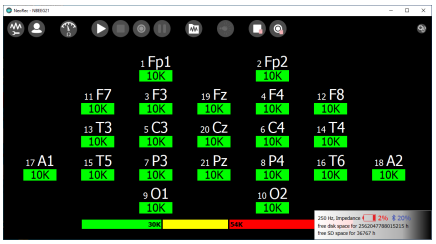
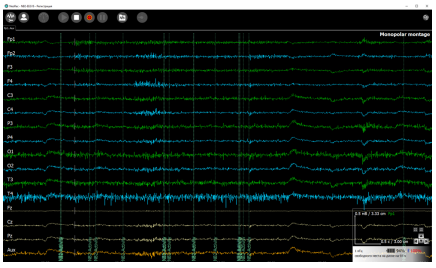
DATA SHEET

System NeoRec cap 7 mini PROFESSIONAL

Low-channel wireless electroencephalograph with an electrode cap with pre-installed EEG electrodes MCScap-NTC.

REF	Size	Head circumference
003-5-093	XL	60-66 cm
003-5-094	XL/L	57-63 cm
003-5-095	L	54-60 cm
003-5-096	L/M	51-57 cm
003-5-097	M	48-54 cm
003-5-098	M/S	45-51 cm
003-5-099	S	42-48 cm
003-5-100	S/XS	39-45 cm
003-5-101	XS	36-42 cm





INTENDED USE

EEG acquisition.

SET

- EEG amplifier NeoRec 7 mini,
- Electrode cap PROFESSIONAL cap for NeoRec 7 mini,
- Memory card,
- Memory card ejector,
- Charging station for NeoRec mini with cable,
- User Manual,
- Plastic box.

Download and install the latest version of the NeoRec software from the manufacturer's website https://mks.ru/en/support/neoreccap/ .

DESCRIPTION

System NeoRec cap 7 mini PROFESSIONAL is the low-channel model of the NeoRec cap DC mobile EEG (hereinafter *NeoRec cap*), including an EEG amplifier NeoRec 7 mini and the PROFESSIONAL cap for NeoRec 7 mini electrode cap.

NeoRec cap DC mobile EEG – is a mobile electroencephalograph for non-invasive recording of electrical activity of the brain.

Not a medical device.

NeoRec cap intended for use both in a specially equipped room and outside, including on the street. But it is necessary to exclude the influence of strong electromagnetic interference on the device during operation.

NeoRec cap can be used for education, research and development in EEG, neuro-computer interfaces (brain-computer interface, direct neural interface, brain interface), bio-feedback (BCI), neuromarketing, neurogaming, brain fitness.

NeoRec cap intended to record EEG and 3D acceleration events to files of different formats (EDF+ 16 bit, BDF+ 24 bit, GDF 32 bit) or transmit it online via stream LSL (Lab Streaming Layer) for analyze by third-party software as MATLAB / EEGLAB, OpenViBE etc.

For developers of their own software, interaction via API is provided (https://github.com/mcsltd/NB2CppDemo).

Answers to frequently asked questions about installing and using NeoRec cap, connecting via API are published on the website in the section Questions and Answers -> NeoRec cap.

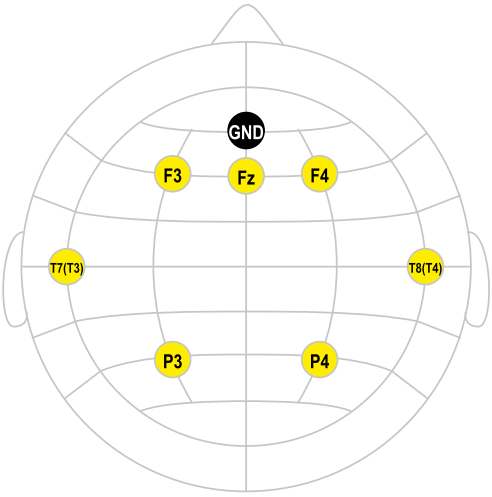
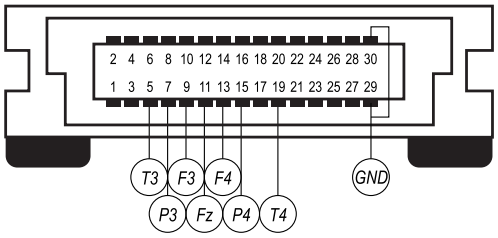
SPECIFICATION

EEG amplifier NeoRec 7 mini

EEG channels (monopolar according to GND)	7
Input dinamic range of EEG cannels	±150 mV, ±300 mV
Accuracy of signal reproduction	1 %
Frequency range at -3 dB	0 to 430 Hz (at 1000 Hz sampling rate)
Sampling rate (set by applied software)	125 Hz, 250 Hz, 500 Hz, 1000 Hz
Analog-to-digital conversion bit size	24 bit
Nonlinearity of frequency response	from -10 % to +5 %
Noise (in operating range from 0.5 to 70 Hz)	< 2 µV p-p
Input impedance	not less then 1 GOhm
Electrode impedance measurement range	from 1 to 3.1 MOhm (dry electrode check)
Electrode impedance control	during aquisition
Events from internal smart accelerometer	• activity (4 steps of sensitivity); • change orientation (turn by 60°); • free fall.
Events from button	press
Mode indication	Mode indicator
Active electrodes support	power and control
Offline data recording	presence, on the memory card
Data format	proprietary, with the ability to save in EDF+, BDF+, GDF, EEG formats by software
Wireless data interface	BLE 5.2
Wireless connection range	20 m

Work from full battery	≥ 2,5 hours
Power	Internal Li-ion rechargeable battery
Nominal battery voltage	3.7 V
Nominal battery capacity	0.16 Ah
Number of batteries in one unit of product packaging	1 pc.
Charging of internal battery	from +5V USB adapter, 500 mA
Full battery charge time	≤ 2.5 hours
Connector for connecting a cap/charger;	Molex 55091-0374
Enclosure dimensions	33 × 23 × 19 mm
Weight of the amplifier	14 g

Electrode cap

Electrode	 MCScap-NTC
Model of textile cap	Textile cap MCScap
Cable length	Without a cable, installing the amplifier on a pad on a cap
Location of the output of the electrode cable from the cap	top of the head
Marking of the textile cap	yes
Marking of the electrodes	yes
Weight of EEG cap	< 250 g
Connector type	Molex 52885-0374
Number of EEG electrodes	8
Electrode positions	F3, F4, P3, P4, T7, T8, FZ, GND
Scheme of electrode arrangement Manufacturer's code	 *#129M8*
Pin layouts of common connector Manufacturer's code	 *#129-01M8*

For information about other possible EEG electrode arrays, contact the manufacturer.