Small Footprint MEA-System: MEA2100-Mini-System

- 60 recording channels per headstage
- Two integrated stimulators per headstage
- Up to 50 kHz sampling rate
- Up to eight headstages on one interface board
- Can be operated in incubators
Small footprint MEA-System for the incubator: MEA2100-Mini-System

The MEA2100-Mini-System is a miniaturized in vitro recording system. The state of the art power saving electronics allow to benefit from almost all advantages of the MEA2100 platform and still be able to operate the system continuously in the incubator. The system consists of a signal collector unit for up to four headstages, which can also control up to four optical stimulation units. The signal collector unit is connected via eSATA cable to the MCS-IFB interface board. Up to two signal collectors can be connected to one interface board. Headstages have 60 recording channels and two integrated stimulators each. Amplifier, stimulators, and A/D converters are all directly on the headstage, which allows low-noise, high quality data acquisition. The modular nature of the system allows easy upscaling.

Application

The small footprint, low heat emission, and possibility for parallel operation of many headstages make the MEA2100-Mini-System the ideal solution for continuous, undisturbed recordings and stimulation of samples in the incubator or on a microscope stage with environmental control.

Interface board multiboost

The MCS-IFB 3.0 multiboost is a new generation of interface boards, which enables you to operate a wide range of MCS in vitro and in vivo headstages: MEA2100-HS, MEA2100-Mini-HS, MEA2100-Beta-Screen-HS, Multiwell-MEA-HS, CMOS-MEA-HS, W2100-RE, and ME2100-HS. This allows cost-effective combinations with only one interface board and multiple recording systems.

Technical specifications

<table>
<thead>
<tr>
<th>Amplifier</th>
<th></th>
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<tbody>
<tr>
<td>Data resolution</td>
<td>24 bit</td>
</tr>
<tr>
<td>Number of recording channels</td>
<td>8x60</td>
</tr>
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<table>
<thead>
<tr>
<th>Stimulus Generator</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Current mode</td>
<td>± 1.5 mA</td>
</tr>
<tr>
<td>Voltage mode</td>
<td>± 10 V</td>
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<table>
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<tr>
<th>Data converter and USB interface</th>
<th></th>
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<tbody>
<tr>
<td>Sampling rate per channel</td>
<td>up to 50 kHz</td>
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