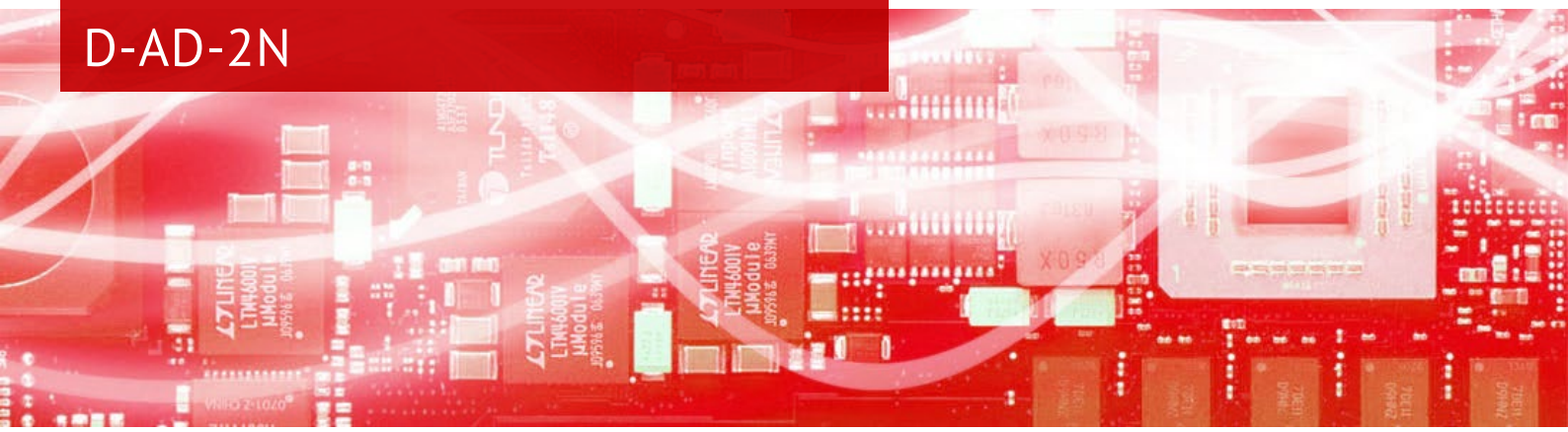
optomet.
LASER VIBROMETRY

Digital Acceleration Decoder
D-AD-2N



Ultrafast FPGA-based Digital Signal Processing

Optomet Vibrometers feature an end-to-end FPGA-based digital signal processing allowing a fully digital read-out of the measurement data. Digital signal processing avoids any drawbacks of analog demodulation which may result from component aging, temperature dependencies, noise and non-linearities. Significantly higher sensitivity, better resolution, and stability are the benefits of OptoMET's end-to-end digital signal processing. Extremely low noise levels produce precise results even from poorly reflecting measurement objects.

HIGHLIGHTS:

- Digital decoder
- 11 acceleration measuring ranges
- Frequency range: 0 Hz - 1 MHz
- Max. acceleration 3,200,000 g
- Best acceleration resolution 1.8 µg / √Hz*

High-Precision Sense Acceleration Decoder

All vibrometers series feature by default a velocity decoder and can be supplemented with a suitable displacement and/or acceleration decoder.

The D-AD-2N acceleration decoder enables acceleration measurements up to 3,200,000 g at a maximum of 1 MHz and 5 m/s.
Required velocity decoder: D-VD-2N

* The resolution is defined as the signal amplitude (rms) that produces 0 dB signal/noise ratio with 1 Hz spectral resolution at 50 % fmax.

Technical data

Pos.	Full Scale Output (Peak) g	Max. Frequency kHz	Max. Velocity m/s
1	3.9	2.5	5
2	15.6	5	5
3	78	10	5
4	392	25	5
5	1,560	50	5
6	7,800	100	5
7	39,200	250	5
8	156,000	500	5
9	784,000	1,000	5
10	1,560,000	1,000	5
11	3,200,000	1,000	5