

Complete kit for optogenetic stimulation and electrical recording in animals [Sistema completo per stimolazione optogenetica e registrazione elettrica su animali]:

Wireless data acquisition system, complete with receiver, interface board, software package, optogenetic and el. recordings headstage and accessories. The system can be connected to any computer or laptop via USB 3.0 High Speed and be controlled from dedicated and custom programs. It includes:

- 1 x Receiver (W2100-RE):

- Dimensions (W x D x H): 250 x 83 x 25 mm
- 5 antennas for signal reception
- Can receive signals from up to 4 headstages (reduced sampling rate)

- 1 x MCS interface board :

Includes various in-/outputs:

- 2x eSATA: Connection for 2 receivers (W2100-RE)
- 4x Digital Out: Interface for output bit 0 - 3 of the 16-bit digital input / output channels (Lemo connector)
- 4x Digital In for synchronization with other instruments (bit 0 – 3) (Lemo connector)
- Digital IN / OUT: Interface for 16-bit digital input / output channels. Generates or accepts TTL-pulses
- 1x Stereo Out: Possibility to export 2 channels (e.g on an oscilloscope or headphones making the signals audible)
- 2x Analog IN: Interface for 2 additional analog inputs (channel 1 and 2) (Lemo connector)
- Analog IN: 8-channel Analog input (channel 1-8)
- 1x Ground
- 1x Universal Serial Bus High Speed
- External power supply: 100-240 V input voltage range

- Data acquisition and analysis software Multi Channel Suite:

- Including a 2 years maintenance package (software updates and support)

- 2 x Headstage,

Wireless headstage with 4 recording channels *with interface for optical stimulation*. 4-channel headstage for W2100-System for recording from 4 in vivo electrodes. Wireless transmission of digitized data from headstage to receiver. With rechargeable lithium batteries.

- Dimensions (W x D x H): 13 (+antenna) x 13 x 5.5 mm (+ battery)
- Weight: 1.9 g (+ battery)
- 4-channel data acquisition
- Bandwidth: 1 Hz – 5 kHz (0.1 Hz on request)
- Resolution: 16 bit
- Sampling rate: 10 kHz/channel on all 4 channels
- 2 LEDs (status adjustable via software)
- Connector: Single-row precision socket for round pins (1.27 mm)
- Interface for connection of LED for optical stimulation (LED not included)
- 2 rechargeable batteries (Wireless2100-B-100mAh)
- ADPT-W2100-opto-TBSI-LED adaptor

- 2 x dual Channel Wireless Optical Stimulation only Headstage, 8 pin,
Dual Row, Horizontal Mount Omnetics

- 40 x Optrodes (Led implant for stimulation) Rigid Optical LED Electrode to be used with both headstages:

- 8 Pin 025 Omnetics,
- Double or single Blue LED at Tip
- 4mm or 8 mm length
- 465 nm blue LED
- 37 mW output at 20 mA
- timing accuracy: up to 50 micros

- S2WO Stimulator Accessory Kit: Optical Stimware, 12"

Trigger Cables, Charger, USB Wireless Dongle WIP Antenna

- Accessories

- Charging device for headstage battery, USB-powered
- Signal generator
- Infra-red flashlight for switching on the headstage
- Cable assembly
- CD with user manuals and software

- 2 x Laser stimulation option:

Each system comprise: blue laser at 473 nm, up to 200mW/mm², TTL modulation 1Hz-1kHz, Power stability (rms, over 4 hours) <3%. With controller. It includes:

- 2 X Fiber optic patch cables

- 10 X Fiber optic cannula
- Rotary joint
- 1x Lab Standard Stereotaxic for Rats with Rat Adaptor and 18° Ear Bars