

EMG-USB2+

Bioelectrical signal amplifier



The EMG-USB2+ is a multichannel amplifier for bioelectrical signals designed by OTBioelettronica, Torino, Italy. It can detect surface electromyographic (sEMG) signals, intramuscular electromyographic (iEMG) signals, electroencephalographic (EEG) signals and electrocardiographic (ECG) signals.

More information is available on

<https://www.otbioelettronica.it/en/products/legacy-device/item/107-emg-usb2-en>

Amplification channels (IN1÷4 and MULTIPLE IN 1÷3)	
Selectable gain	OFF, 100, 200, 500, 1000, 2000, 5000, 10000 V/V
Selectable bandwidth	High pass filter: 0.3, 10, 100, 200 Hz Low pass filter: 130, 500, 900, 4400Hz
Maximum input range	50 mV _{PP}
Noise level referred to input	< 4 μV _{RMS}
Input impedance	> 10 ¹¹ Ω
CMRR	> 95 dB
Output range	0 ÷ 5 V
Insulation voltage	4.000 V _{DC}
Auxiliary channels (AUX-IN 1÷16)	
Input range	± 5 V
Bandwidth	Channels are not filtered
Gain	0.5 V/V
Input impedance	200 kΩ
A/D converter input dynamics	0 ÷ 5 V
Data conversion	
A/D converter resolution	12 bit
Data transfer to PC	USB2 interface
Selectable sample frequency	512, 2048, 4096, 10240 Hz

The device specification used for the data acquisition

Sampling Frequency	2048 Hz
Bandpass filter (Hardware)	10 Hz - 450 Hz
Gain (Hardware)	500 Hz
Number of Channels	32