

# Starstim® tES-EEG systems

## Key Features

### Powerful, mobile, wireless

The only ultralight and portable multi-channel tES device with rechargeable batteries lasting up to 5 hours.

### Easy set-up

Despite complexity of traditional technology, our adult and child headsets can be set up in just a few minutes.

### Any tES waveform

tDCS/tACS/tRNS, custom waveforms or temporal interference configurable for bipolar, 4x1, or on each of up to 32 channels.

### Multi-step tES-EEG protocols

Design the whole tES procedure with pre-, post- or simultaneous EEG and let the device do the rest.

### Cortical visualization of tES electric field

State-of-the-art visualizations of how your protocol's current will be distributed in the brain.

### Proprietary hybrid & sponge electrodes

Handy hybrid tES-EEG Ag/AgCl electrodes as well as sponges in the size of your choice.

## Family products comparison

Hi-Tech Applications	Starstim 32	Starstim 20	Starstim 8	Starstim tES
tES with simultaneous EEG	✓✓✓	✓✓✓	✓✓✓	—
Complex network stimulation	✓✓✓	✓✓	✓	—
Bipolar / 4x1 / HD tDCS	✓✓✓	✓✓✓	✓✓✓	✓✓✓
tACS with in-phase/anti-phase montage	✓✓✓	✓✓✓	✓	✓
EEG-tES closed loop	✓✓✓	✓✓	✓	—
Multi-channel tES-MRI experiment	✓✓✓	✓✓✓	✓✓✓	✓✓✓
tES-EEG-fNIRS experiment	✓✓✓	✓✓✓	✓✓✓	—

## Service

Warranty	2 years standard / 5 years GOLD
Modeling Services	Exclusive personalized model-driven montage optimizations.
Customer Service	Free lifetime customer support + one-on-one expert assistance

# Modeling Services

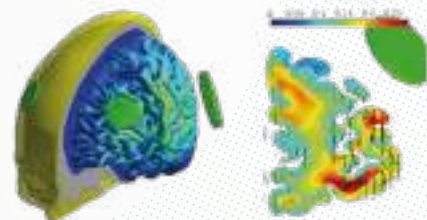
## Exclusive model-driven tES protocol optimizations

At NE®, we develop advanced computational algorithms to provide you with a wide range of modeling services. With your inputs, our team of scientists will tailor them to your individual montage.

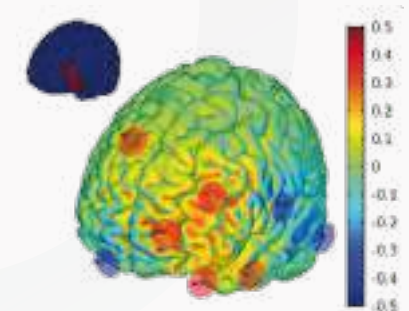
### Head model creation



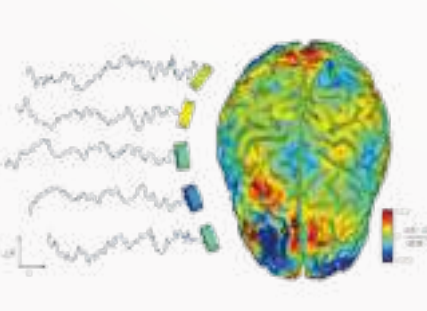
### NE® electric field analytics



### Montage optimization: Stimweaver algorithm



### EEG source localization: NE® cortical mapper



## Recommended publications

Iannone, A., et al., *Comparing the effects of focal and conventional tDCS on motor skill learning: A proof of principle study*. Neuroscience Research (2022).

Sprugnoli, G., et al., *Impact of multisession 40Hz tACS on hippocampal perfusion in patients with Alzheimer's disease*. Alzheimer's research & therapy (2021)

Sprugnoli, G., et al., *Reduction of intratumoral brain perfusion by noninvasive transcranial electrical stimulation*. Science Advances (2019)

Dagan, Moria, et al., *Multitarget transcranial direct current stimulation for freezing of gait in Parkinson's disease*. Movement Disorders (2018)

Neri, F. et al., *A Novel tDCS Sham Approach Based on Model-Driven Controlled Shunting*. Brain Stimulation (2019)

Fischer, David B., et al., *Multifocal tDCS targeting the resting state motor network increases cortical excitability beyond traditional tDCS targeting unilateral motor cortex*. Neuroimage (2017)

Ruffini, Giulio, et al., *Optimization of multifocal transcranial current stimulation for weighted cortical pattern targeting from realistic modeling of electric fields*. Neuroimage (2014)



© neuroelectronics / anacapas.com



# starstim<sup>NE®</sup>

Starstim® tES-EEG systems. Unique and all-in-one solutions for wireless multi-channel brain stimulation and monitoring.

# NE®

US Office in BOSTON. 210 Broadway, Suite 201. Cambridge, MA 02139, USA.  
EUROPE Office in BARCELONA. Av. Tibidabo 47 bis. 08035, Barcelona, Spain. Tel. +34 93 254 03 66 info@neuroelectronics.com



www.neuroelectronics.com

NE  
neuroelectronics®

Unique and all-in-one solutions for wireless multi-channel brain stimulation and monitoring

Complex tES research made simple



# Starstim® tES-EEG system is our unique, all-in-one wireless system for simultaneous brain stimulation and monitoring.

Welcome to the next generation of precise multi-focal tES-EEG devices with 8, 20 and 32 channels, and an intuitive user interface for protocol design and real-time visualizations. A perfect solution for double-blinded studies.

Leading the clinical evidence

All-in-one tES-EEG

High precision in your research

## Complex tES research made simple.

### Leading the clinical evidence

A renowned and trusted solution for pioneers in pain, epilepsy, Alzheimer's, stroke, rehabilitation, depression and addictive disorders research with numerous publications every year.

### All-in-one tES-EEG

Freely customizable tES waveforms and montages allow for advanced investigations with simultaneous monitoring as well as closed-loop applications.

### High precision in your research

Exclusive model-driven tES protocol optimizations and personalizations to maximize the effects of stimulation and accurately interpret the results of your experiment.



**US CAUTION:** US Federal Law classifies Starstim as an investigational device.  
**Europe:** Starstim is classified as a research use only device.



## Simultaneous Brain Stimulation and Monitoring ( tES-EEG )

