

CMOS-MEA5000-System

CMOS: Complementary Metal Oxide Semiconductor Technology

Technical Specifications

General Characteristics

Operating temperature	10 °C to 50 °C
Storage temperature	0 °C to 50 °C
Relative humidity	10 % to 85 %, non-condensing

Headstage

Dimensions (W x D x H)	256 mm x 230 mm x 25 mm
Weight	1407 g

Integrated Amplifier

Number of recording channels	4225
Data resolution	14 bit
Bandwidth	DC to 12.5 kHz, software controlled
Sampling frequency per channel	25 kHz or lower, software controlled

Integrated Stimulus Generator

Number of stimulation channels	1024
Output voltage range	± 3.4 V, software controlled 0 to 3.4 V (The stimulus amplitude depends on the voltage slope)
Output voltage resolution	1 mV
Time resolution	10 µs
Independent stimulation patterns	3, stimulation sites freely selectable

Interface Board „IFB-C Multiboot“ and Connectors

Dimensions (W x D x H)	250 mm x 83 mm x 25 mm
Weight	300 g

Front Panel

2 Sync In and Sync Out	Connectors for IFB-C connection in a chain Lemo connector, EPL 00250 NTN
1 8-Channel Analog In connector	10-pin connector DIL10Header-100mil
2 Analog In connectors	Lemo connector, EPL 00250 NTN
2 LEDs	LEDs for link status 1 and 2
4 Digital inputs	Lemo connector, EPL 00250 NTN
4 Digital outputs	Lemo connector, EPL 00250 NTN
1 Ground	Common jack 4 mm, banana plug

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Rear Panel

I / O
 Power supply
 1 Ground
 1 16 Bit Digital In / Out
 2 Auxiliary channels
 1 Audio output
 1 Digital signal processor DSP port
 Not in use in CMOS-MEA5000-Systems!
 2 Connectors for interface board to headstage
 2 USB-C ports
 Signal input range for analog channels
 Gain for analog channels

On / Off switch
 MPU 30, PWR DC 0.85 x 2.75 mm
 Common jack 4 mm, banana plug
 68-pin connector, Honda-PCS-XE68LFD
 Lemo connector, EPL 00250 NTN
 Stereo jack 3.5 mm, PRA.00.250.CTAC29
 14-pin connector, DIL14Header-100mil-angeled
 External power over iX-industrial cable, type B
 USB-C A and USB-C B
 ± 2500 mV
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Power Supply Unit

Input voltage range 110 - 240 V
 Output voltage 24 V
 Max. power 65 W
 Mark of conformity CE, TÜV, cUL
 European standard EN60601

Software

Operating system Strongly recommended: MCS specified PC
 Microsoft Windows 10 and 8.1 (64 bit),
 English and German version supported
 Data acquisition: CMOS-MEA-Control Version 2.5.0 and higher
 Analysis software: CMOS-MEA-Tools Version 2.5.0 and higher
 Data export: Multi Channel DataManager Version 1.13.3 and higher