

S2C R USBL MODEM



Built on the S2C modem platform, S2CR USBL modem enables tracking along with data transmission

- Simultaneous tracking and data transmission
- Can track multiple (up to 255) targets
- *Distance measurement accuracy:*
 - 1.5 cm: In stationary arrangements or slow motion
 - 5–10 cm: Practical achievements when tracking fast moving AUV involving acceleration, deceleration, sharp turns etc.
- *Angular resolution:*
 - *Under 0.5 degree in stationary arrangements*
- No deck unit required and can be connected directly to the ship host PC
- Absolute and relative coordinates possible
- Available in OEM version for easy integration into AUV/ROV electronics
- Power supply 24V DC (12V DC Optionally)

KEY ADVANTAGES

HIGH PERFORMANCE

- Guaranteed data delivery even under adverse conditions
- Delivery of “instant messages” on top of ongoing data stream (avoids need for an extra emergency or command link)
- Full duplex data transmission
- Low energy consumption
- High speed digital communication

SUPERIOR DATA MANAGEMENT

- Built in forward error correction and data compression
- Error rate of less than 10^{-9} even when conditions deteriorate during transfer
- Asynchronous transfer with user adjustable priorities for data streams from multiple data sources
- Built in data logger with extensible option

EASY USAGE

- Very compact and low weight
- Built in relative speed and distance measurements
- Smooth underwater networking with built in networking feature
- OEM option and system integration service
- Transparent serial interface with advanced commands set

EvoLogics®

**S2C SIGNALS DELIVER YOUR SUBSEA DATA
WHERE OTHERS FAIL**



Underwater communication equipment for professionals

S2C R DSP ENGINE



Embedded data acquisition and DSP module for customer specific application

EvoLogics GmbH
Ackerstrasse 76 | 13355 Berlin, Germany
phone: +49 (0)30 46 06 82 26 | fax: +49 (0)30 46 06 82 15
email: info@evologics.com | www.evologics.com

THE NEW GENERATION OF SMART S2C HYDROACOUSTIC MODEMS

SPECIFICATION	S2C R 48/78	S2C R 40/80	S2C R 18/34	S2C R 12/22	S2C R 8/16
S2C R FAMILY					
WORKING RANGE.	1000 m	2000 m	3500 m	6000 m	8000 m
MAX. ACHIEVABLE RANGE.	2000 meters (with high power in good conditions)	2500 meters (with high power in good conditions)	4500 meters (with high power in good conditions)	8000 meters (with high power in good conditions)	10000 meters (with high power in good conditions)
MAXIMUM DEPTH.	100, 1000, 2000 meters (6000 meters deep rated)	100, 1000, 2000 meters (6000 meters deep rated)	100, 1000, 2000 meters (6000 meters deep rated)	100, 1000, 3500 meters (6000 meters deep rated)	100, 1000, 3500 meters (6000 meters deep rated)
HYDROACOUSTIC LINK (Nominal bit rate)	up to 28 kbit/s	up to 33.0 Kbit/s	up to 14 kbit/s	up to 10 kbit/s	up to 6.5 kbit/s
INTERFACES.	2x RS 232 Ethernet	2x RS 232 Ethernet	2x RS 232 Ethernet	2x RS 232 Ethernet	2x RS 232 Ethernet
INTERNAL DATA BUFFER.	1 MB (user configurable)	1 MB (user configurable)	1 MB (user configurable)	1 MB (user configurable)	1 MB (user configurable)
ERROR RATE.	less than 10 ⁻⁹ (with correction algorithm)	less than 10 ⁻⁹ (with correction algorithm)	less than 10 ⁻⁹ (with correction algorithm)	less than 10 ⁻⁹ (with correction algorithm)	less than 10 ⁻⁹ (with correction algorithm)
POWER SOURCE.	24V DC (Optionally 12V DC)	24V DC (Optionally 12V DC)	24V DC (Optionally 12V DC)	24V DC (Optionally 12V DC)	24V DC (Optionally 12V DC)
POWER CONSUMPTION.	Standby mode: 3mW Receive mode: 5 ...500 mW (adjustable toggle cycle) Transmit mode: 250 m - 2.5 W 500 m - 3.5 W 1000 m - 40 W high power mode provides up to 80 W for transmission	Standby mode: 3mW Receive mode: 5 ...500 mW (adjustable toggle cycle) Transmit mode: 250 m - 2.5 W 500 m - 3.5 W 1000 m - 40 W high power mode provides up to 80 W for transmission	Standby mode: 3mW Receive mode: 5 ...500 mW (adjustable toggle cycle) Transmit mode: 1000 m - 2.8 W 2000 m - 8 W 3500 m - 35 W high power mode provides up to 80 W for transmission	Standby mode: 3mW Receive mode: 5 ...500 mW (adjustable toggle cycle) Transmit mode: 1500 m - 2.5 W 3000 m - 5 W 6000 m - 15 W high power mode provides up to 80 W for transmission	Standby mode: 3mW Receive mode: 5 ...500 mW (adjustable toggle cycle) Transmit mode: 2000 m - 3 W 4000 m - 10 W 8000 m - 40 W high power mode provides up to 80 W for transmission
TRANSDUCER BEAM PATTERN.	horizontally omnidirectional	directional conical beam of 70 degrees	horizontal omnidirectional	directional conical beam of 70 degrees	spherical
OPERATING FREQUENCY BAND.	48...78 kHz	40...80 kHz	18...34 kHz	12...22 kHz	8...16 kHz
DIMENSIONS.*	housing length with transducer	housing length with transducer	housing length with transducer	housing length with transducer	housing length with transducer
	Ø 100 mm; length 170 mm 260 mm	Ø 100 mm; length 170 mm 260 mm	Ø 100 mm; length 170 mm 260 mm	Ø 100 mm; length 200 mm 330 mm	Ø 100 mm; length 180 mm 320 mm
* Deep rated modems are slightly larger					
WEIGHT.	AlMg, in air/water Delrin, in air/water Stainless Steel in air/water Ti, in air/water	AlMg, in air/water Delrin, in air/water Stainless Steel in air/water Ti, in air/water	AlMg, in air/water Delrin, in air/water Stainless Steel in air/water Ti, in air/water	AlMg, in air/water Delrin, in air/water Stainless Steel in air/water Ti, in air/water	AlMg, in air/water Delrin, in air/water Stainless Steel in air/water Ti, in air/water
	2100 g / 1400 g 1390 g / 690 g 8000 g / 5800 g 6500 g / 4500 g	2100 g / 1400 g 1390 g / 690 g 8000 g / 5800 g 6500 g / 4500 g	2170 g / 1470 g 1420 g / 720 g 8000 g / 5800 g 6500 g / 4500 g	3580 g / 980 g 2930 g / 430 g 7350 g / 4750g	4160 g / 1560 g 2990 g / 490 g 7780 g / 5180g