

# GeoRes SubSea Sensor Array Cable



## Continuous Un-Armored Shallow Water 4C Sensor Array Cable

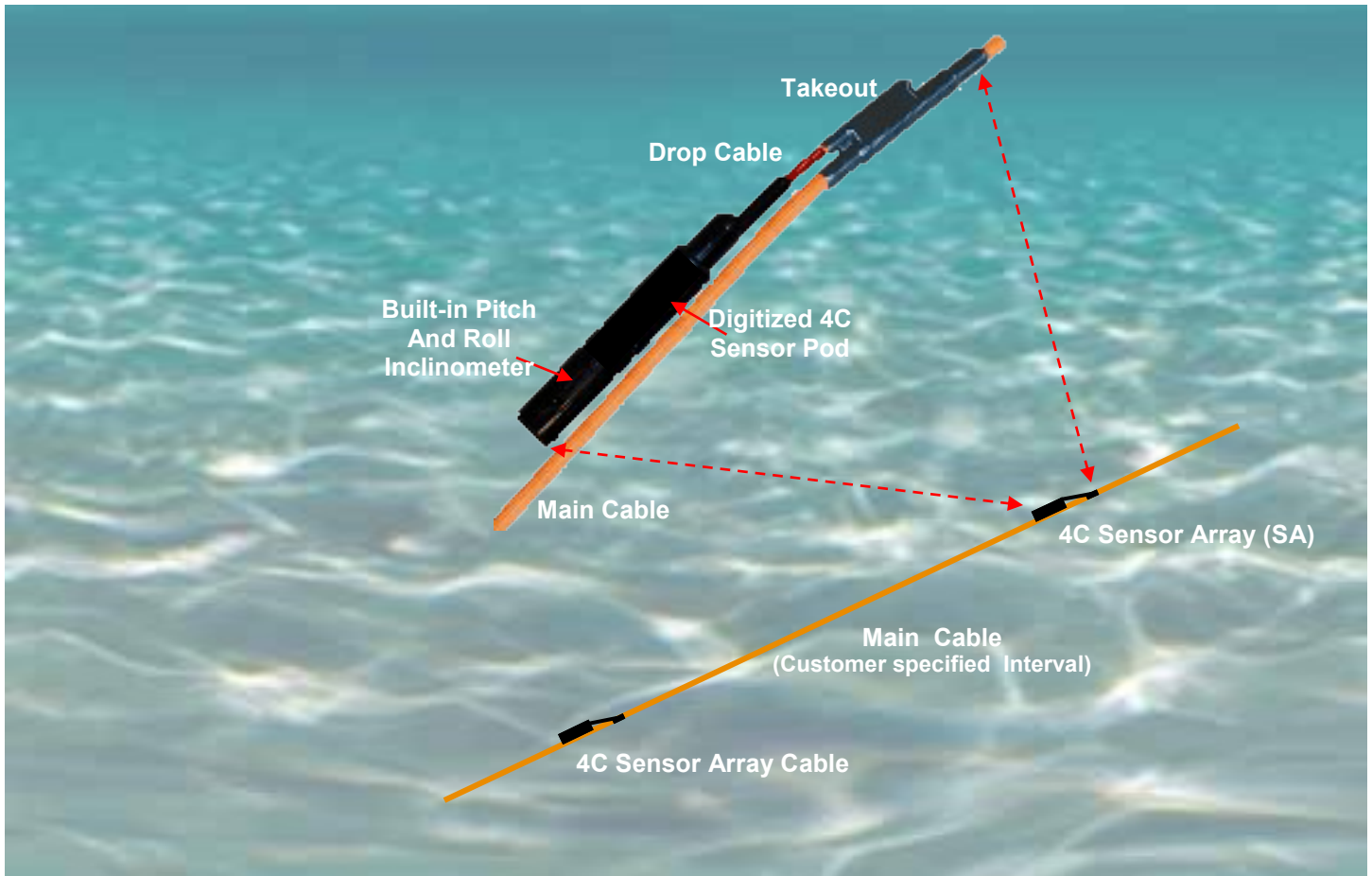
### Features:

- Continuous long length cables
- 4-component digitized 24-bit sensor modules
- SubSea (“OBC”) Retrievable

SubSea 4C sensor array cable (SA Cable) is designed specifically to maximize the reliability of the in-water equipment. The SubSea cable array segments can be manufactured in customer-specified section lengths and sensor station intervals.

The digitized sensor module contains power supplies, digitization, and telemetry electronics. The module is attached to the take-out cable via a connector. Both ends of a SA cable section are terminated by GERI dry-mate connectors.

The main cable is robustly designed to withstand repeated deployment and retrieval.



# GeoRes SubSea Sensor Array Cable



## SPECIFICATIONS

### GeoRes Imagine HC Central Electronics

Channel Capacity	Scalable: user specified number of GeoRes remote SubSea digitizers
Sample Interval	1, 2, 4 ms
Overlapping record	System can time stamp and store overlapping records
Data Format on Disc	SEGD Rev 2
Recording Modes	Time Break Trigger Continuous Recording Overlapping Shooting (System records overlapping records: time stamp on data header)
GPS synchronization	Better than 1 part in 10 million
Maximum line lengths	Geophysical line-19 KM @ 25M station spacing @ 2ms
Test Capability	Harmonic distortion analysis Impulse response tests Dynamic range/resolution tests Noise tests: amplifier RMS noise, receiver RMS noise Gain accuracy Leakage tests Crossfeed isolation

### GeoRes SubSea 4C Unit Specifications

Digitization	24-Bit Delta-Sigma
Gain accuracy	Better than 1%
Anti-alias filter	80% Nyquist
Instantaneous dynamic range	120 dB @ 2ms sample interval
Crossfeed isolation	>90 dB
THD	<0.2%
Operating temperature range	-5 to +50°C
Storage temperature range	-40 to +50°C



