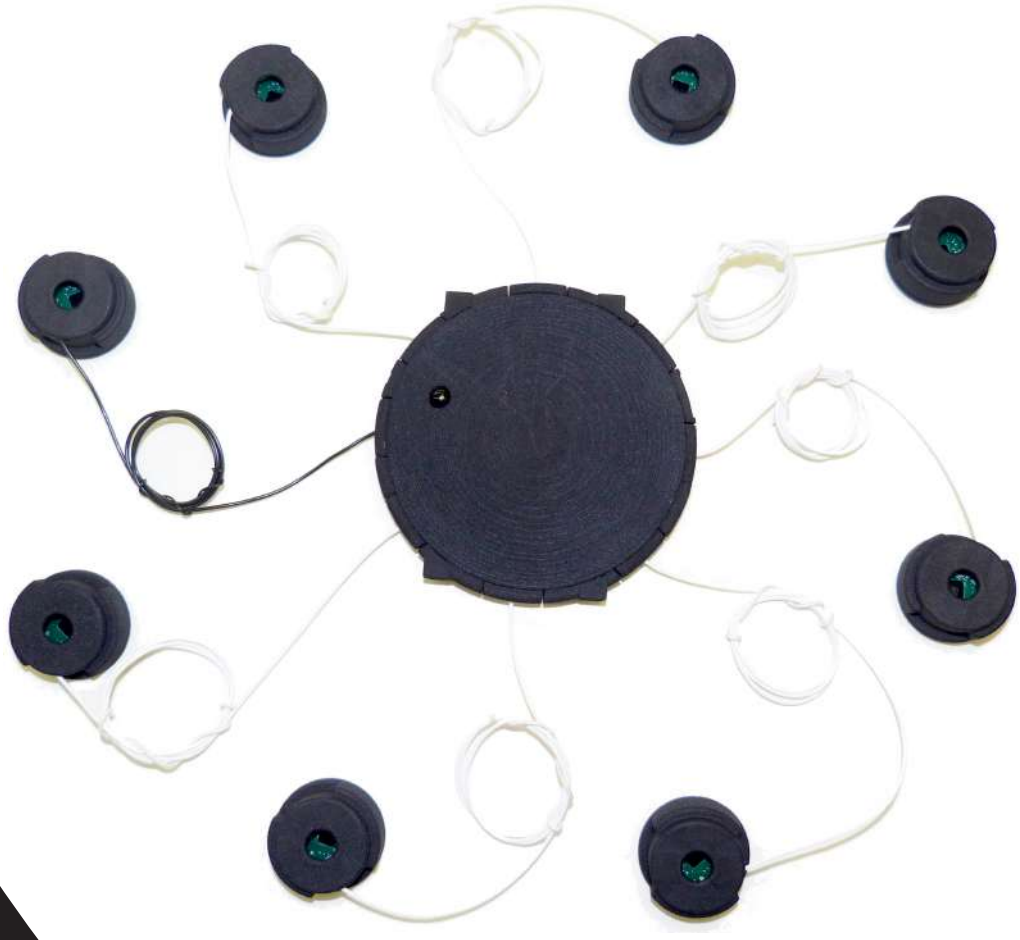
WEARABLE Sensing

DSI-7-Flex

Clean. Mobile. Fast.



Revolutionizing EEG

State-of-the-art **active** dry electrode technology	Positive user experience for all
Wireless ambulatory research-grade EEG	Recording in natural environments
Resistant to electrical and motion artifacts	High data integrity
Fast-donning and comfortable for long-term use	Enhanced efficiency and productivity

Applications

Neuroscience research
Neurofeedback
Brain-computer interfaces
Consumer neuroscience
and many more

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The DSI-7-Flex is a complete, research-grade wireless EEG system designed for rapid application of 7 sensors at any location. Sensors can be positioned using the supplied BraiNet electrode harness or other harness systems. Alternatively the DSI-7-Flex sensors can be used for the acquisition of other biopotentials such as EMG, ECG, EOG, etc.

