a 2x2 (2-7 kHz) sub-bottom profiler array (AT-471) with Chirp and Continuous Wave (CW) tone burst transmission, which is software selectable, and a dual hydrophone array for optimum receive performance. The subsea unit has a basic built in heading, pitch and roll sensor, and depth sensor. This package offers (4) RS-232 communication lines in addition to 12 and 24 VDC with a total of 50 watts available for instrument power.

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SURFACE UNITS

Transceiver

CL-163	ADSL Transceiver Includes a 270 volt power supply for the tow vehicle, Communications Link (ADSL, 5Mbit/sec) for long cable operations up to 10,000 meters (with SIS-1625) using a single a co-axial cable. This unit interfaces the topside data acquisition computer (DAC) with the tow vehicle.

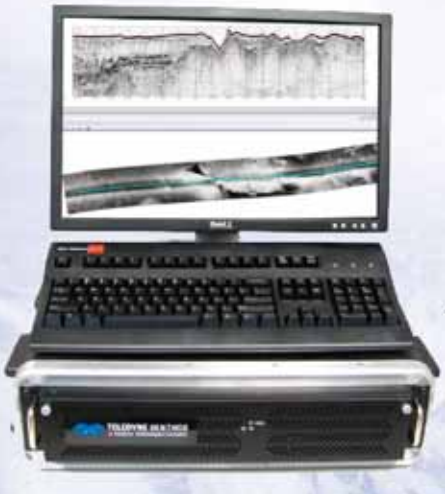
CL-163 ADSL Transceiver

Digital Acquisition Computer (DAC)

This Industrial Rackmount Computer comes in a rugged case that is designed for optimum acquisition performance and durability. It comes with a high end Intel processor. The hard drive offers ample room for data storage and is minimally 500GB in size. This computer also offers a Gigabyte Ethernet connection. In addition, DACs come with a high resolution 20" flat screen monitor, a full function keyboard and a mouse.

DAC-210	1625 Rackmount Computer with **Triton® SS-Logger** Software
DAC-220	1625 Rackmount Computer with **Chesapeake® SonarWiz.Map** Software

See pages 51 - 52 for software package descriptions.



Digital Acquisition Computer w/ Monitor

SIS-1625 Dual Frequency Side Scan and Chirp Sub-bottom Profiler

CABLES (KEVLAR DECK ONLY - NOT FOR TOWING)

The SIS-1625 Sonar system is delivered with a standard 75 meter Kevlar Deck Cable of 0.35" diameter, single coax, reinforced with abrasion resistant urethane jacket. The cable includes the dry side RF style connector to the CL-163 Transceiver and a Kevlar cable termination assembly for the wet side consisting of a Kellems grip and a molded female 4-pin micro, Subconn connector (MCIL-4F) with a locking sleeve.

011060	**Kevlar Deck Only** coax cable w/termination - 75M
ES LENGTH	Additional meter of **Kevlar Deck Only Cable** - per meter

Example: A 100 meter cable would be priced as a 75 meter cable with 25 meters of extra cable @ $10/meter ($3,550 + $250 = $3,800)

Kevlar Deck Only Cable

CABLES (ARMORED TOW CABLE)

013295	TWC-290 **Armored** Tow coax cable 0.45" dia. w/termination - 200M
ES LENGTH	Additional meter of **Armored** coax cable 0.45" dia. - per meter **Not to exceed 5000 meters based on 5Mbits/sec data rate* ***Recommend Rochester A301241 for application up to 5000 meters*
C-250-218	TWC-290 **Armored** cable termination assembly for 0.45" cable

OPTIONS FOR SIS-1625 SERIES

B298-0528	Y molded cable for mulitple ancillary sensors (3 or 4 sensors)

SHIPPING CASES

012692	Wood crate for TTV-290 series Tow Vehicle + Cable + Transceiver + DAC
013499	Corrugated box for DAC: Computer, Monitor, Keyboard, and Manual

