



## POSEIDON

*Poseidon* is the ultimate leap in amplifier technology for brain monitoring that sets a new standard for signal quality, usability and mobility.

*Poseidon Mini* is miniature, wireless device that enables high-fidelity EEG to be streamed to any WiFi connected device or stored locally on a 32 GB micro SD card. It boasts true DC recording, 24-bit resolution, extremely-high dynamic range and user-selectable filters and sampling rates.



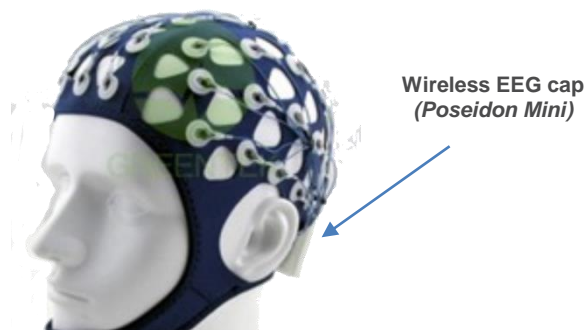
*Poseidon Mini*

### Applications

- Psychology/Neuroscience research
- Subdural ECoG / iEEG
- Scalp EEG
- Event-related potentials (ERPs)
- Evoked potentials (EPs)
- ENG (peripheral-nerve cuffs)
- Sleep (PSG) studies
- EMG, ECG
- Exercise physiology & sports
- Ambulatory monitoring
- Neurofeedback
- Neuromarketing (with eye tracking)
- Brain-Computer Interfaces (BCIs) development

Experiment designs are no longer limited by noise and mobility issues caused by the bulky, artifact-inducing wires and cables in tethered EEG systems. *Poseidon Mini* allows high-quality EEG to be recorded even from subjects during high physical-activity levels (athletes, epileptic & Parkinsonian subjects).

A high-density connector provides a one-connection wireless interface to EEG caps. Electrode-contact quality is monitored by measurement impedance. Device can be recharged while in Logger or WiFi mode.



### Features

- 32 referential channels
- 4 differential channels
- 16 event channels (TTL or strobed)
- True DC recordings
- Huge dynamic range ( $\mu\text{V}$  to V)
- 3D accelerometer (subject's motion)
- Wireless
- 10 / 24 hours per charge (WiFi on / off)
- Micro SD card storage (32 GB)
- WiFi or USB-C connectivity
- Impedance monitoring
- One-connection interface to EEG caps
- Monopolar and bipolar montages



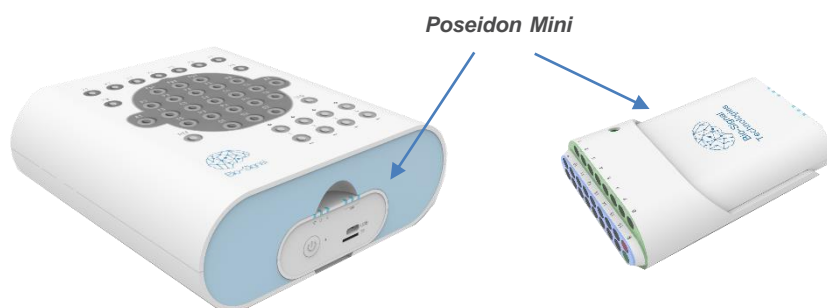
## POSEIDOn

With *Poseidon Mini*, recording high-quality EEG & EMG signals are now possible from a device in the subject's pocket. Wireless triggering provides precision event marking and synchronization with video/audio, electrical/photic stimulators or other control systems.

*Poseidon HBox* is an innovative headbox design with a plug-in slot for *Poseidon Mini*. It transforms the industry-standard design to one with advanced signal-processing, WiFi connectivity and local data storage (Logger). It is equipped with industry-standard touchproof (safety) connectors (DIN 42802-1). *Poseidon Plus* is an ultra-compact, touchproof interface for recording 32-ch EEG/ECOG/iEEG.

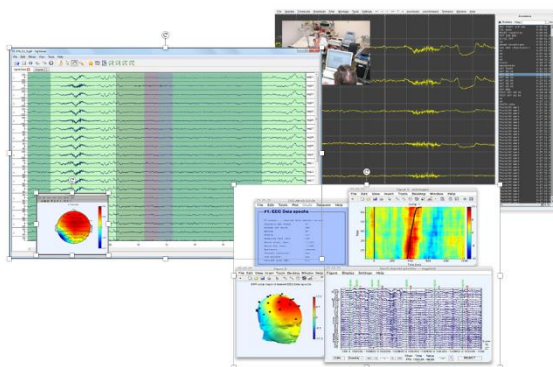
### Specifications

- Analog Inputs: 36 (32 referential, 4 bipolar)
- Sampling: 24 bits up to 4 kHz
- Bandwidth: DC – 500 Hz
- Input Impedance: > 1 G $\Omega$  (DC) || 8 pF
- Input-Referred Noise: < 0.5  $\mu$ Vrms
- CMRR: > 120 dB (50/60 Hz)
- Input Range: +/- 4.5 V
- Resolution: 0.536  $\mu$ V
- Dynamic Range: 128 dB
- Digital Inputs: 16 (TTL or strobed-word)
- Wireless: Low-power WiFi 802.11n
- Transmission Range: 10 m
- Battery: LiPo (5,000 mAh, rechargeable)
- Battery Life:
  - > 10 hours WiFi on
  - > 24 hours Logger on (WiFi off)
- Local Storage: micro SD card (32 GB)
- HBox: 150 mm x 90 mm x 50 mm
- Plus: 95 mm x 78 mm x 37 mm
- Mini: 92 mm x 75 mm x 30 mm
- HBox / Plus / Mini Weight: 300g / 30g / 180g



*Poseidon HBox*

*Poseidon Plus*



*Poseidon's* intuitive and powerful software allows you to process, visualize and analyze data including such analyses as power spectrum and electrode-contact quality. Easily configure for monopolar or bipolar montages or view alpha, beta, theta, delta, and gamma waves – all in real time.

Export data to BDF, EDF, CSV or binary files for importing into 3rd-party applications such as MATLAB, EEGLAB, BCILAB, FieldTrip, SciPy, and EDF Browser. MATLAB & C/C++ SDKs are provided for development of real-time EEG measurement and analysis applications (e.g., Brain-Computer Interfaces, BCIs).