

S2CR 7/17W USBL

PRODUCT INFORMATION



Simultaneous positioning and communication

S2C Technology: accurate 3D positioning and reliable data transmissions with up to 6.9 kbit/s

Directional beam pattern, optimized for vertical and slant channels

Depth rated long-range device

Compatible with S2CR 7/17 and S2CR 7/17D

TECHNICAL SPECIFICATIONS

GENERAL	OPERATING DEPTH	Delrin	200 m
		Aluminium Alloy	1000 m
		Stainless Steel	2000 m
		Titanium	10000 m available upon request
	OPERATING RANGE		up to 11000
	FREQUENCY BAND		7 - 17 kHz
	TRANSDUCER BEAM PATTERN		hemispherical
USBL	SLANT RANGE ACCURACY ¹⁾		0.01 m
	BEARING RESOLUTION		0.1 degrees
	NOMINAL SNR		10 dB
CONNECTION	ACOUSTIC CONNECTION		up to 6.9 kbit/s
	BIT ERROR RATE		less than 10 ⁻¹⁰
	INTERNAL DATA BUFFER		1 MB, configurable
	HOST INTERFACE ²⁾		Ethernet, RS-232 (RS-485/422*)
	INTERFACE CONNECTOR		up to 2 SubConn® Metal Shell 1500 Series
POWER	CONSUMPTION	Stand-by Mode	2.5 mW
		Listen Mode ³⁾	5 - 285 mW
		Receive Mode ⁴⁾	1.4W
		Transmit Mode	3 W, 2000 m range 10 W, 4000 m range 40 W, 8000 m range 65 W, max. available
	POWER SUPPLY ⁵⁾		External 24 VDC (12 VDC*) or internal rechargeable battery*
PHYSICAL	DIMENSIONS ⁶⁾	Housing/USBL sensor	Ø 114 mm x 224 mm / Ø 170 mm x 210 mm
		Total length	434 mm
	WEIGHT	dry/wet	Delrin* 8500 / 4230 g
		Aluminium Alloy *	9800 / 5300 g
		Stainless Steel	15600 / 9540* g
	Titanium*	13420 / 8920 g	

* optional

¹⁾ Slant range estimation is based on the measured time delay, slant range accuracy depends on sound velocity profile, refraction and signal-to-noise ratio.

²⁾ See the Configuration Options for available standard interface combinations.

³⁾ User-configurable Listen Mode is only available with a WakeUp module installed. Power consumption in Listen Mode depends on Listen Mode settings.

⁴⁾ Power consumption for the RS-232 interface option. Add 500 mW for the Ethernet interface option. Add 0.3 W for Wake-Up Module.

⁵⁾ Contact EvoLogics for more information on power supply options.

⁶⁾ Dimensions of a Stainless Steel housing, other builds are slightly larger. Marked* weights are estimates.

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APPLICATIONS

Positioning, navigation and communication for deep-sea AUVs and ROVs
 Seafloor observatories
 Underwater acoustic sensor networks

CONFIGURATION OPTIONS

HOUSING	DELFIN	Plastic non-magnetic corrosion-resistant housing for short-term deployments, depth rating 200 m	
	ALUMINIUM ALLOY	Light metal housing for short-term deployments, depth rating 1000 m	
	STAINLESS STEEL	Robust metal, suitable for long-term deployments in harsh environments, depth rating 2000 m	
	TITANIUM	Corrosion resistant, suitable for long-term deployments in harsh environments, depth rating 6000 m	
INTERFACE	1 CONNECTOR	RS-232 ¹⁾ or Ethernet	
	2 CONNECTORS	RS-232 + RS-232 or RS-232 + Ethernet	
MODULES	WAKE-UP MODULE ²⁾	RS-232 interface	✓
		Ethernet interface	✗
		RS-232 + RS-232 interface	✓
		RS-232 + Ethernet interface	✗
	ROLL, PITCH, HEADING ³⁾	internal AHRS, Xsens® MTx	

¹⁾ One RS-232 Interface can be replaced with either RS-485 or RS-422 interface. More interface configurations available by special request. Contact EvoLogics for more information.

²⁾ The Wake Up Module turns the rest of the device on if it detects incoming acoustic signals or incoming data on the host interface. Once the device completes receiving or transmitting data, it switches itself off.

³⁾ Power consumption increases by 800 mW with an AHRS installed.