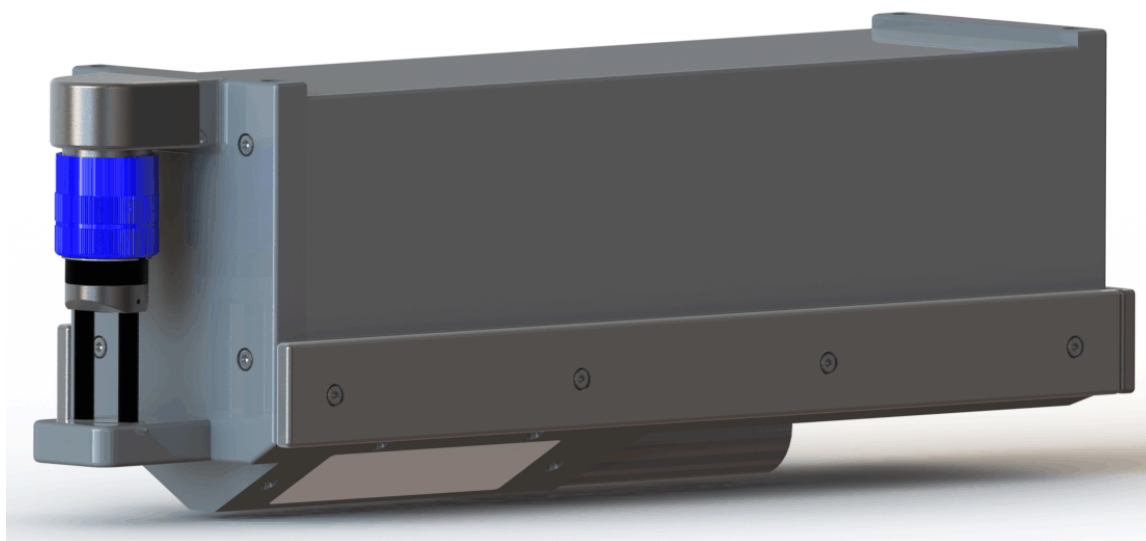# IMAGENEX MODEL DT102xi
180° MULTIBEAM PROFILING SONAR
with Optional Internally Integrated
Motion Reference Unit
