multichannel systems
Innovations in Electrophysiology

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
Intergated 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 Digial 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	68-pin MCS standard connector
1 8-Channel Analog Input	10-pin connector (2.54 mm grid), dual row standard IDC
2 Analog Inputs	Lemo connector, EPL 00250 NTN
Signal input range for analog channels	± 1250 mV
Gain for analog channels	2
1 Digital signal processot DSP port	20-pin JTAG connector (1.27 / 2.54 mm grid)
2 USB 3.0 ports	USB 3.0 super speed cable (type A - micro B)
Power supply	MPU 30, PWR DC 0.85 x 2.75 mm
Ground	Common jack 4 mm, banana plug
1 Audio output	Stereo jack 3.5 mm FFA.00.250.CTAC29
Side Panel	
2 Interface board to headstage connectors	External power over serial ATA (eSATAp)

Power Supply Unit	
Input voltage range	100 - 240 V
Output voltage	11 - 13 V
Max. power	30 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 1.4.0 and higher
Analysis software: CMOS-MEA-Tools	Version 1.2.3 and higher
Data export: Multi Channel DataManager	Version 1.8.4 and higher

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