

## 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

up to 8 headstages can be connected

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  $\pm 70$  mV

Bandwidth DC to 10 kHz, software controlled

Sampling frequency per channel up to 50 kHz, software controlled

Input impedance 450 M $\Omega$  || 10 pF

**Integated Stimulus Generator** Not in use in MEA2100-Beta-Screen-Systems!

#### Integrated Heating Element

Temperature sensor type Pt 100 with four wire connection

Accuracy  $\pm 0.1$  °C

**Signal Collector Unit (MCS-SCU)** up to 2 Signal Collector Units can be connected

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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### Technical Specifications

#### 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

± 2500 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