DELPHIS

SUCCORFISH

Data Sheet

Delphis are a low-cost, low-power, miniature acoustic communication and ranging device for underwater vehicles, divers and subsea instruments. Data messages may be exchanged between units and an efficient “ping” protocol is implemented for range measurement by transponder operation. If multiple units are deployed in known locations, then long baseline positioning (LBL) operation is possible.

PHYSICAL LAYER
Spread spectrum (orthogonal signalling) with BPSK modulation and error correction code

SUPPLY CURRENT @5V
Listening: 2.5mA
Receiving: 5mA
Transmitting: max 300mA

SUPPLY VOLTAGE
3 – 6.5v dc (5V or 6V supply recommended)

ACOUSTIC FREQUENCY
24-32 kHz

ACOUSTIC SOURCE LEVEL
~168 dB re 1μPa @ 1m

ACOUSTIC DIRECTIVITY
Near omnidirectional (reduction around cable entry of potted unit).

ACOUSTIC DATA RATE (RAW)
640 bits/s, unicast and broadcast data messages up to 64 bytes in length.

ACOUSTIC THROUGHPUT (MAX)
463 bits/s

ADDRESSING
Up to 256 units (addresses 0-255)

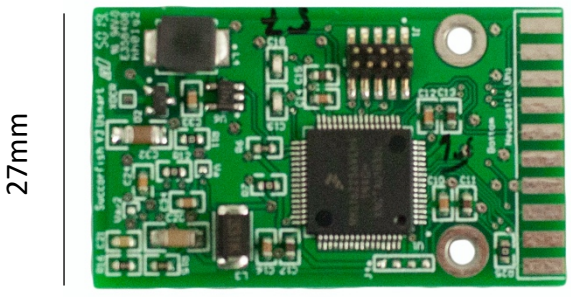
RANGING INCREMENT
4.7cm (c=1500m/s)

RANGING VARIANCE
~10cm

MAXIMUM RANGE*
2 km in sea water
3.5 km in fresh water

RS232 interface
9600 Baud, 8-bit, no parity, 1 stop bit, no flow control

DEPTH RATING
Depth rated to 350 metres +



*** Specifications subject to typical acoustic propagation and noise conditions.**

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