Bitbrain

WATER-BASED EEG TECHNOLOGY

Versatile 8/16/32/64ch EEG

No gel, no prep.
Just water and ready for research.

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No gel, no prep. **Just water and ready for research.**

Portable and wireless water-based EEG cap with 8, 16, 32 and 64 channels. Great comfort to the researcher and freedom of movement to the user.

Semi-dry EEG sensors
Sensors moistened with tap water. Up to 3+ hours of continuous recording.

Advanced electronics
Active shielding with optimized DRL to improve SNR and reduce artifacts.

Flexibility
Electrodes can be placed anywhere in the International 10-10/10-20 system from infants to adults.

Mobile and wireless
Comfortable technology that is fast and easy to set up and wear. Can be integrated with eye tracking, VR, and many other technologies.

Discover how **Bitbrain technology is applied across various research fields.**

For the online version, click here or scan the QR code if you're viewing the printed version.

Use Cases

Out-of-the Lab Research

Expand your research scenarios in **psychology** and **neuroscience** by monitoring brain activity out of the lab.

Clinical and Rehabilitation Applications

Perform clinical research, new neurorehabilitation therapies or assessment of interventions based on EEG patterns.

Multimodal and Immersive Studies

Combine EEG correlates with other biosignals (GSR, EMG, HR, etc.) and Virtual Reality to explore and learn about human behaviour.

Technical Specifications

HARDWARE

SENSORS AND HEADSET	8ch	16ch	32ch
EEG channels	8x EEG, REF, GND	16x EEG, REF, GND	32x EEG, REF, GND
Type of sensors	Water-based sensors, active shielding and optimized DRL		
Head perimeter	420–660 mm (Cap sizes S, S/M, M, M/L,L, XL)		

WIRELESS AMPLIFIER		
Sampling rate/resolution	256 SPS at 24 bits	
Bandwidth	DC–40 Hz (3rd-order LPF)	DC–70 Hz (3rd-order LPF)
Real-time impedance check	Yes (relative contact impedance)	
Integrated sensors	Integrated IMU (9 axis): Accelerometer, gyroscope and magnetometer	
Other inputs	1x digital input (1 bit) /optical trigger (photodiode)	1x optical trigger 1x digital input 2x bipolar ExG
Data backup	Yes (removable microSD card, up to 8 GB, Class ≥ 10)	

DATA STREAMING AND STORE	
Data transmission and range	Bluetooth 2.1 + EDR with 10 meters in direct sight
Data files	CSV, EDF

POWER	
Battery	Rechargeable lipo battery. Charging time < 3 h
Autonomy	> 8 h

GENERAL	8ch	16ch	32ch
Weight	82 g	125 g	165 g
Warranty	2 years		
Certifications	CE (Directive 2014/53)		

SOFTWARE

BITBRAIN CORE RESEARCH SOFTWARE (INCLUDED WITH EQUIPMENT)

Bitbrain SennsLite

Real-time visualization, recording, and synchronized data across Bitbrain devices. LSL-compatible for third-party real-time I/O (BCI2000, OpenVibe, NeuroPype, Medusa). CSV and EDF export for Python (MNE), MATLAB (EEGLAB/FieldTrip/BCILAB), and more.

Bitbrain SDK

SDK in C for maximum performance and portability enabling Python integration. Compatible with Windows OS and Linux (x86).

BITBRAIN EXTENDED RESEARCH TOOLS (LICENSED)

Bitbrain SennsLab

Synchronization software for experimental design and data collection, integrating 35+ sensor modalities (EEG, eye-tracking, biosignals). Compatible with third-party software via TCP/IP and CSV export.

Technical Overview

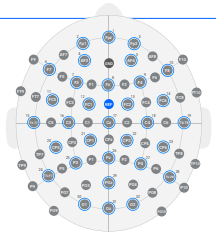
Adapted for the pediatric population. Wireless, mobile and light hardware.

Reliable dry-EEG monitoring with 24 bits at 256Hz for 3+ hours. Bluetooth streaming and/or on-board SD storage.

Clean technology that is **easy to transport and store.**

SENSOR LAYOUT

Flexible electrode placement within the international 10-20 and 10-10 system.



BUNDLE INCLUDES

- Amplifier
- EEG cap and chinstrap
- Set of EEG electrodes and connectors
- Sensor holder
- Sensor sockets
- Wet sensors (sponges)
- Measuring band
- 8GB Class-10 MicroSD card with SD adaptor
- Charger + adapters

Bitbrain

We invite you to explore our scientific publications section.

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