

# VIBDAQ 2.1

Double channel data acquisition module



## DESCRIPTION

VIBDAQ 2.1 is a double channel data acquisition module for signal processing in IEPE standard. The inputs can be also configured as AC or DC inputs, the selected type is indicated by an appropriate diode on the panel, and can be switched using proper buttons. The device is fully powered by USB port. VIBDAQ 2.1 has configurable gain (x1, x10, x100) and signal overload indicator for each channel, which are presented on the panel by diodes.

The small size and weight make the device very convenient to use.

## FEATURES

- Possibility to work with two IEPE sensors
- Ability to switch the input type to DC or AC
- The module is fully powered from USB port
- Configurable gain (x1, x10, x100) for each channel that is indicated on the panel by diodes
- Indication of signal overload - for both channels
- Does not require external drivers for the system
- In the operating system the device is seen as a sound card

## PARAMETERS

|                           |  |
|---------------------------|--|
| Number of input channels  | 2  |
| Input channels connectors | BNC  |
| Input signal type         | DC, AC, ICP®   |
| ICP®                      | 24 VDC, 2.4 mA   |
| Input voltage range       | ±10 V  |
| Gain                      | x1, x10, x100  |
| Input impedance           | AC: 220 kΩ<br>DC: 220Ω<br>ICP®: 110kΩ  |
| THD                       | typically: -88 dB<br>max: -70dB<br>(at $F_s = 48$ kHz,<br>input signal: 1 kHz sinusoid)                                |
| SNR                       | 92 dB  |
| Crosstalk                 | 1 kHz sinusoid : < -120 dB<br>10 kHz sinusoid : < - 90 dB<br>20 kHz sinusoid : < - 86 dB                               |
| A/C converter             | multi bit Delta - Sigma<br>16 bit (optionally 24 bit)  |
| Sampling frequency        | 44.1 kHz, 48 kHz (16 bit, 24 bit)<br>96 kHz (only for 16 bit)  |
| Anti-aliasing filter      | digital decimation   |
| Anti-aliasing filter gain | 0-0.39 $F_s$ : 0.1 dB<br>0.55-0.63 $F_s$ : 75 dB<br>0.1425 $F_s$ : 0.25 dB<br>0.45 $F_s$ : 3 dB<br>0.5 $F_s$ : 17.5 dB |
| Communication interface   | USB  |
| Power supply              | USB port   |
| Power consumption         | approx. 300 mA   |
| Dimensions                | 60 x 100 x 30 mm   |
| Weight                    | 250 g  |
| Operational temperature   | 0-70°C   |

