

NIRSIT ^{LITE}

Brain Imaging System for Kids



NIRSIT Lite for Research on Kids

OBELAB is introducing a new portable functional Near-Infrared Spectroscopy (fNIRS) system: NIRSIT Lite! It is a light-weight, easily configurable, multi-channel fNIRS neuroimaging system for prefrontal cortex, specifically targeted for research on children.

NIRSIT Lite is designed to measure variations in cerebral hemodynamics on a realtime basis by radiating a near-infrared light beam, at two wavelengths of 780nm and 850nm of LED, into the cerebral cortex.

Boasting light weight of only 193g, it is designed to fit the head sizes of children from preschool to high school.

The system comes with its dedicated monitoring and analysis software for researchers. Flexible design to fit various head sizes.

Key features

- Non-invasive measurement
- Motion artifact removal algorithm using embedded motion sensor
- Real-time multichannel monitoring (ΔHbO_2 , ΔHbR , ΔHbT)
- 15 channels with short channel separation (8mm)
- High temporal resolution of 8Hz
- CSV file format support for measured data
- Real-time adaptive filtering and digital filters
- Flexible design to fit various head sizes
- Various embedded cognitive and behavioral tasks



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Technical specifications

Optode distance	For children : 2.5 cm For adult : 3cm
Channels	15 channels (multi-distance : 6 channels)
Optical Elements	light sources : 5 / detector : 7 (default) → Short channel possible (8 mm distance)
Wavelength	780, 850 nm
Weight	193 g
Sampling rate	8.138 Hz
Motion sensor	9 axis
Operating time	5 hours (1000 mAh rechargeable battery)
Wireless	BLE
PC tool	Window based, external sync (E-prime, TCP/IP communication)
Warranty	1 year



Accessories

Nirsit Lite	BLE Dongle USB cable OTG cable Charger Manual Warranty Certificate
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OBELAB

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