DevKit-12
Technical Specifications

Inspired by our Flow 2 system, the 12-module DevKit offers a more flexible and adaptable approach to neuroscience experimentation and data collection. By employing a soft cap design that allows users to customize and install optical modules and EEG electrodes as desired, researchers can optimize sensor placement for their specific research goals.

Time-Domain fNIRS

Time-Domain measurements have improved depth sensitivity and reduced susceptibility to artifacts compared to traditional CW-fNIRS.

Sampling rate

With our industry-leading 3.5ms integration time, we are able to image over the whole cortex at a rate of 12Hz.

Output Format and Metrics

Standard analyses for included reference tasks

With all Kernel tasks that ship with the system, simple behavioral and brain analyses reports are available.

Automated quality control

We offer both a basic and a detailed report on the signal quality of each collected dataset.

Data download

Data can be downloaded at various stages of preprocessing as SNIRF files (Shared Near-Infrared Spectroscopy Format, see specification). Learn more about how to use DevKit data here.

12
Optical modules

Each with | and

3
Dual-wavelength sources
690 nm / 905 nm

6
Time-resolved detectors

200+
Within-module channels with

8.5 - 27 mm
Source-detector separation

Up to
60 mm
Between-module channels

> 100 dB
Dynamic range

6
EEG electrodes

1 kHz
EEG sampling rate

Headgear
Custom
Ships with soft cap

Power supply
USB-PD
Delivered over USB-C

Data storage
Data streamed to acquisition PC at rate of 300MB/min

Optode style
Modular

Power consumption
15W Max

Data transfer
USB 2.0

Weight
1.2 kg

Power and data cable
Up to 10' USB-C

Laser classification
Class 1 (FLPPS 21CFR1040.10)