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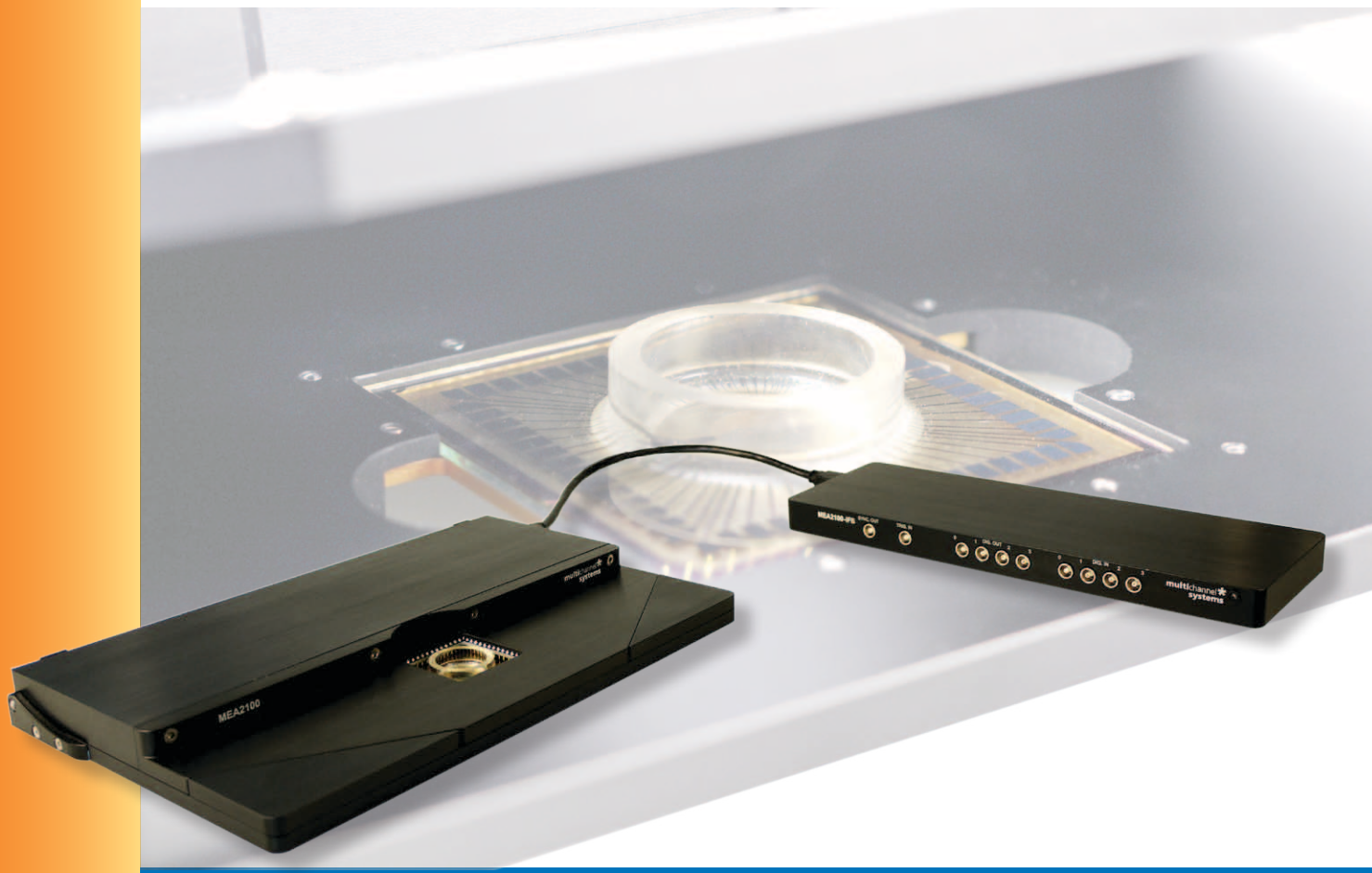
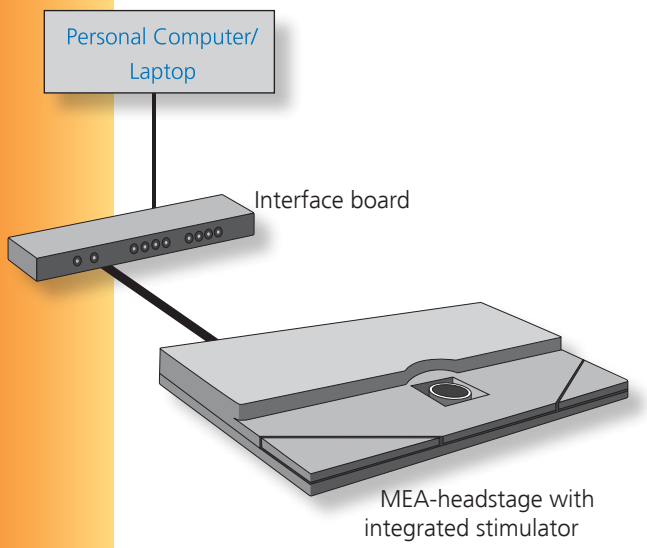



