

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 „MCS-IFB 3.0 Multiboot“ and Connectors

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

Front Panel

4 Digital inputs	Lemo connector, EPL 00250 NTN
4 Digital outputs	Lemo connector, EPL 00250 NTN
2 Auxiliary channels (not in use)	Lemo connector, EPL 00250 NTN



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Rear Panel

1 16 Bit Digital In / Out
1 8-Channel Analog Input

2 Analog Inputs
Signal input range for analog channels
Gain for analog channels
1 Digital signal processor DSP port
2 USB 3.0 ports
Power supply
Ground
1 Audio output

Side Panel

2 Interface board to headstage connectors

Power Supply Unit

Input voltage range
Output voltage
Max. power
Mark of conformity
European standard

Software

Operating system

Data acquisition: CMOS-MEA-Control
Analysis software: CMOS-MEA-Tools
Data export: Multi Channel DataManager

68-pin MCS standard connector
10-pin connector (2.54 mm grid), dual row standard IDC
Lemo connector, EPL 00250 NTN
 ± 1250 mV
2
20-pin JTAG connector (1.27 / 2.54 mm grid)
USB 3.0 super speed cable (type A - micro B)
MPU 30, PWR DC 0.85 x 2.75 mm
Common jack 4 mm, banana plug
Stereo jack 3.5 mm

External power over serial ATA (eSATAp)

100 - 240 V

11 - 13 V

30 W

CE, TÜV, cUL

EN60601

Strongly recommended: MCS specified PC
Microsoft Windows 10 and 8.1 (64 bit),
English and German version supported

Version 1.4.0 and higher

Version 1.2.3 and higher

Version 1.8.4 and higher