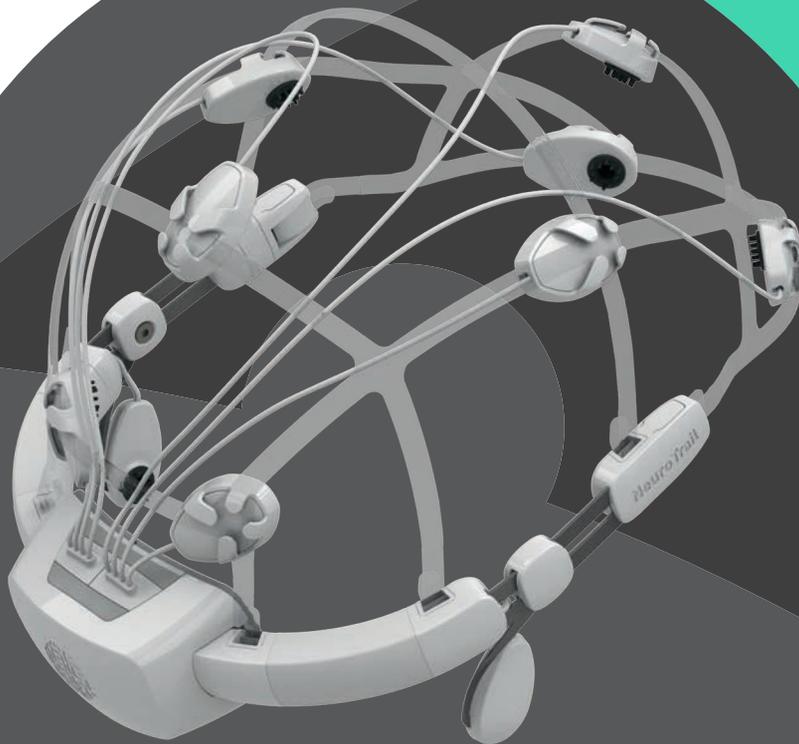


NEUROPRO  
NEUROTRAIL



Clinical-grade,  
gel-free, wireless EEG

[neuropro.ch/neurotrail](https://neuropro.ch/neurotrail)

# About NeuroTrail

NeuroTrail is a family of wireless wearables for the capture of EEG enabling experts and non-experts alike to record clinical-grade EEG effortlessly. Additionally, NeuroTrail captures accelerometer and gyroscopic movement data for online artefact detection and correction.

## Key features

- Wireless, gel-free, clinical-grade EEG acquisition
- 1–8 EEG electrodes (referenced to right mastoid)
- Continuous impedance monitoring
- 3-axis accelerometer
- 3-axis gyroscope
- Variable electrode positioning within international 10 / 20 system
- Fully adjustable to fit > 95 % of head sizes (49–63 cm circumference)
- Frequency resolution 0.36  $\mu$ V
- Bluetooth 4.0 and Bluetooth 4.0 LE data transmission
- 240 mAh rechargeable battery (> 3 h continuous run-time)
- Quick change battery
- USB recharging dock
- Weight 180 g

NeuroTrail has been ergonomically designed for ease of use, and to be comfortable for long-term and repeated wear in everyday situations.

The gel-free electrodes drastically reduce the set-up and clean-up time associated with conventional gelled electrodes. Their modular design enables the use of between one and eight electrodes positioned anywhere within the international 10 / 20 system for placing EEG electrodes on the scalp.

This flexibility facilitates their use in a wide variety of applications spanning conventional EEG research to health and wellness such as EEG guided meditation and cognitive brain training.

NeuroTrail integrates seamlessly with our software applications to allow instant analysis, visualisation and streaming of captured EEG data, enabling remote EEG applications such as telemonitoring and neurofeedback in real-time from any location.

NeuroTrail's bundled SDK enables in-depth analysis of captured EEG and development of new applications via patented algorithms and advanced visualisations.



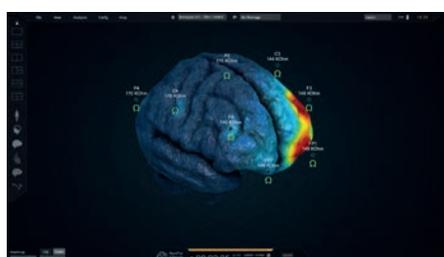
*Monitoring brain health for mental wellness will become as ubiquitous as activity tracking for physical fitness. Crowd sourcing EEG has the potential to **transform our understanding of the brain in health and disease.***

**Dr Jamil El-Imad**

Managing Director and Chief Scientist at NeuroPro AG



NeuroTrail integrates seamlessly with NeuroVIS



Continuous impedance monitoring and EEG visualisation



EEG streamed via bluetooth from headset



## Technology

NeuroTrail makes use of the latest advances in chip design and sensor technology. It features one to eight channels captured with state-of-the-art integrated electronics and gel-free electrodes. The headset also features a nine-axis inertial sensor (three-axis accelerometer and three-axis gyroscope) for monitoring a range of movements for developing real-time artefact detection and rejection algorithms. Recorded data is transmitted wirelessly via Bluetooth or Bluetooth-LE. Thus, NeuroTrail delivers clinical-grade EEG signals at a low energy cost enabling extended recordings with a very small device footprint and weight.



8 Channel Configuration



2 Channel Configuration

## Applications

- EEG research
- Neuromonitoring
- Neurofeedback
- Brain computer interfaces
- Patient led research
- Neuromarketing
- Cognitive brain training
- Work place wellness
- Guided meditation
- Stress management

## Ongoing projects

- Self guided bio- and neuro- feedback for the management of PTSD
- Cognitive brain training for the proactive prevention of cognitive decline with advancing age
- Neurofeedback for the cognitive deficits associated with chemotherapy treatment in cancer survivors
- Stress management for workplace wellness
- Visualisation of brain dynamics in coma and non-convulsive status epilepticus
- Ambulatory seizure prediction in epilepsy

# NEUROPRO

## Who we are

NeuroPro incorporates specialists from the fields of computer science, neurophysiology, bioengineering, and product and user-interface design. This combination of skills allows us to adopt an informed inter-disciplinary approach to the specific challenges facing those working in brain science.

Our tools for monitoring and analysing brain activity will contribute to accelerating brain research by supporting researchers, clinicians and innovators in pushing the boundaries of brain science and its applications.

Our tools provide an advanced platform for the development of a wide range of health and wellness applications from supporting the development of brain observatories to remote telemonitoring, patient led research, neurofeedback and cognitive wellness. Additionally, NeuroPro's tools are relevant to innovative entertainment, lifestyle and interaction solutions driven by brain computer interface technologies.

## Contact us

Partnership is a key element in the way we work. We collaborate with global leaders in the design, development and implementation of our products and welcome new collaborations.

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