Bitbrain

DRY EEG TECHNOLOGY

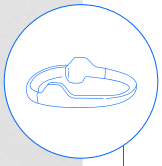
Air 8ch EEG

Wearable EEG for deep insights in cognitive and emotional research

Air 8ch EEG

Dry-EEG for **real-world applications**

Lightweight device with sensors located over frontal and occipital areas, **optimized for comfortable and reliable recordings** in natural environments.



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.

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

Flexible, adaptive Design
Adjustable arcs and sensor adjustments ensure the device adapts to head shape and hair volume, maintaining reliable contact in every recording.

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

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Use Cases

Innovation for Real-World Brain Monitoring

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

Empowering Wellness with Brain Computer Interface

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

Multimodal Insights into Human Behavior

Explore the brain correlates of human behavior by **combining EEG with other biosignal technologies, eye tracking, and more.**

Technical Specifications

HARDWARE

SENSORS AND HEADSET

EEG channels	8x EEG (Fp1, Fp2, AF7, AF8, PO7, PO8, O1, O2), REF (A1) and GND (Fpz)
Type of sensors/ electronics	Dry EEG sensors with active shielding and optimized DRL
Head perimeter	530–610 mm

WIRELESS AMPLIFIER

Sampling rate/resolution	256 SPS at 24 bits
Bandwidth	DC – 40Hz (3º order LPF)
Online/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), 1x 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 microSD card, up to 8GB, 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	> 6 h

GENERAL

Weight	Amplifier: 82g
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

Wearable and ultralight (82g) EEG headset. Quick and easy set up anywhere, and under any circumstances.

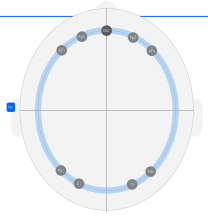
Reliable dry-EEG monitoring with 24 bits at 256Hz for 6 hours.

Bluetooth streaming and/or on-board SD storage.

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

SENSOR LAYOUT

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



BUNDLE INCLUDES

- EEG headset and amplifier
- Charger and adapter
- Headband stand
- 8GB Class-10 MicroSD card with SD adaptor

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We invite you to explore our scientific publications section.

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Zaragoza, Spain
Calle. Sta. Teresa de Jesús, 32,
50006 Zaragoza

info@bitbrain.com
www.bitbrain.com
+34 931 444 823