# GeoRes SubSea Sensor Array Cable

## SPECIFICATIONS



### Geophone Specifications OMNI-X Geophone

3 Orthogonal oriented OMNI-LT-X Geophones mounted in 4C Digitizer Module

#### Specifications:

Resonance Frequency	15 Hz +10 % to -5%
DC Resistance	870 ohms $\pm$ 5%
Distortion	<0.20% @ 15Hz with driving velocity of .7 in/sec (1.8 cm/sec) P-P
Typical Spurious Frequency	>160Hz
Intrinsic Voltage Sensitivity (G)	.560 V/in/s (.220 V/cm/s) $\pm$ 5%

Open Circuit Damping	68% damping +10% to -15%
Damping Constant ( $B_c R_t$ )	214.9
Operating Angle	0 <sup>0</sup> to 180 <sup>0</sup> (Omni-directional)

#### Physical Specifications

Moving Mass (M)	.423 oz, (12.0 g) $\pm$ 5%
Case to Case Motion P-P	.040 in (.102 cm) MIN .160 in (.406 cm) MAX
Operating Temperature	-45 <sup>0</sup> C to 100 <sup>0</sup> C Continuous Duty
Dimensions	Height (less terminals): 1.55 in (3.94 cm) Diameter: 1.12 in (2.84 cm) Weight: 4.23 oz (120 g) Terminal Height: .16 in (.41 cm)

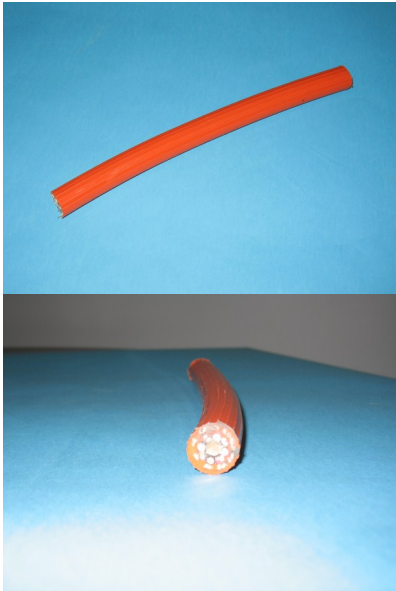
# GeoRes SubSea Sensor Array Cable

## SPECIFICATIONS

### Hydrophone Specifications

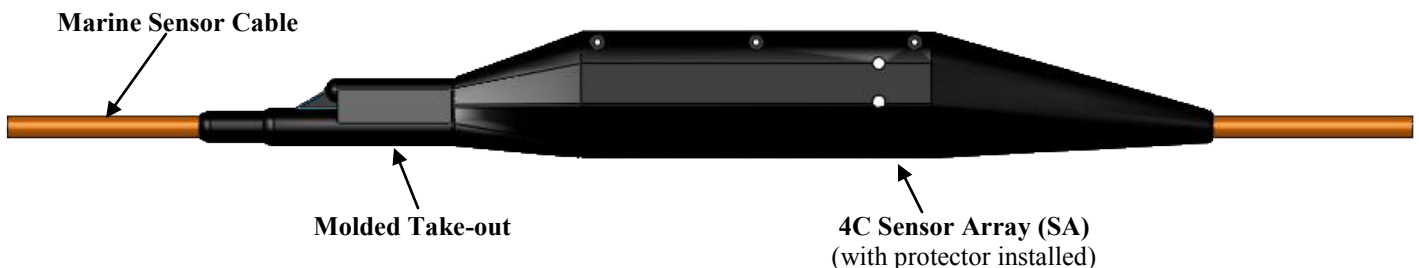
#### General Specifications:

Natural Frequency	10 Hz	
Voltage Sensitivity	6.4 Volts/Bar	
Impedance	250 Ohms	
DC Resistance ±	160 Ohms	
Operating Temperature Range	0-35°C	32-95°F
Operational Depth	0.30-200 m	1-656 ft
Dimension (Length x Diameter x Weight)	16.76 cm x 5.08 cm x 263g	6.60in x 2.00 in x 0.56 lbs



### Un-Armored Cable Specifications

Cable weight:	349 Lbs. per 1000 feet in air
Cable weight:	97 Lbs. per 1000 feet in fresh water
Cable weight:	91 Lbs. per 1000 feet in salt water
Outer Diameter:	0.904 inches
Break Strength:	6,900 Lbs. (Fixed End)
Break Strength:	6,900 Lbs. (Free End)
Working Load:	1300 Lbs.
Bend Radius:	13 inches (Minimum)
Maximum Water Depth:	150M



7007 Pinemont Drive • Houston, Texas 77040 USA  
[www.geospace.com](http://www.geospace.com)  
 Tel: 713.986.4444 • Fax: 713.986.4445



Regional  
 Offices  
 Geospace Technologies, Canada  
 2735 - 37<sup>th</sup> Avenue N.E.  
 Calgary, Alberta, Canada T1Y 5R8  
 403 250-9600

Geospace Technologies, Eurasia  
 Kirovogradskaya, 36  
 Ufa, Baskortostan, Russia 450001  
 011 (7) 3472 25 39 73

Geospace Technologies, China  
 Room 700, 7th Floor, Lido Office Tower, Lido Place  
 Jichang Road, Jiang Tai Road, Beijing, 100004, P.R.China  
 011 (86) 10 643 78 758

Geospace Engineering Resources International (GERI), UK  
 F3 Bramingham Business Park, Enterprise Way, Luton  
 Bedfordshire LU3 4BU, England  
 011 44 (0) 7775 688 467