

Brite

Completely wearable
multi-channel fNIRS
device



Truly wearable & flexible for a wide range of participants and any cortical area of interest.



Compatible 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.



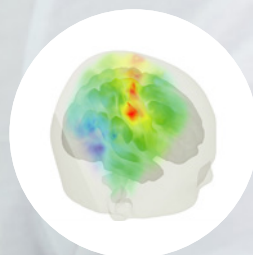
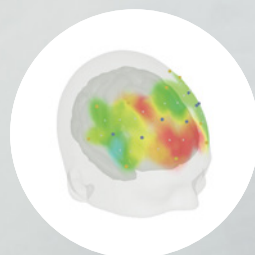
Online connection via Bluetooth or offline recording with high sampling rate.



Main applications are found in: both inside and outside the lab.

Main applications are found in:

- Brain oxygenation monitoring
- Sports science
- Functional studies
- Cerebral studies
- Hyperscanning



Interested?

Contact us at
askforinfo@artinis.com

www.artinis.com
+31 481 350 980

Einsteinweg 17
6662 PW Elst
The Netherlands

References to wireless fNIRS

Buchheit, M., Bishop, D., Haydar, B., Nakamura, F. Y. & Ahmadi, S. Physiological Responses to Shuttle Repeated-Sprint Running. *Int. J. Sports Med.* 31, 402–409 (2010).

Maidan, I. et al. Changes in oxygenated hemoglobin link freezing of gait to frontal activation in patients with Parkinson disease: an fNIRS study of transient motor-cognitive failures. *J. Neurol.* 262, 899–908 (2015).

Maidan, I., Bernad-Elazari, H., Giladi, N., Hausdorff, J. M. & Mirelman, A. When is Higher Level Cognitive Control Needed for Locomotor Tasks Among Patients with Parkinson's Disease? *Brain Topogr.* 30, 531–538 (2017).

Maidan, I. et al. The Role of the Frontal Lobe in Complex Walking Among Patients With Parkinson's Disease and Healthy Older Adults: An fNIRS Study. *Neurorehabil. Neural Repair* 30, 963–971 (2016).

Mirelman, A. et al. Increased frontal brain activation during walking while dual tasking: an fNIRS study in healthy young adults. *J. NeuroEngineering Rehabil.* 11, 85 (2014).

Nieuwhof, F. et al. Measuring prefrontal cortical activity during dual task walking in patients with Parkinson's disease: feasibility of using a new portable fNIRS device. *Pilot Feasibility Stud.* 2, (2016).

Shadgan, B., Reid, W. D., Gharakhanlou, R., Stpublsher-ids, L. & Macnab, A. J. Wireless near-infrared spectroscopy of skeletal muscle oxygenation and hemodynamics during exercise and ischemia. *Spectroscopy* 23, 233–241 (2009).



Technical specifications

TECHNOLOGY	Continuous wave Near-InfraRed Spectroscopy (NIRS) using the modified Lambert-Beer law
RELATIVE MEASURES	Oxy-, deoxy-, and total hemoglobin concentration changes
CHANNELS	Up to 27 or up to 54 channels with dual Brite
SHORT SEPARATION CHANNELS	Short channels at 10 mm with multipower switch
MULTI-POWER GAIN CONTROL	Choose between 4 different power levels to improve your recordings or select the auto-power setting
INTER-OPTODE DISTANCE	10 - 55 mm
TRANSMITTERS	10 LEDs, each with 2 wavelengths
RECEIVERS	8 photodiodes
WAVELENGTHS	Standard 760 and 850 nm, custom wavelength possible
AMBIENT LIGHT CORRECTION	Proprietary algorithm to filter out ambient light
OPTODE HOLDERS	3 available heights to adjust pressure
DIMENSION	Battery housing: 75x75x30 mm. Headcaps available in multiple sizes: kids version (from 2 years old) and adults (XS - XL)
TOTAL WEIGHT	300 grams including battery and headcap
ENVIRONMENT	Operating temperature: 10 - 35 °C
INDICATORS	Power, measuring, battery status, bluetooth
POWER	More than 3 hours with with fast-charging battery, charging with powerbank possible
SAMPLE RATE	Up to 150 Hz
ORIENTATION SENSOR	9-axis accelerometer
DATA COLLECTION & STORAGE	Online, offline 100+ hours, local back-up of data
DATA ANALYSIS SOFTWARE	OxySoft, Optional: 3D extension
OPERATING SYSTEM	Windows 10
EVENTS	Online, offline or PortaSync
ELECTROMAGNETIC COMPATIBILITY	No interference with TMS, EEG, EMG, ECG
HARDWARE SYNC OPTIONS	PortaSync, parallel cable, serial cable, AD input box
SOFTWARE SYNC OPTIONS	LSL, DCOM (e.g. Matlab, E-prime, Presentation)
NIRS + OTHER MODALITIES	We deliver the following packages: Brite + TMSi EEG package (32 channels or more) Brite + tDCS (STARSTIM)

Get a quote:

askforinfo@artinis.com

What's in the box?

Brite research package

Brite MKII
Strong & sturdy Pelicase
License key

Battery charger
Laptop
User guide

Bluetooth dongle
OxySoft, data analysis software
Neoprene headband/head cap