SIS-1625 Dual Frequency Side Scan and Chirp Sub-bottom Profiler

INTEGRATED PACKAGES FOR SIS-1625

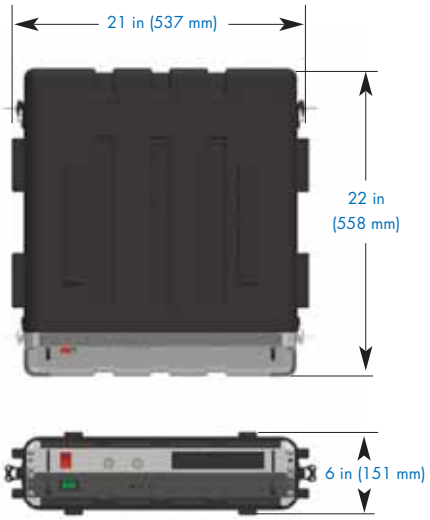
1625-1	SIS-1625 Combined Side Scan Sonar/Sub-bottom Profiling System	
	TTV-295	Tow Vehicle
	CL-163	ADSL Transceiver
	DAC-210	Rackmount Computer with **Triton® SS-Logger**
	011060	Kevlar Deck Only coax cable - 75m
	012692	Wood crate for TTV-290 series Tow Vehicle + Cable + Transceiver+ DAC
1625-2	SIS-1625 Combined Side Scan Sonar/Sub-bottom Profiling System	
	TTV-295	Tow Vehicle
	CL-163	ADSL Transceiver
	DAC-220	Rackmount Computer with **Chesapeake® SonarWiz.Map**
	011060	Kevlar Deck Only coax cable - 75m
	012692	Wood crate for TTV-290 series Tow Vehicle + Cable +Transceiver + DAC

See pages 51 - 52 for software package descriptions.

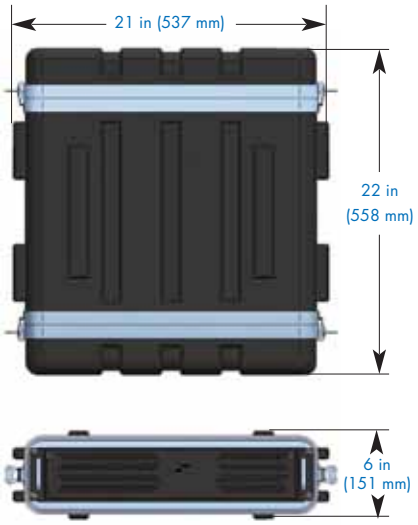
SIS-1625 Dual Frequency Side Scan and Chirp Sub-bottom Profiler

