Combination wearable & wireless fNIRS - tDCS - EEG in one single headcap

Combine transcranial current stimulation (tCS: tDCS, tACS, tRNS) & electroencephalography (EEG) with fNIRS in one single headcap.

Optimal solution for brain stimulation and imaging.

Includes Neuroelectrics® Starstim (tCS and EEG) & Artinis Brite / OctaMon, both non-invasive and wearable technologies.

Applications:

The Starstim fNIRS kit allows clinicians and researchers to measure resting-state and task-related cortical activity (EEG) and/or hemodynamics (fNIRS) before, during and after transcranial electrical stimulation in real-world settings.

Interested?
Contact us at askforinfo@artinis.com
www.artinis.com
+31 481 350 980
Einsteinweg 17
6662 PW Elst
The Netherlands
Relevant publications


Cabibel, V., Muthalib, M., Teo, W.-P. & Perrey, X. S. High-definition transcranial direct-current stimulation of the right M1 further facilitates left M1 excitability during crossed facilitation. J. Neurophysiol. 7


The Starstim fNIRS kit is the most modern wireless solution for brain stimulation and imaging that combines transcranial current stimulation (tCS: tDCS, tACS, tRNS) with electroencephalography (EEG) and functional near-infrared spectroscopy (fNIRS) neuroimaging in one single headset. The Starstim fNIRS kit includes a Neuroelectrics Starstim (tCS and EEG) and an Artinis OctaMon/Brite (fNIRS) systems, all non-invasive, lightweight, and head-wearable technologies.

In addition to the equipment provided, the Starstim fNIRS kit package includes kick-start training/support by Silverline Research on how to integrate these two state-of-the-art devices (single headcap and software synchronisation) through every step as well as 1-year online support to optimise your experimental design, methods and analysis at no additional cost.

Silverline Research expertise can also provide specialised online and/or on-site training to work more closely with your research team to integrate tCS with neuroimaging (EEG and fNIRS) as well as other neurophysiological techniques (TMS, fMRI) and applications (cognition, motor control, sports and virtual reality) into your experimental design, methods, and analysis.

### Starstim fNIRS package

The Starstim fNIRS kit is the most modern wireless solution for brain stimulation and imaging that combines transcranial current stimulation (tCS: tDCS, tACS, tRNS) with electroencephalography (EEG) and functional near-infrared spectroscopy (fNIRS) neuroimaging in one single headset. The Starstim fNIRS kit includes a Neuroelectrics Starstim (tCS and EEG) and an Artinis OctaMon/Brite (fNIRS) systems, all non-invasive, lightweight, and head-wearable technologies.

In addition to the equipment provided, the Starstim fNIRS kit package includes kick-start training/support by Silverline Research on how to integrate these two state-of-the-art devices (single headcap and software synchronisation) through every step as well as 1-year online support to optimise your experimental design, methods and analysis at no additional cost.

Silverline Research expertise can also provide specialised online and/or on-site training to work more closely with your research team to integrate tCS with neuroimaging (EEG and fNIRS) as well as other neurophysiological techniques (TMS, fMRI) and applications (cognition, motor control, sports and virtual reality) into your experimental design, methods, and analysis.

### NIRS functionality
- **NUMBER OF CHANNELS**: 8 or 24 channels
- **SAMPLING RATE**: 50 Hz
- **LIGHT SOURCE**: LED (2x wavelengths per transmitter)
- **WAVELENGTHS**: 760, 850 nm
- **OPTODE DISTANCE**: 30 mm

### EEG functionality
- **NUMBER OF CHANNELS**: 8, 20, or 32 channels
- **SAMPLING RATE**: 500 Hz
- **BANDWIDTH**: 0 to 125 Hz (DC coupled)
- **RESOLUTION**: 24 bits – 0.05 µV resolution
- **NOISE**: < 1 µV RMS
- **CMRR**: -115 dB
- **INPUT IMPEDANCE**: 1 GΩ

### Stimulation functionality
- **NUMBER OF CHANNELS**: 8, 20, or 32 channels
- **SAMPLING RATE**: 1000 Hz
- **FREQUENCY RANGE**: 0 to 250 Hz (tACS) and 0 to 500 Hz (tRNS)
- **STIMULATION TYPES**: tDCS, tACS and tRNS
- **MAXIMUM CURRENT PER-CHANNEL**: ± 2mA
- **CURRENT ACCURACY**: ± 1% of the output
- **CURRENT RESOLUTION**: ± 1 µA
- **VOLTAGE**: ± 15 V per electrode (30 V potential difference)

**What’s in the box?**

- **Starstim fNIRS package**
- **NeuroElectrics Starstim**
- **Artinis Brite / OctaMon**

- **Specialized training by Silverline Research Services (SRS)**

©2019 Artinis Medical Systems all rights reserved. All specifications and appearances can change without further notice. All other trademarks or registered trademarks are the property of their respective owners.