# Versatile *in vitro* recording system: MEA2100-Lite-System

- Integrated stimulation
- Gain and bandwidth adjustable via software
- 60 recording channels
- Sampling rate of 30kHz on all channels
- Multi-well solutions possible for higher throughput



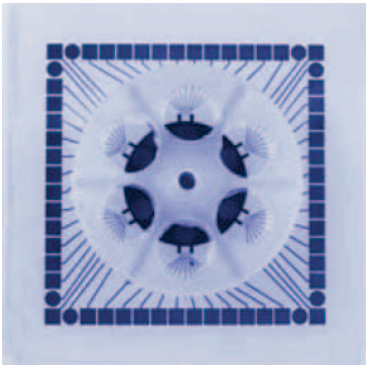

## Versatile *in vitro* recording system: MEA2100-System

The MEA2100-System is a versatile *in vitro* recording system with integrated stimulation, following the tradition of high-quality, low-noise amplifiers.

It is the complete setup for extracellular recordings from microelectrode arrays (MEAs), including everything you need for your experiment: data acquisition software; interface board; MEA-headstage with integrated stimulation; as well as one MEA. Thanks to its compact design, you can position the MEA-headstage on any inverted or upright microscope. It is connected via a single SATA cable to the interface board, which offers various analog inputs and digital in-/outputs for synchronization with other instruments.

## Higher throughtput with flexible multi-well solutions

The MEA2100-Lite-System can be used with 6-well MEAs for higher throughput. You can run 6 experiments at the same time. However, you are not limited to multi-well solutions. By using different MEAs, the setup can be optimized for a completely different application within seconds.



## 6-well MEA

In the 6-well microelectrode array, the 60 recording electrodes are divided into 6 independent wells with 9 recording electrodes each. Independent measurements can be performed in each well.

These arrays are ideal for toxicology, stem cell research, and safety pharmacology, as they considerably increase the throughput of your system. A maximum of 24 wells on four MEAs can be recorded in parallel with one MEA2100-System.

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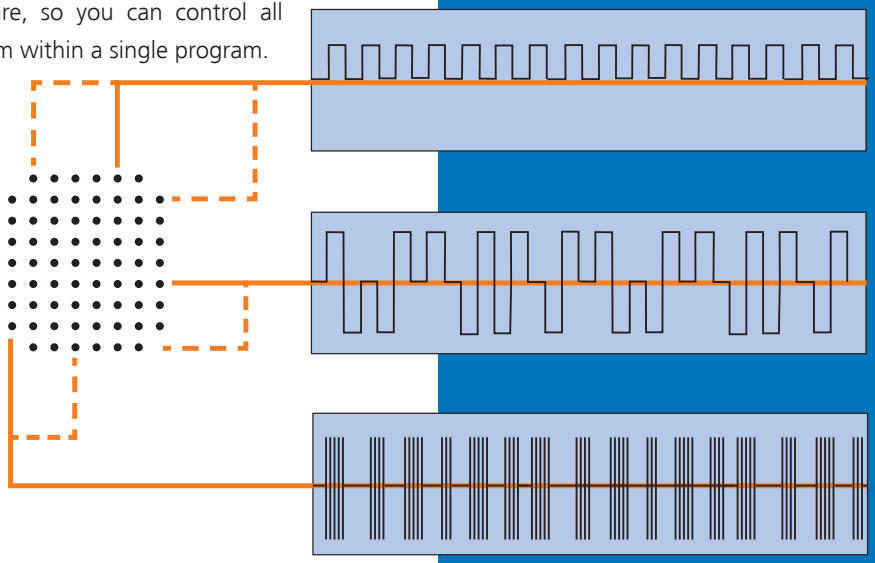
## Stimulation integrated in MEA-headstage

