

Versatile Bio Amplifier

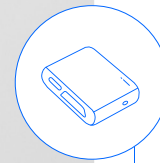
**All the biosignals you need,
in one device.**



Versatile Bio Amplifier

All the biosignals you need, in one device.

Portable amplifier designed for real-time, synchronized, and simultaneous acquisition of multiple biosignals.



Mobile and compact
Multi-purpose technology that is easy to set up and wear.

21+ channels
That can monitor up to 35 physiological variables with millisecond sync.

Advanced electronics
Signal acquisition layer optimized to improve SNR, while reducing external artifacts.

Flexible position
The amplifier can be placed on the arm, waist or leg.

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

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Use Cases



Psychology and Neuroscience

Explore new research scenarios in **psychology and neuroscience** with a complete physiological human monitoring in or out-of-the lab.



Clinical Research

Perform **clinical research**, new neurorehabilitation therapies, or assessment/interventions based on physiological responses.



Real-World Applications

Understand physiological correlates in real world applications such as **sports science, education, UX, or in the professional workplaces.**

Technical Specifications

HARDWARE

SENSORS

Biosignals channels	9x bipolar ExG + GND 6x auxiliary analog inputs (analog sensors like GSR, RESP, TEMP, BVP...) 2x auxiliary digital inputs (sensors like IMU). - Streaming mode: Up to 2 HUB 1 on each input to multiplex up to 8 IMU on each input. - Backup mode: Only 1 HUB to multiplex up to 8 IMU in the selected input. 1x digital input (3 bits) 1x digital output (1 bit)
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WIRELESS AMPLIFIER

Sampling rate	256 SPS at 24 bits
Bandwidth	DC–100 Hz (3rd-order LPF)
Integrated sensors	Integrated IMU (9 axis): Accelerometer, gyroscope and magnetometer
Input range and noise	$\pm 420 \text{ mV}$, $< 4 \mu\text{VRMS}$ (0.5 – 30Hz) @256Hz (Bipolar ExG) $\pm 2.5 \text{ V}$, $< 10 \mu\text{VRMS}$ (0.5 – 30Hz) @256Hz (Analog AUX)
CMRR/Input impedance	$> 100 \text{ dB}$ @50Hz, $> 50 \text{ G}\Omega$

DATA STREAMING AND STORE

Data transmission and range	Bluetooth 2.1 + EDR with 10 meters in direct sight
Data files	CVS
Data backup	Yes (removable microSD card, up to 8 GB, Class ≥ 10)

POWER

Battery	Rechargeable lipo battery. Charging time $< 3.5 \text{ h}$
Autonomy	$> 8 \text{ h}$

GENERAL

Weight	170g
Amplifier maintenance	Not required
Sensor maintenance	Off-the-shelf consumables
Warranty	2 years
Certifications	CE (Directive 2014/53)

SOFTWARE

BITBRAIN CORE RESEARCH SOFTWARE (INCLUDED WITH EQUIPMENT)

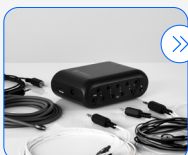
Bitbrain SennsLite

Real-time visualization, recording, and synchronized data across Bitbrain devices. LSL-compatible for third-party real-time I/O (BCI2000, OpenVibe, NeuroPyne, 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).

Technical Overview



Versatile technology to monitor **up to 35 physiological variables** simultaneously.



Wireless, mobile, compact and ultralight (170g). **Very easy to use.**



Minimal maintenance and easy to transport (everything fits in a suitcase).



BUNDLE INCLUDES

- Amplifier
- Power supply
- Instructions
- Suitcase
- Physiology Kit
- Motion Sensor Kit
- Arm and waist adjustable band

**We invite you to explore our
scientific publications section.**

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