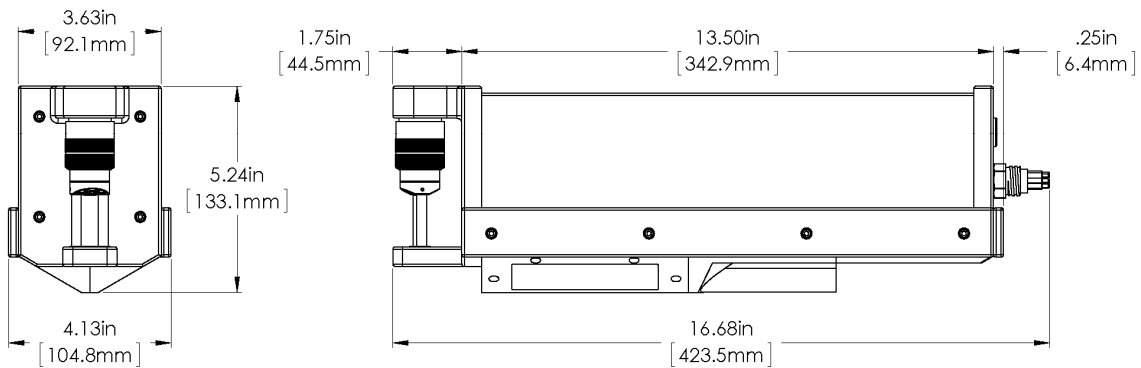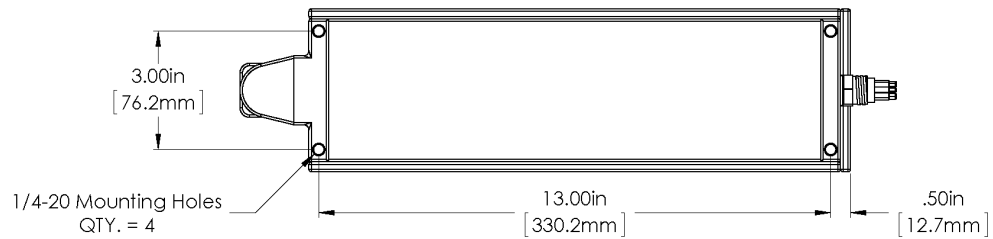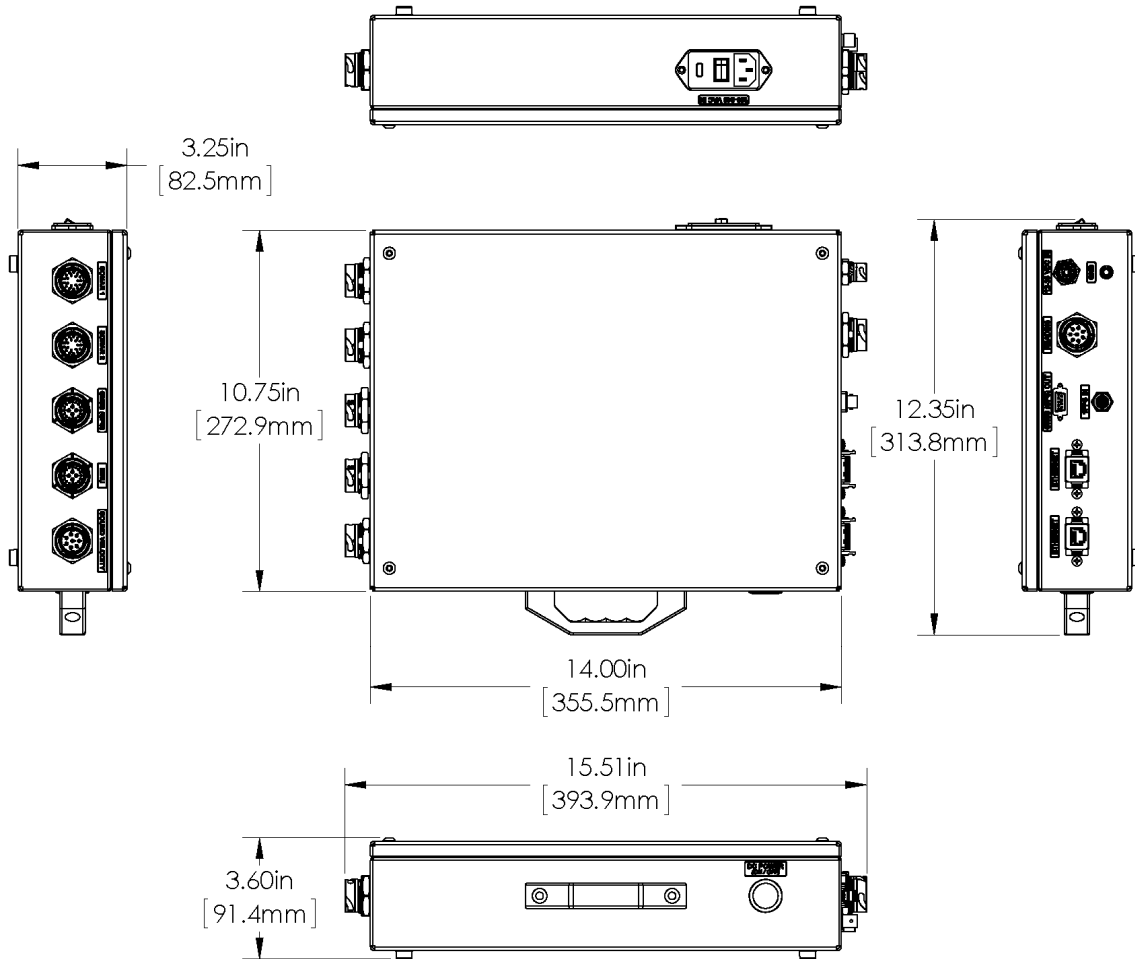## & Sound Velocity Sensor

