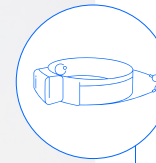Bitbrain

Ikon Sleep EEG

An EEG headband **designed for sleep.**
Engineered for research.

Ikon Sleep EEG

An EEG headband designed for sleep.
Engineered for research.

Sleep EEG with 2 pre-gelled frontal sensors and integrated PPG for brain and cardiac monitoring. Combines ease of use and comfort with our textile band. Designed following medical standards for reliable sleep research anytime, anywhere, by anyone.

BLE

IMU (9DOF)

PPG

2 Snap-on EEG Sensors

9 h Battery Life

256 Hz

Effortlessly conduct sleep studies anywhere with self-administered technology that requires no expert supervision.

Delivers all-night comfort with reliable, **high-quality EEG signals.**

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

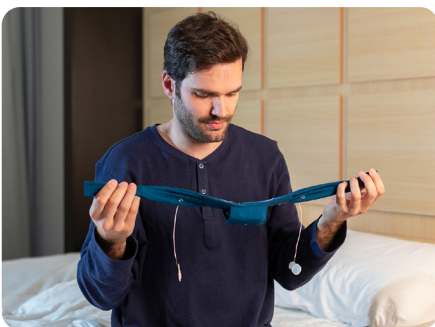**Certified quality**, designed in accordance with ISO 13485.

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.
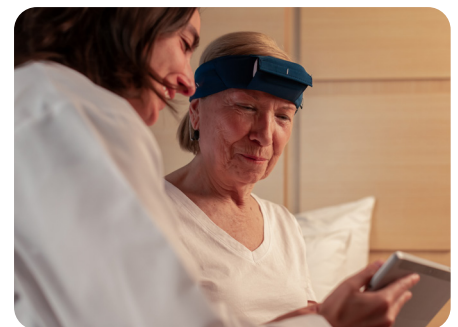
Use Cases

Self-administered Technology

Set up in minutes, offering high **ergonomics and comfort with proven success** in clinical populations.

Beyond the Lab

Created for **real-world** sleep research applications.

Clinical Trial Monitoring

Easily integrate sleep as a new variable in **clinical trial monitoring.**

Technical Specifications

HARDWARE

SENSORS AND HEADSET

EEG channels	AF7 and AF8. GND in A2. REF is in A1.
Type of sensors/ electronics	EEG wet sensors
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

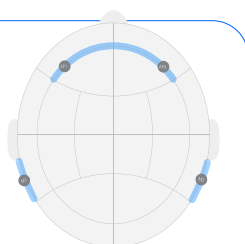Wearable and ultralight EEG headset. **Quick and easy set up** for real-life scenarios.

Precision 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 Sleep includes two pre-gelled disposable EEG sensors positioned prefrontal AF7 and AF8, with GND and REF placed on the mastoids.

BUNDLE INCLUDES

- Amplifier
- Ikon Sleep band
- Gel sensors
- Extension strap
- USB type A-USB C cable

Bitbrain

We invite you to explore our scientific publications section.

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

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