DIMENSIONAL DRAWINGS

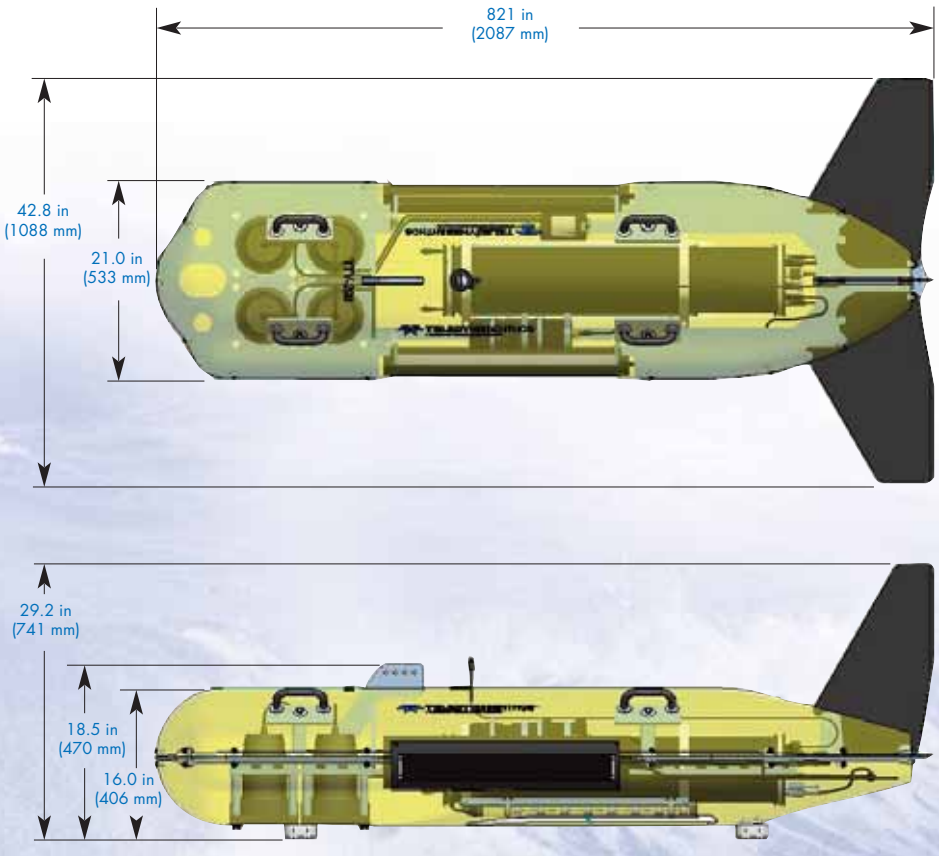
CL-163 Transceiver



DAC Rackmount (without computer)



TTV-290 Series Tow Vehicle



SIS-1625 Dual Frequency Side Scan and Chirp Sub-bottom Profiler

SYSTEM SPECIFICATIONS

SYSTEM

Sonar Frequency	100/400kHz
Maximum Operating Depth	2000 meters
Side Scan Sonar	
Acoustic Source Level	+225 dB re 1uPa@ 1 meter
Range	25 to 500 meters each channel
Chirp Frequency Range	Simultaneous sweeps in the 110 kHz to 130 kHz and 370 kHz to 390 kHz bands
CW Frequencies	Simultaneous 123 kHz and 383 kHz
Transducers	Multi-element array, dual channel 100/400 kHz, 0.5 degree horizontal beam; 60 degree vertical beam.
Sub-bottom	
Transducer	Transmit projector array; dual hydrophone array; 30 degree conical radiation pattern
Frequency	2 kHz to 7kHz swept FM (4 KW output), synchronous with side scan
Resolution	5 cm
Processing	Calibrated transmit waveform stored in ROM; matched filter FFT digital signal processing.
Scale Selection	25 meters to 500 meters full scale.
Sensors	
Standard Sensors:	Depth (FSI EOPM2)
	Heading / Pitch / Roll (TCM2.5)
Optional Sensors:	Altimeter (optional)
(sold separately)	Magnetometer (optional)
	Motion Reference Unit (optional)

TOW VEHICLE

Construction:	Stainless steel, polyethelene
Length:	208.7 cm (82 in)
Front Cross Section:	38.4 cm x 53.3 cm (15 1/8 in x 21 in)
Weight (in air):	158 kg (350 lbs)
Weight (in water):	45.3 kg (100 lbs)

TOPSIDE DATA ACQUISITION COMPUTER (DAC)

Operating System:	Windows XP
Storage:	Large capacity hard drive, writable CD/DVD
Network Interface:	100/1000 base T Ethernet (compatible with ADSL communication interface)
Serial:	RS232 x 4
Display Monitor:	20" Flat Panel

TOPSIDE TRANSCEIVER

Power Supply:	Input 120/240 VAC auto-sensing, output 300VDC maximum
Network interface:	Ethernet
Dimensions:	2U Rack mount 48.3 cm (19 inches)

SOFTWARE

CAATI:	C3D Controller (proprietary)
Acquisition:	Triton, Chesapeake, OIC
Post-Processing (optional):	Triton, Chesapeake, OIC
Data Format:	XTF

CABLES

Call for specific cable requirements

Kevlar Deck Only Cable:	75 meter coax (default)
Armored Tow Cable:	Co-axial cable