



PopotoModem

Enabling the underwater IOT revolution™

Popoto S1000RP

Product Overview:

The Popoto S1000RP is an advanced underwater acoustic modem delivering superb performance, unique features, and flexible interfacing, making it suitable for nearly any application. Optimized for remote power operation and a tiny form factor, the S1000RP features a compact machined aluminum casing capable of withstanding depths of up to 1000 meters and a transmitter with up to 175-180 dB (re 1 μ Pa @ 1m), making it both versatile and robust.

Features:

- Compact 315mm x 49mm x 49mm form factor
- Multiple modulation schemes from 80 BPS to 10240 BPS
- Python and MATLAB® APIs for on-board data processing and system automation
- Acoustic ranging (Accurate to <0.3m)
- Baseband and passband waveform playback and recording during modem operation



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Data Transfer	
Data Rates	80 bps with Frequency Hopping FSK 10240, 5120, 2560, 1280, 640 bps with PSK
Storage	128GB microSD
Transmit Power	175-180 dB (re 1µPa @ 1m)
Range	1-4 km depending on conditions and modulation scheme selected
Frequencies	22-35 KHz selectable
Transducer Type	20-30 KHz Omnidirectional
Power	
Power Draw	GPIO Enabled Sleep: < 10uW Acoustic Wake Up Deep Sleep: < 45 mW Acoustic Wake Up Sleep: 150 mW Active Receive: 1.5 W
Interface	
Data Connections	Ethernet, RS-422, RS-232
External Interface Connections	SPI Bus, I2C Bus, GPIO, Analog
APIs	Python, C++, MATLAB®, JSON, JACK, and MARIA
Processor	ARM9
Operating System	Debian Linux for user applications
Hardware	
Size	315mm x 49mm x 49mm
Weight	Dry: 800g In Sea Water: 250g
Depth Rating	1000m
Export Classifications	5A991 Controlled for anti-terrorism only