The system comprises ultra-high impedance active Dry Sensor Interface (DSI) sensors that function through hair, requiring no skin preparation or conductive gels. The sensors can be individually adjusted to optimize contact impedance. They are spring-loaded to provide constant, comfortable contact pressure that mitigates movement artifacts seen during ambulation and are actively and passively shielded to prevent contamination from electrical artifacts.

BraiNet electrode harness

Uncompromising Signal Quality

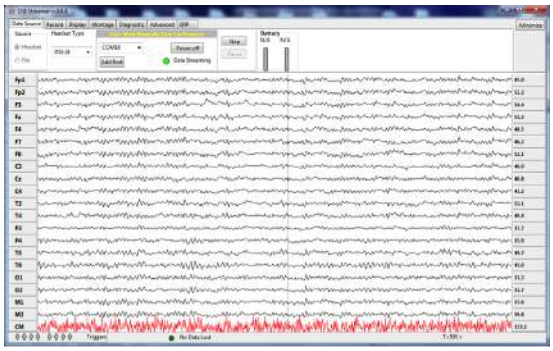
- Active dry electrode sensor with 2-stage amplification and digitization in headset
- Research-grade EEG signal (>90% correlation with conventional wet electrode systems)
- Patented artifact-resistant electro-mechanical designs suitable for ambulation in naturalistic environments
- Continuous impedance and signal quality monitoring

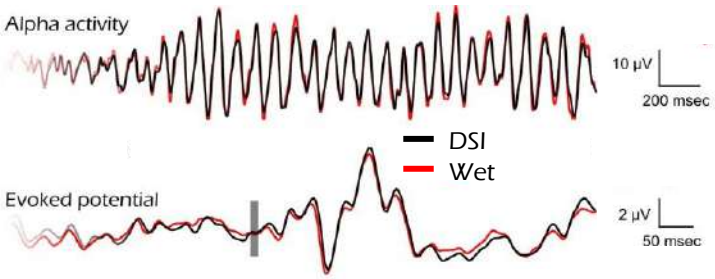
Practical EEG

- Fully integrated, complete EEG system in a single device
- Reduced set-up and clean-up time
- Versatile sensor placement for exploratory investigations
- Comfortable for continuous and repeated use

Powerful Options

- Wireless triggering for synchronizing multiple devices (hyper-scanning) and ambulatory ERPs
- Bluetooth or wired-USB transmission
- Optional internal storage for computer-free recording
- Optional embedded 3D accelerometers
- Optional ECG, EMG, EOG, GSR, Respiration, Skin Temperature
- Compatible with VR/AR Headsets





Technical Specifications

Sensor locations:	User-selectable
Reference:	Common-mode-follower
Ground:	Fpz
Amplifier/digitizer:	16 bits, 7 channels
A/D resolution:	0.317 µV referred to input
Sampling rate:	300 Hz (600 Hz option)
Bandwidth:	0.003-150 Hz
Gain:	60
CMRR:	> 120 dB
Channel cross-talk:	< -70 dB with sensors
Input impedance (1Hz):	47 GΩ
Input bias current:	< 25 pA
DC offset tolerance:	± 200 mV
Maximum input range:	10mV p-p
Noise (1-50Hz):	< 3 µV p-p
Digital inputs:	4 bits
Wireless:	Bluetooth
Wireless range:	10 m
Run-time:	> 12 h

Intuitive Software Included

- DSI-Streamer
  - Signal quality metrics
  - Montages
  - ERPs
  - File formats: EDF, CSV (filtered and raw)
  - Streaming via TCP/IP socket
- C-based API for Windows/Mac/Linux
- LSL streaming

Synchronized Interfaces

- Mensia Neuro RT / OpenVibe / BCI2000
- MATLAB / EEGLAB / ERPLAB /BCILAB
- QStates Coginitive Classification
- NeuroGuide / BrainSurfer
- E-Prime / Presentation
- TEA Ergo CAPTIV
- Motion Capture
- Eye-tracking

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