

MEA2100-Beta-Screen-System

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)	125 mm x 100 mm x 22 mm
Weight with cable, w/o MEA chamber	444 g
Weight with cable, with MEA chamber	484 g
Length of the cable	3 m

Integrated Amplifier

Number of analog recording channels	5
Gain	23
Data resolution	24 bit
Signal input voltage range	± 70 mV
Bandwidth	DC to 10 kHz, software controlled
Sampling frequency per channel	up to 50 kHz, software controlled
Input impedance	450 MΩ 10 pF
Intergated Stimulus Generator	Not in use in MEA2100-Beta-Screen-Systems!

Integrated Heating Element

Temperature sensor type	Pt 100 with four wire connection
Accuracy	± 0.1 °C

Signal Collector Unit (MCS-SCU)

Dimension (W x D x H)	250 mm x 83 mm x 25 mm
Weight	300 g
4 Inputs for headstages (HS1 to HS 4)	Lemo connector, EPG.0B.307.HLN
1 Connector with 4 analog outputs for LED driver	Lemo connector, EPG.0B.307.HLN
Voltage output of each analog output	0 - 5 V
1 64-Channel Analog Out connector	68-pin MCS standard connector
Collector unit to interface board connector	External power over serial ATA (eSATAp)

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MCS-IFB 3.0 Multiboot Interface Board

Dimensions (W x D x H)

250 mm x 83 mm x 25 mm

Weight

300 mg

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

Rear Panel

1 16 Bit Digital In / Out

68-pin MCS standard connector

1 8-Channel Analog In

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 port: (not in use)

20-pin JTAG connector (1.27 / 2.54 mm grid), dual row

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 (not in use)

Stereo jack 3.5 mm

Side Panel

2 Interface board to headstage connectors

External power over serial ATA (eSATAp)

Power Supply Unit (MPU 30)

Input voltage

90 - 264 VAC @ 47 - 63 Hz

Output voltage

11 - 13 V

Max. power

30 W

Mark of conformity

CE, TÜV, cUL

European standard

EN60601

Software

Operating system

Windows 10, 8.1, and Windows 7 (32 or 64 bit),

Microsoft Windows ®

English and German version supported

Beta-Screen software

Version 2.8.9 and higher