WEARABLE *Sensing*

In Partnership with

neurable

DSI-VR300
Fast. Clean. VR-ready.

Revolutionizing **EEG**

State-of-the-art **active dry** electrode technology	Positive user experience for all
Integrated with the HTC-Vive VR headset	Recording in virtual environments
Resistant to electrical and motion artifacts	High data integrity during ambulation
Optimized for P300 detection	Ideal for BCI applications

Applications

Neuroscience research
Brain-computer interfaces
Neurogaming
Neuromarketing
Neurofeedback
Peak-performance training
and many more...
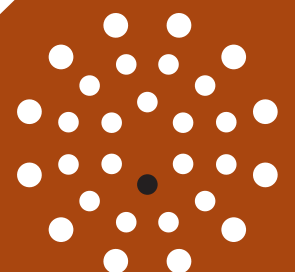
wearablesensing.com

The DSI-VR300 is a research-grade EEG system specifically designed for P300 applications and VR integration. The system comprises ultra-high impedance active Dry Sensor Interface (DSI) sensors that function through hair, requiring no skin preparation or conductive gels. Sensors can be individually adjusted to optimize contact impedance. The design interfaces seamlessly with the HTC-Vive VR headset. A virtual realilty-specific API developed by **Neurable** allows rapid integration of P300 elements into the VR environment.

Uncompromising Signal Quality

- Active dry electrode sensors 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
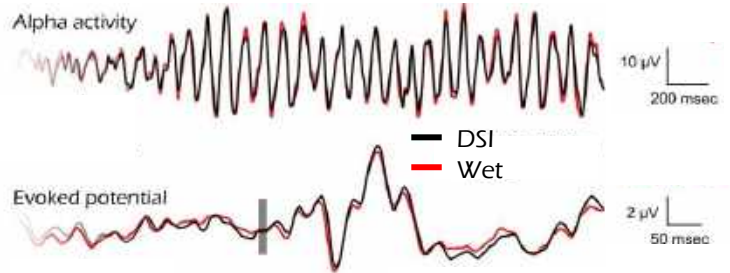
Practical EEG

- Fully integrated, complete EEG system in a single device
- Rapid set-up (< 2 min) and clean-up time (< 1 min)
- Adjustable to fit a wide range of head sizes
- Comfortable for continuous and repeated use

Powerful Options

- Wireless triggering for synchronization of multiple devices for hyperscanning or ambulatory ERPs
- Bluetooth or wired-USB transmission
- Optional embedded 3D accelerometers

Intuitive Software Included

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

VR Interface by neurable

- Seamless integration with HTC-Vive
- Unity and Unreal engine integration
- Embedded real-time P300 analysis
- Demo software and code available

Synchronized Interfaces

- Eye-tracking
- Motion capture
- NeuroGuide / BrainSurfer
- EEGLAB / ERPLAB /BCILAB
- Mensia Neuro RT / OpenVibe
- TEA Ergo CAPTIV
- BCI2000
- E-Prime
- Inquisit
- Presentation

Alpha activity

— DSI
— Wet

10 µV
200 msec

Evoked potential

2 µV
50 msec

Technical Specifications

Sensor locations:	International 10-20 system FCz, Pz, P3, P4, PO7, PO8, Oz, Linked Ears
Reference:	Common-mode-follower
Ground:	A1
Positional accuracy:	Within 1.5 cm
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 (1 Hz):	47 GΩ
Input bias current:	< 25 pA
DC offset tolerance:	± 200 mV
Maximum input range:	10 mV p-p
Noise (1-50 Hz):	< 3 µV p-p
Digital inputs:	4 bits
Wireless:	Bluetooth
Wireless range:	10 m
Run-time:	> 12 h