

Minimal EEG Air

Wearable and portable dry-EEG device optimised to monitor basic cognitive and emotional states in real-world applications.



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Wearable dry-EEG device with sensors located over frontal and occipital brain areas, optimized for basic cognitive and emotional states estimation.

- **Wearable and comfortable**

Fast and simple to set up. Participants forget that they are wearing it in few minutes.

- **Dry EEG sensors**

No need to apply electrolytic substances or saline solutions.

- **Advanced electronics**

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



- **Mechanical support**

Flexible arcs and sensor adjustments that adapt to the head morphology and hair volume.

- **Connectivity and storage**

Bluetooth real time EEG streaming and local SD storage.

- **Battery**

8+ hours in streaming and in local SD storage.

Some applications



Develop new ways to monitor EEG brain signals in natural and ecological real-world scenarios.



Discover new forms of interaction with digital and physical products, environments or new experiences.

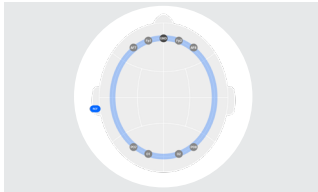


Create new interventions based on brain-computer interfaces for health and wellness.



Learn about the brain correlates of human behaviour **in combination with other biosignal technologies, eye trackers, and more.**

Technical overview



Layout optimized for pre-frontal alpha asymmetry, occipital alpha, visual P300 and others.



Wearable and ultralight (130g) EEG headset. Quick and easy set up anywhere, and under any circumstance.



Reliable dry-EEG monitoring with 24 bits at 256Hz for 8+ hours. Bluetooth streaming and/or on-board SD storage.



Clean technology that is easy to transport and store without maintenance.

Hardware specifications

Sensors and headset	
EEG channels	8 x EEG (Fp1, Fp2, AF7, AF8, PO7, PO8, O1, O2), REF (A1) and GND (Fpz)
Type of sensors/electronics	EEG dry sensors with active shielding and optimized DRL
Head perimeter	53cm - 61cm
Wireless Amplifier	
Sampling rate/resolution	256 SPS at 24 bits
Bandwidth	DC – 40Hz (3 rd order LPF)
Online/real-time impedance check	Yes (relative contact impedance)
Integrated sensors	Integrated IMU (9 axis): accelerometer, gyroscope and magnetometer.
Other inputs	1 x Digital input (1 bit), 1 x optical trigger
Input range and noise	±100 mV, < 1 µVRMS (0.5 – 30Hz) @256Hz
CMRR / Input impedance	>100 dB @50Hz, > 50 GΩ
Data backup	Yes (removable µSD card) (max 8GB. Class ≥ 10)
Data streaming and store	
Data transmission and range	Bluetooth 2.1 + EDR with 10 meters in direct sight
Data files	CSV
Power	
Battery	Rechargeable lipo battery. Charging time <3h
Autonomy	> 8 h
General	
Weight	Headset: 130g, Amplifier: 82g
Maintenance	Wipes moistened in tap water.
Warranty	2 years
Certifications	CE and CB, with EN 60950, EN 55032, EN 55024

Software specifications

Bitbrain software kit (included with equipment)	
Bitbrain real-time SDK	In C/C++ for Windows and Linux.
Bitbrain data acquisition and visualization suite	Live visualization, streaming or SD recording, data export in CSV and raw data visualization.
Third parties and real-time I/O	LabStreamingLayer LSL compatibility (Matlab, Python, BCI2000, OpenVibe, NeuroPype, etc).
Third parties data processing	Matlab (EEGLAB, FieldTrip, BCI LAB, etc), Python (MNE, etc) and more.

Bitbrain software platforms (optional)

Bitbrain Viewer Software	Software for data visualization and recording, with large compatibility with real-time I/O and data processing third parties.
Bitbrain Software Development Kit	Software kit consisting of different scripts that allow communication and control of the hardware used. It is a starting point for the development of brain-computer interface applications.
Bitbrain Human Behaviour Research Lab	Practical research platform for experiment design and data acquisition with 30+ sensor modalities seamlessly synchronized and analyzed with a wide range of emotional and cognitive biometrics available.

Bundle includes

- EEG headset and amplifier
- Power supply
- Storage base
- Instructions
- Suitcase
- Bitbrain Software Kit

Additional services

Installation and Initial Training

Our team provides a training course that includes the installation of your EEG headset and software.

Real-world research and applications



Europe

Zaragoza, Spain

Calle. Sta. Teresa de Jesús, 32,
50006 Zaragoza
+34 931 444 823

America

New York, United States

228 E 45th Street. Suite 9E
New York, NY 10017



Email

info@bitbrain.com

Website

www.bitbrain.com