The new DT102xi 180° Multibeam Profiling Sonar (i.e. Multibeam Echo Sounder) is a single instrument integrating the sonar, motion reference unit (MRU), and sound velocity sensor into one sleek and compact unit. The DT102xi requires only one cable for operating all three sensors and is a portable solution for any survey. Compatible with the DT100 SIR (Sensor Interface Relay) power supply/timing box, simply connecting a dual antenna GNSS/GPS receiver is all that is required to perform bathymetric surveys.

Patent Pending

IMAGENEX
www.imagenex.com

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HARDWARE SPECIFICATIONS:	
FREQUENCY	675 kHz
SWATH WIDTH (nominal beam geometry)	Transmit: 180° x 3°
	Receive: 180° x 3°
EFFECTIVE BEAM WIDTHS	Narrow: 0.75°
	Medium: 1.5°
	Wide: 3°
NUMBER OF BEAMS	Default: 720
	Selectable: 360, 180

RANGE RESOLUTION:
   SCREEN
   OUTPUT
	
	0.1% of range
	0.01% of range

RANGE	TBA water depth TBA slant range
MIN. DETECTABLE RANGE	0.5 m (1.6') below transducer

MOTION REFERENCE UNIT
       Pitch and Roll Accuracy:
                        Heave:
	Internally mounted OEM version
	0.04°
	5 cm or 5% (whichever is greater)

SOUND VELOCITY SENSOR	Internally mounted OEM version of AML Micro•X 1400 m/s to 1600 m/s +/- 0.025 m/s
MAX. OPERATING DEPTH (Submersion depth)	300 m (984') Contact Imagenex if a greater depth rating is required
INTERFACE TO PC	Ethernet (100 Mbps) using TCP/IP
MAX. CABLE LENGTH	100 m (328') on CAT5-e, longer cable runs possible with additional hardware
CONNECTOR	Underwater wet-mateable 8 conductor
POWER SUPPLY (sonar head only)	22 - 50 VDC at less than 15 Watts
DIMENSIONS	424 mm (16.68") L x 133 mm (5.24") H x 105 mm (4.13") W
WEIGHT: In Air **In Water**	~4.7 kg (~10.3 lbs) ~0.8 kg (~1.8 lbs)
MATERIALS	316 Stainless Steel, PVC, Stainless Steel connector

POWER SUPPLY/ TIMING BOX:
 	
DT100 Sensor Interface Relay (DT100 SIR)
	2 port Ethernet switch (DT102xi PC and Survey PC)
	Interfaces to:
	   DT102xi
	   GNSS (GPS)
	   Gyro / Heading Sensor
	100 – 240 VAC or 12 – 36 VDC input range
	Dimensions: 394 mm (15.5") x 314 mm (12.4") x
	                    92 mm (3.6")

MAX. PING RATE	20 Hz

SOFTWARE SPECIFICATIONS:	DT102.exe
WINDOWS™ OPERATING SYSTEM	Windows™ XP, Vista, 7, 8, 10
DISPLAY MODES	Sector, Linear, Perspective, Profile, Beam Test
PERSISTENCE (TRAIL)	1 – 300 seconds
RANGE SCALES	5 m, 10 m, 20 m, 30 m, 40 m, 50 m, 60 m, 80 m, 100 m
SECTOR SIZES	30°, 60°, 90°, 120°

FILE FORMAT:
    RAW DATA
    PROFILE POINT
	
	(filename).D1R
	(filename).D1P

RECOMMENDED MINIMUM COMPUTER REQUIREMENTS:	2 GHz Pentium 4 256 MB RAM 20 GB Hard Disk 1024 x 768 screen resolution

3.25in
[82.5mm]

10.75in
[272.9mm]

12.35in
[313.8mm]

14.00in
[355.5mm]

15.51in
[393.9mm]

3.60in
[91.4mm]

ORDERING INFORMATION:		
300 m UNIT	Standard	838-000-102
Sensor Interface Relay box (DT100 SIR)	Standard	837-000-007
IP Address*	Option	-020

*Note: Standard IP Address is 192.168.0.2
A different IP Address may be specified upon ordering.

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