The integrated stimulus generator offers 3 different stimulation patterns (monophasic, biphasic, bursts) per available MEA. You can choose between current and voltage stimulation and select each electrode for stimulation. All configurations (stimulation patterns, output, and electrodes) are defined via the included MC_Rack data acquisition software, so you can control all parameters of your experiment from within a single program.



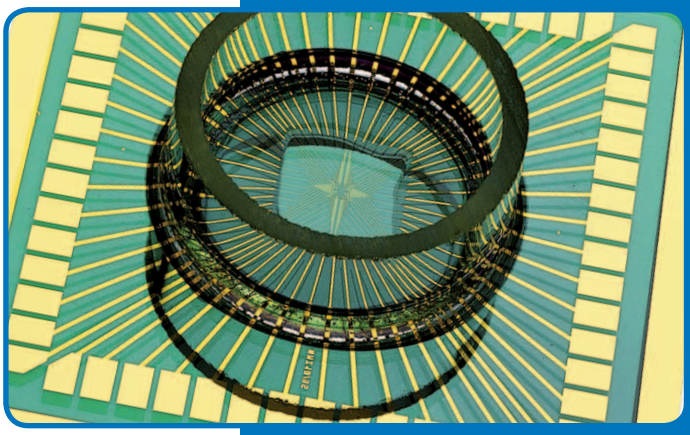
## Flexible and powerful: MC_Rack

The MC_Rack data acquisition and analysis program is highly adaptable with essentially limitless possibilities. MC_Rack has been used for many years in laboratories around the world and has proven to be powerful, flexible, and reliable.

## 60-electrode MEAs: The widest range

MEAs with 60 electrodes are available in many variations. They are offered as standard glass as well as perforated MEAs, with different electrode materials (titanium nitride, gold) and in various layouts. You can choose between different electrode diameters and spacings, 8x8 or 6x10 grid, or select a high density layout. These MEAs are also available as "ThinMEAs", which are as thin as a coverslip (180 µm). This makes them ideal whenever high resolution imaging is combined with MEA technology.

In this range, you will definitely find the right MEA for your application. If you need any help in selecting the most appropriate type, please contact our support team.



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# MEA2100-Lite-System: Technical Specifications

## General characteristics

| | |
|---|---|
| Dimensions (W x D x H) | Headstage: 256 mm x 151 mm x 25 mm<br>Interface board: 250 mm x 83 mm x 25mm |
| Weight | Headstage: 1.0 kg<br>Interface board: 0.3 kg |

## Amplifier

| | |
|---|---|
| Data resolution | 16bit |
| Number of recording channels | 60 |
| Bandwidth | 0.1 Hz to 10 kHz |

## Stimulus Generator

| | |
|---|---|
| Number of stimulation channels | 3 independent patterns per MEA slot |
| Number of stimulus signals | 3 (monophasic, biphasic, bursts) or Ground |
| Output current | ± 1.5 mA |
| Output voltage | ± 12 V |

## Data converter and USB interface

| | |
|---|---|
| Control interface | USB |
| Sampling rate per channel | up to 30 kHz per channel |

## Heating element and temperature sensor

| | |
|---|---|
| Heating element impedance | 20 Ω |
| Temperature sensor type | PT 100 with 4 wire connection |

## Software

| | |
|---|---|
| Operating system | Windows 8, 7, Vista or XP with NTFS<br>English and German versions are supported |
| MC_Rack program | Version 4.1.1 and higher |
| MC_DataTool program | Version 2.6.3 and higher |
| Multi Channel Suite | under development |
| Data export | Axon binary file (*.abf), ASCII file (*.txt), binary file (*.raw) |

Made in Germany



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