

# Hero 9ch EEG

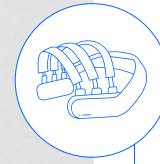
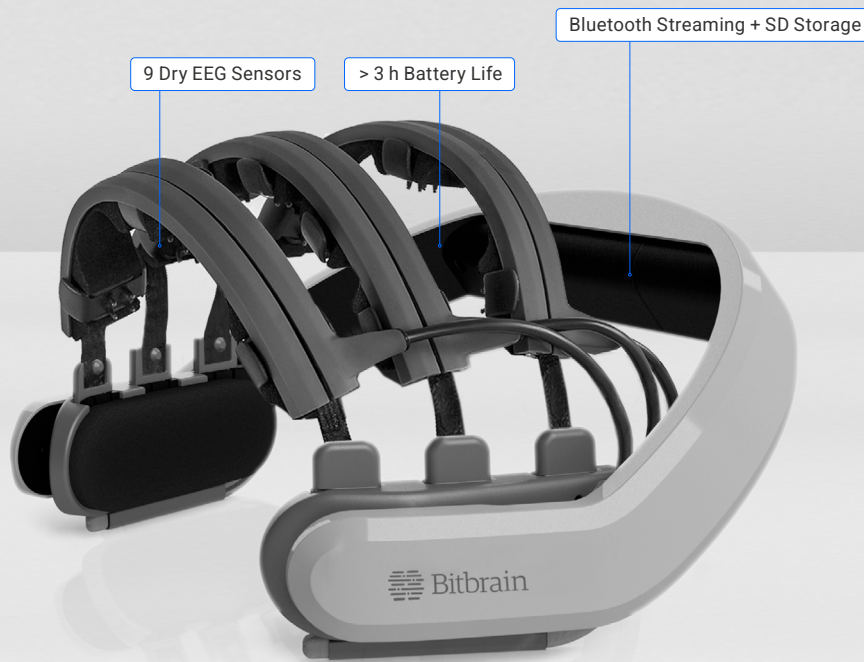
Wearable EEG engineered for **advanced**  
**cognitive and sensorimotor research**



# Hero 9ch EEG

Wearable EEG engineered for **advanced cognitive and sensorimotor research**

Dry-EEG headset with integrated amplifier and storage, **designed for comfortable mobility and advanced neurorehabilitation studies** in natural contexts.



## 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 a few minutes.

## Mechanical support

Flexible arcs and sensor adjustments that ensure comfort, and can adapt to head morphology and hair volume.

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## Use cases



### Neurorehabilitation

**New health interventions** based on brain-computer interfaces for cognitive or motor neurorehabilitation.



### UX and Product Evaluation

Capture natural human behaviour to **evaluate interfaces or physical products** to build optimal user experiences.



### Education and Workspace Optimization

**Improve educational workspaces** by measuring cognitive or sensory-motor estates, individually or in groups.

# Technical Specifications

## HARDWARE

| SENSORS AND HEADSET         |   |
|-----------------------------|---|
| EEG channels                | 9× EEG (FC3, FCz, FC4, C3, Cz, C4, CP3, CPz, CP4); linked ear reference (A2); REF (A1) + GND (A1) |
| Type of sensors/electronics | Dry sensors, active shielding, and optimized DRL  |
| Head perimeter              | 135–165 mm  |

| WIRELESS AMPLIFIER               |  |
|----------------------------------|--|
| Sampling rate/resolution         | 256 SPS at 24 bits   |
| Bandwidth                        | DC – 40Hz (3rd order LPF)  |
| Online/real-time impedance check | Yes (relative contact impedance)                                   |
| Integrated sensors               | Integrated IMU (9 axis): Accelerometer, gyroscope and magnetometer |
| Input range and noise            | ±100 mV; <1 µV RMS (0.5–30 Hz@256 Hz)                              |
| CMRR/Input impedance             | > 100 dB @50Hz, > 50 GΩ  |

| DATA STREAMING AND STORE    |  |
|-----------------------------|--|
| Data transmission and range | Bluetooth 2.1 + EDR with 10 meters in direct sight   |
| Data files                  | CSV, EDF   |
| Data backup                 | Yes (removable microSD card, up to 8 GB, Class ≥ 10) |

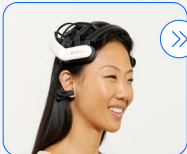
| POWER    |   |
|----------|---|
| Battery  | Swappable lipo battery. Charging time < 3 h |
| Autonomy | > 3 h per battery                           |

| GENERAL        |                        |
|----------------|------------------------|
| Weight         | 250g                   |
| Warranty       | 2 years                |
| Certifications | CE (Directive 2014/53) |


## SOFTWARE

| BITBRAIN CORE RESEARCH SOFTWARE (INCLUDED WITH EQUIPMENT)   |  | BITBRAIN EXTENDED RESEARCH TOOLS (LICENSED)  |
|---|--|--|
| <b>Bitbrain SennsLite</b><br>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. | <b>Bitbrain SDK</b><br>SDK in C for maximum performance and portability enabling Python integration. Compatible with Windows OS and Linux (x86). | <b>Bitbrain SennsLab</b><br>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 (250g) EEG headset. **Quick and easy set up anywhere**, and under any circumstances.



**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

Layout optimized for mu/alpha ERD/ERS, ERPs (P300, N400), MRCPs, and CVN, among others.





### BUNDLE INCLUDES

- EEG headset
- Foam adjusters
- Chin strap
- Band spacing ruler
- Spare sets of elastic straps
- Rechargeable battery with micro-USB port
- USB Type A - micro USB type B cable
- 8GB Class-10 MicroSD card with SD adaptor



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