

mcdRec Data Recorder

HIGH-PERFORMANCE MULTIPURPOSE DEVICE FOR DATA ACQUISITION USING THE ACOUSTIC CAMERA



The mcdRec is a multi-channel data recorder with Ethernet-CPU and 9 cPCI slots. With 48 to 168 differential microphone channels and the possibility to connect hundreds of different sensors, the mcdRec is a powerful and reliable data acquisition system. All channels are recorded synchronously at the highest sampling rates.

The mcdRec was developed especially for use with the Acoustic Camera. It simultaneously facilitates high sampling frequencies and high channel counts. The data recorder features a scalable microphone channel count, simply dependent on the number of cards dedicated to microphone data.

In addition to microphone signals, other channels such as rotational speed, torque, angle of rotation and other parameters can be recorded via the digital channels interface (sampling rate: 6.14 MHz). Ethernet cameras can also be connected to the mcdRec via a provided Ethernet switch.



The mcdRec is the heart of the basic Acoustic Camera Pro system, which also consists of a microphone array, and a notebook or other workstation with the NoiseImage analysis software.



BENEFITS

- Customizable to your needs
- Low noise: no masking of sound sources by the measuring system
- Extremely high sampling rate for recording transient processes as well as exact sound source localization
- Extensive EMI shielding
- Upgradable card interface system (analog/digital)
- Plug-and-go interface for peripheral devices
- Gbit LAN for fast data transfer
- Power independent operating option
- Synchronization of up to 6 data recorders

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TECHNICAL DATA

Size and Weight

Dimensions	42 x 31 x 20 cm
Weight	10 kg

Operating Conditions

Ingress protection code	IP20
Cable length to array	Up to 20 m (on request: 50 m)
Cable length to notebook	50 m for 1 GB Ethernet
Power supply	90 to 240 V
Operating environment	0°C - 45°C, up to 80% RH



Measurement cards available

ADC114MLN	24 analog inputs
ADC102A10B	12 analog inputs
DDC_102RC	12 digital inputs
ICDC101	4 analog BNC-channel
CAN Bus	Support of CAN bus data in NoiseImage



mcdRec Data

Microphone Channels	up to 168 time-synchronized, analog channels (7 cards with 24 channels each)
Sampling Rate	48 to 192 kHz (32 bit)
Interface	1 Gbit Ethernet PC interface streaming capabilities
Max. recording time (with 48 kHz)	approx. 349 s
Max. recording time (with 192 kHz)	approx. 87 s