



PopotoModem

Enabling the underwater IOT revolution™

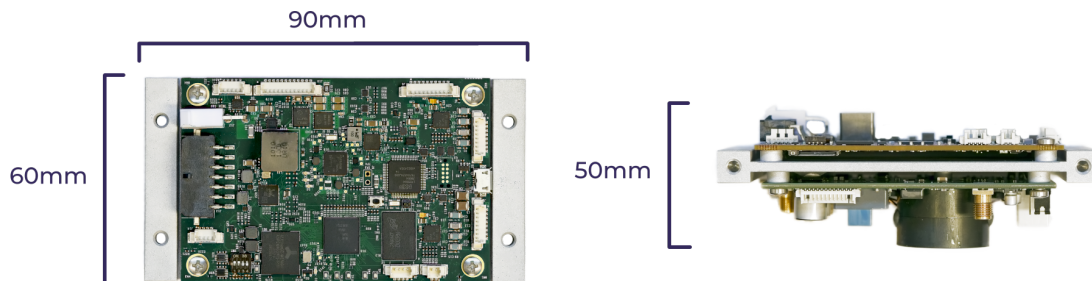
Popoto PMM5544

Product Overview:

As the Popoto PMM5544 delivers superb performance, unique features, and flexible interfacing for nearly any application. Featuring a compact 60x90x50mm form factor and a transmitter capable of up to 185-190 dB SPL (re 1 μ Pa @ 1m) output (using the PMT-28 transducer), the PMM5544 is both versatile and robust.

Features:

- Multiple modulation schemes from 80 BPS to 10240 BPS
- Up to 6 channels of sample-synchronous ADC-DAC input and output.
- MARIA, Python, and MATLAB® APIs for on-board data processing and system automation
- Ethernet, RS422, and RS232 interfaces, including pShell, JSON, and a web interface
- Acoustic ranging (Accurate to <0.3m)
- High-capacity data logging (upgradeable with microSD)
- Baseband and passband waveform playback and recording during modem operation
- Options for JANUS (NATO ANEP-87), Phorcys Stheno, and Phorcys Euryale



PopotoModem

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Data Transfer	
Data Rates	80 bps with Frequency Hopping FSK 10240, 5120, 2560, 1280, 640 bps with PSK Phorcys Stheno & Eurale MS 0-31
User-Accessible Storage	128GB via Included microSD
Range	1-8 km (using PMT-28 transducer, depending on conditions and modulation scheme selected)
Frequencies	10-100kHz 20-35 kHz (Standard Modem Operation)
Voice Communications	
Voice Features Included	Single Sideband Voice Adaptive Squelch and Vox Noise Cancellation
Power	
Operating Voltage Range	8.5-36V
Power Draw	GPIO Enabled Sleep: < 10uW Acoustic Wake Up Deep Sleep: < 45 mW Acoustic Wake Up Sleep: 150 mW Active Receive: 1.5W
Transmit Power	190 dB (re 1μ Pa @ 1m) With PMT-28 Transducer
Interface	
ADC & DAC Data	6 channels sample-synchronous input and output
Data Connections	Gigabit Ethernet, RS-422, RS-232
External Interface Connections	SPI Bus, I2C Bus, GPIO, Analog
APIs	Python, C++, MATLAB®, JSON, JACK, and MARIA
Processor	Dual-Core 1.4GHz Arm® Cortex®-A53
Operating System	Debian Linux for user applications
Hardware	
Size	90mm x 60mm x 50mm
Weight	500g
Export Classifications	5A991 Controlled for anti-terrorism only



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