Bitbrain

TEXTILE EEG TECHNOLOGY

Ikon 5ch EEG

The **first wearable EEG** with
smart textile technology

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Ultra-light and portable textile dry EEG with prefrontal sensors, wireless connectivity, and internal storage. Designed to conduct research anywhere, anytime.

Effortlessly conduct EEG research anywhere with self-administered technology that requires no expert supervision.

The first device on the market with textile sensors—no need for electrolytic substances like gels, saline, or water.

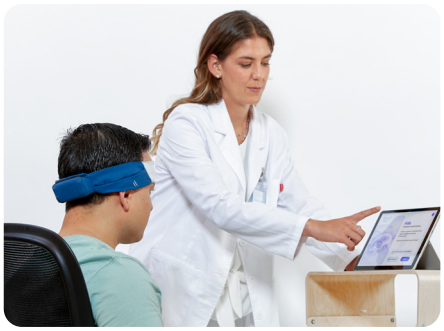
Active shielding with optimized DRL to improve SNR and reduce artifacts.

Certified quality, designed in accordance with ISO 13485.

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



Large-scale Data Collection

Ideal for **large-scale data collection** in everyday environments, paving the way for breakthrough insights and faster EEG biomarker discovery.

Advancing Research

A solution for **advancing research in precision medicine** and creating customized treatments, enabling tailored interventions based on individual needs.

Seamless Multimodal Research

Combined with other biosensors, it enables **seamless multimodal research** across various settings, from e-sports and psychology to pharmacological studies.

Technical Specifications

HARDWARE

SENSORS AND HEADSET	
EEG channels	5x EEG (Fp2, Af7, Af8, A1, A2) + GND (Fpz) + REF (FP1) *A1 and A2 used for linked ear re-referencing
Type of sensors/ electronics	EEG dry sensors with active shielding and optimized DRL
Head perimeter	520 - 700 mm

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

DATA STREAMING AND STORE	
Data transmission and range	Bluetooth Low Energy 5.0 2,4GHz + EDR with 10 meters in direct sight
Data backup/files	Direct transfer via BLE + data backup to internal SD card

POWER	
Battery	Rechargable lipo battery. Charging time < 3 h
Autonomy	> 9 h

GENERAL	
Weight	Amplifier 65g
Warranty	2 years for amplifier
Certifications	CE (Directive 2014/53) and FCC (part 15)

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.

Ikon App

User-friendly recording application designed for remote data collection outside the lab. Available for Windows (Android coming soon), it features an intuitive interface that enables non-technical users to record and save sessions autonomously.

Bitbrain SDK

Bitbrain SennsLab: Synchronized experimental design and data collection platform supporting 35+ sensor modalities, including EEG, eye tracking, and biosignals. Integrates with third-party tools via TCP/IP and exports data in CSV format.

Technical Overview

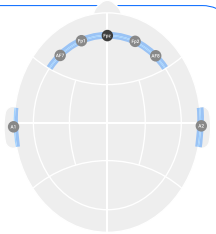
Wearable and **ultralight EEG headset.** Quick and easy set up for real-life scenarios.

Reliable textile-EEG monitoring with bluetooth streaming and/or on-board SD storage.

Washable technology that is **easy to clean, transport, store**, and reuse.

SENSOR LAYOUT

Ikon features **5 dry textile EEG sensors,** plus GND and REF, following the 10/10 system. GND is at Fpz and REF at Fp1, with re-referencing options at A1 or A2.



BUNDLE INCLUDES

- Amplifier
- Ikon band
- Extension strap
- USB type A – USB C cable

Bitbrain

We invite you to explore our scientific publications section.

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