MEA2100-Mini-System

Technical Specifications

General Characteristics
- Operating temperature: 10 °C to 50 °C
- Storage temperature: 0 °C to 50 °C
- Suitable for Incubator: Humidity: 10 % to 95 %, non-condensing

Headstage
- Dimensions (W x D x H): 186 mm x 80 mm x 12 mm
- Weight with cable: 485 g
- Cable length: 3 m
- Type of headstage: MEA2100-Mini-HS60 for 60-electrode MEAs
  MEA2100-Mini-HS120 for 120-electrode MEAs
- Power consumption: 1.5 W

Integrated Amplifier
- Number of analog recording channels: 60 or 120
- 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

Integrated Stimulus Generator
- Output current: ± 1.5 mA @ ± 16 V compliance voltage
- Output voltage: ± 10 V @ ± 20 mA max. compliance current
- Number of stimulation patterns: 2 independent stimulation patterns
- Stimulation pattern: Almost arbitrary pattern
- Resolution: 16 bit
- Time resolution: 20 µs

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)
- 1 Connector with 4 analog outputs for LED driver
- Voltage output of each analog output: 0 - 5 V
- 1 64-Channel Analog Out connector
- Signal Collector Unit to Interface Board connector
- Up to 2 Signal Collector Units can be connected
- Lemo connector, EPG.08.307.HLN
- Lemo connector, EPG.08.304.HLN
- External power over serial ATA (eSATAp) cable
# ME2100-Mini-System

## 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
- 4 Digital Outputs
- 2 Auxiliary channels (not in use)

**Rear Panel**

- 1 16 Bit Digital In / Out
- 1 8-Channel Analog In
- 2 Analog Inputs
- Signal input range for analog channels: ± 2500 mV
- Gain for analog channels: 2
- 1 Digital signal processor DSP port (Not in use!)
- 2 USB 3.0 ports
- Power supply
- Ground
- 1 Audio output

**Side Panel**

2 Interface board to headstage connectors

**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), English and German version supported
- **Multi Channel Suite software package**: Version 2.6.0 and higher
  - Multi Channel Experimenter
  - Multi Channel Analyzer
  - Multi Channel DataManager

**ME2100-Mini-System**

- Lemo connector, EPL 00250 NTN
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- Lemo connector, EPL 00250 NTN
- 68-Pin MCS standard connector
- 10-Pin connector (2.54 mm grid), dual row standard IDC
- Lemo connector, EPL 00250 NTN
- ± 2500 mV
- 20-Pin JTAG connector (1.27 / 2.54 mm grid) (Not in use!)
- 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)