

# Enobio<sup>®</sup> technical specifications

| HARDWARE   | Enobio 32                           | Enobio 20  | Enobio 8   |
|--|-------------------------------------|------------|------------|
| Number of Channels   | 32                                  | 20         | 8          |
| Bandwidth  | 0 to 125 Hz (DC coupled)            |            |            |
| Sampling rate  | 500 SPS                             |            |            |
| Dynamic range  | 24 bits – 0,05 microvolt ( $\mu$ V) |            |            |
| Measurement noise  | < 1 $\mu$ V RMS                     |            |            |
| Input impedance  | >1 G $\Omega$                       |            |            |
| CMRR   | -115 dB                             |            |            |
| Communication  | Wi-Fi IEEE 802.11 g or USB          |            |            |
| 3 axes accelerometer   | Yes (100 S/s)                       |            |            |
| MicroSD card for offline recording                                       | ✓                                   | ✓          | ✓          |
| Rechargeable system using Li-Ion battery                                 | ✓                                   | ✓          | ✓          |
| Device dimensions  | 89.1 mm x 61.1 mm x 23.8 mm         |            |            |
| Device weight  | 97 g                                | 81 g       | 83 g       |
| Operating time* - WiFi communication                                     | 5.0 hours                           | 11.0 hours | 6.0 hours  |
| Operating time* - Holter Mode MicroSD recording                          | 11.0 hours                          | 24.0 hours | 16.5 hours |
| Operating time* - USB Communication                                      | 16.5 hours                          | 35.5 hours | 20.0 hours |
| Allows simultaneous use of stimulation devices (tDCS and TMS compatible) | ✓                                   | ✓          | ✓          |

\* Hours will vary depending on set up times and Holter Mode settings.

## SOFTWARE

|  |  |   |   |
|--|--|---|---|
| File output  | Proprietary NEDF or EDF+ & ASCII file formats                    |   |   |
| Real-time EEG monitoring   | ✓  | ✓ | ✓ |
| Scalp and cortical mapping of brain activity                       | ✓  | ✓ | – |
| Spectrum, spectrogram and band power plots                         | ✓  | ✓ | ✓ |
| Raw data streaming output  | Lab Streaming Layer (LSL) outlets or TCP/IP port                 |   |   |
| EEG markers sources  | Lab Streaming Layer (LSL) inlets, TCP/IP, keyboard, TTL triggers |   |   |
| Timestamp synchronization for precise hyperscanning                | ✓  | ✓ | ✓ |
| Compatible with Windows Vista/7/8/10 and Mac OS X (> Snow Leopard) | ✓  | ✓ | ✓ |
| 3rd party EEG software compatibility                               | OpenVibe, BCI2000, NeuroGuide (via Lab Streaming Layer)          |   |   |
| Offline EEG analysis   | MatLab (EEGLAB Plugin), Python (NEPY library)                    |   |   |
| Investigational applications via Software Development Kit          | ✓  | ✓ | ✓ |
| Networked system control with MatNIC toolbox                       | ✓  | ✓ | ✓ |

## HEADSET

|                                  |  |               |              |
|----------------------------------|--|---------------|--------------|
| Available headcaps               | 6 sizes: 42/46/49/54/57/60cm                                   |               |              |
| EEG custom montages              | Headcaps available with 39 or 64 of 10-10 EEG system positions |               |              |
| Set-up time using gel            | 20-25 minutes  | 15-20 minutes | 8-12 minutes |
| Set-up time using dry electrodes | 4 minutes  | 3 minutes     | 1-2 minutes  |

## CERTIFICATIONS

|                   |   |   |   |
|-------------------|---|---|---|
| CE Medical Device | ✓ | ✓ | ✓ |
|-------------------|---|---|---|

# Enobio<sup>®</sup> product content

| <b>Enobio 32</b>                                      | <b>Enobio 20</b>                                      | <b>Enobio 8</b>                    |
|---|---|------------------------------------|
| 1 x Enobio 32 NECBOX                                  | 1 x Enobio 20 NECBOX                                  | 1 x Enobio 8 NECBOX                |
| 1 x Neoprene headcap size M                           | 1 x Neoprene headcap size M                           | 1 x Neoprene headcap size M        |
| 32 x NG Geltrode                                      | 20 x NG Geltrode                                      | 8 x NG Geltrode                    |
| 1 x Earclip   | 1 x Earclip   | 1 x Earclip                        |
| 50 x Sticktrode                                       | 50 x Sticktrode                                       | 50 x Sticktrode                    |
| 1 x Set of cables Enobio 32<br>1 x 10 Electrode cable | 1 x Set of cables Enobio 20<br>1 x 10 Electrode cable | 1 x 10 Electrode cable             |
| 1 x Electrode gel 250 g                               | 1 x Electrode gel 250 g                               | 1 x Electrode gel 250 g            |
| 1 x Curved syringe                                    | 1 x Curved syringe                                    | 1 x Curved syringe                 |
| 1 x USB Stick with manuals & NIC2                     | 1 x USB Stick with manuals & NIC2                     | 1 x USB Stick with manuals & NIC2  |
| 1 x USB wifi dongle                                   | 1 x USB wifi dongle                                   | 1 x USB wifi dongle                |
| 1 x USB Isolator & Extension cable                    | 1 x USB Isolator & Extension cable                    | 1 x USB Isolator & Extension cable |
| 1 x Wifi devices power adapter                        | 1 x Wifi devices power adapter                        | 1 x Wifi devices power adapter     |