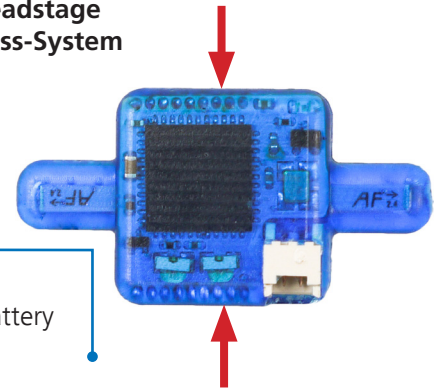


W32-HS Headstage

32-Channel Wireless Headstage for Use with the Wireless-System



W32-HS top side:
Connector for the battery

Important: Please handle the headstage with great care!
Do not touch the antennae, but the body of the headstage.

Applications

The W32 headstage is the ideal solution for spikes, LFP, EEG, ECG, EMG, and ECoG. Additional inputs to the interface board allow the synchronization of the data with external devices.

Technical Specifications

Number of recording channels	32
Weight (without battery)	+/- 3.7 g
Dimensions (W x D x H)	16 x 16 x 7.5 mm
Distance for wireless link	5 m and more under normal conditions

Advantages

- Small-sized headstage with integrated A/D converter.
- The Wireless-System converts the recorded signals into digital data already on the headstage.
- The signal-to-noise ratio is excellent and most important, independent from the distance between sender and receiver.
- The signal amplitude is independent of the distance, too, and the data arrives safely and completely at the receiver for further analysis.

Amplifier

Gain	101
Bandwidth	1 Hz to 5 kHz (0.1 Hz on request)
Input impedance	1 GΩ 10 pF
Resolution	16 bit
Input voltage range	+/- 12.4 mV
Input noise	< 1.9 μV _{RMS}

Sampling rate

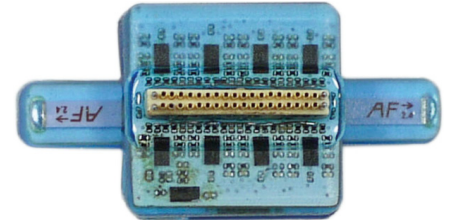
32 channels simultaneously	5 kHz
16 channels simultaneously	10 kHz
8 channels simultaneously	10 kHz
4 channels simultaneously	10 kHz
2 channels simultaneously	10 kHz

Software

Operating system	Windows ® 10, 8.1, 7 (64 bit)
Data acquisition and analysis software	Multi Channel Suite Version 1.5.1 and higher MC_Rack Version 4.6.2 and higher

W32-HS Headstage

Layout



W32-HS bottom side:

Connector for the electrode probe or for the MEA/Signal generator.

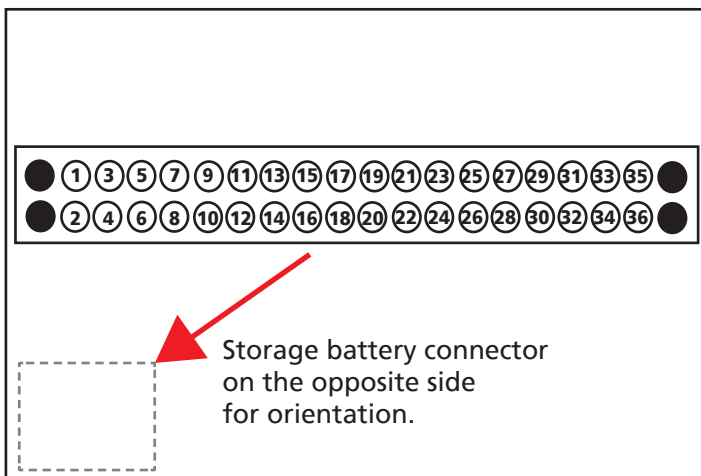
Wireless-B-100mAh

Standard battery for the W32-HS. Please connect the battery via cable to the headstage. The recording time with a 100 mAh battery at maximal sampling rate on all thirty-two channels is 1.3 hours.



W16 Headstage with Omnetics Connector

Diagram of the bottom side with pin layout. Please orientate the headstage as shown in the diagram.



Connector for W32 Headstage with Omnetics Connector

A79023-001 (NSD-36-DD-GS female, 4 guide posts mates with standard pin connector such as:
 Straight Thru-Hole:
 A79022-001
 Horizontal Surface Mount:
 A79024-001
 Vertical Surface Mount:
 A79026-001
 Cable (18.0" 34 AWG lead-wire):
 A79028-001

Pin Layout of the Omnetics Connector

Pin 1	GND (Ground)	Pin 13	Channel 11	Pin 25	Channel 23
Pin 2	REF (Reference)	Pin 14	Channel 12	Pin 26	Channel 24
Pin 3	Channel 1	Pin 15	Channel 13	Pin 27	Channel 25
Pin 4	Channel 2	Pin 16	Channel 14	Pin 28	Channel 26
Pin 5	Channel 3	Pin 17	Channel 15	Pin 29	Channel 27
Pin 6	Channel 4	Pin 18	Channel 16	Pin 30	Channel 28
Pin 7	Channel 5	Pin 19	Channel 17	Pin 31	Channel 29
Pin 8	Channel 6	Pin 20	Channel 18	Pin 32	Channel 30
Pin 9	Channel 7	Pin 21	Channel 19	Pin 33	Channel 31
Pin 10	Channel 8	Pin 22	Channel 20	Pin 34	Channel 32
Pin 11	Channel 9	Pin 23	Channel 21	Pin 35	GND (Ground)
Pin 12	Channel 10	Pin 24	Channel 22	Pin 36	GND (Ground)