Brite

Completely wearable multi-channel fNIRS.



Truly portable and covering e.g. the prefrontal cortex, motor cortex, or visual cortex.



Can be combined with other techniques such as EEG and tDCS.



Measures oxy-, deoxy-, and total hemoglobin concentration changes.



Integrated 9-axis orientation sensor.



Easy analysis of your data with our superior analysis software; Oxysoft.



Bluetooth connection or offline recording with high sampling rate.

Main applications are found in:

- Brain oxygenation monitoring
- Sports science
- Functional studies
- Cerebral studies
- Hyperscanning
- Both inside and outside the lab



Contact us at askforinfo@artinis.com

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References to wireless NIRS

Buchheit et al. Physiological Responses to Shuttle Repeated-sprint Running. Int J Sports Med. 2010 Jun; 31(6):402-9.

Maidan I, Bernad-Elazari H, Gazit E, Giladi N, Hausdorff JM, Mirelman A. Changes in Oxygenated Hemoglobin Link Freezing of Gait to Frontal Activation in Patients with Parkinson Disease: an fNIRS Study of Transistent Motor-cognitive Failures. J Neurol. 2015 Jan 31.

Maidan I, Nieuwhof F, Bernad-Elazari H, Reelick MF, Bloem BR, Giladi N, Deutsch JE, Hausdorff JM, Claassen JA, Mirelman A. The Role of the Frontal Lobe in Complex Walking Among Patients with Parkinson's Disease and Healthy Order Adults: An fNIRS Study. Neurorehabil Neural Repair. 2016 May 23. pii: 154596831665042

Maidan I, Bernad-Elazari H, Giladi N, Hausdorff JM, Mirelman A. When is Higher Level Cognitive Control Needed for Locomotor Tasks Among Patients with Parkinsosn's Disease? Brain Topogr. 2017 Apr 24.

Mirelman A, Maidan I, Hagar BE, Nieuwhof F, Reelick M, Gilandi N, Hausdorff JM. Increased Frontal Brain Activation During Walking While Dual Tasking: an fNIRS Study in Healthy Young Adults. Journal of NeuroEngineering and Rehabilitation 2014, 11:85

Nieuwhof F, Reelick MF, Maidan I, Mirelman A, Hausdorff JM, Olde Rikkert MGM, Bloem BR, Muthalib M and Claassen JAHR. Measuring Prefrontal Cortical Activity During Dual Tasks Walking in Patients with Parkinson's Disease: Feasibility of Using a New Portable fNIRS Device. Pilot and Feasibility Studies 2016 2:59

Shadgan B, Reid DW, Gharakhanlou R, Stothers L, Macnab AJ. Wireless Near-Infrared Spectroscopy of Muscle Oxygenation and Heamodynamics During Exercise and Ischemia. Spectroscopy 2009; 23 (5-6): 233-241.



TECHNOLOGY Continuous wave near infrared spectroscopy using modified

Lambert-Beer law

MEASURES Oxy-, deoxy-, and total hemoglobin

DATA ANALYSIS SOFTWARE Oxysoft

OPERATING SYSTEM Windows 10

LIGHT SOURCE 10 or 11 Light emitting diodes, each with 2 wavelengths
CHANNELS 23, 24, or 27 channels, different setup's and short channels

possible

WAVELENGTHS Standard nominal 760 and 850 nm, others possible DETECTORS 7x or 8x Photo diode with ambient light protection

OPTODE DISTANCE 30mm

POWER Rechargeable and fast loading battery, up to 3 hours on a

single charge.

TOTAL WEIGHT approximately 300 grams including battery

SIZE Battery housing: 75x75x30 mm, headbands and headcaps

available in multiple sizes: including kids version (3months

- 6 years) and adults (XS - XL)

ENVIRONMENT Operating temperature: ~ 10-35 °c

INTERFERENCE No interference with EEG, ECG OR EMG

OPTIONAL All devices can be combined with the Portasync.

OFFLINE DATA STORAGE 100+ hours
RESOLUTION 16 bit
SAMPLE RATE 50 or 100 Hz

INCLUDED 9-axis orientation sensor

NIRS + OTHER MODALITIES We deliver the following packages:

Brite + TMSI EMG package (2 channels or more)
Brite + TMSI EEG package (16 channels or more)

Brite + tDCS (STARSTIM)









Get a quote:

askforinfo@artinis.com

What's in the box?

Brite research package

Brite 23/24/27 Strong & sturdy Pelicase License key Battery charger Laptop User guide Bluetooth dongle Oxysoft, data analysis software Neoprene headband