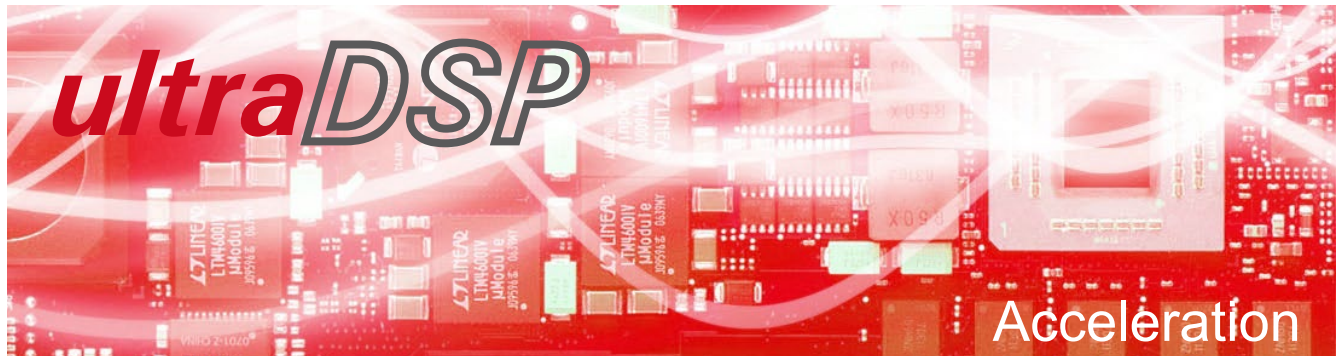


Digital Acceleration Decoder D-AD-5



ultraDSP Technology - Ultrafast digital signal processing (ultraDSP)

OptoMET offer a complete line of vibrometer digital decoders. Compared to their analog counterparts, digital decoders offer much better precision, resolution, aging resistance, and sensitivity. The user can thus measure vibrations / dynamic motion (even very small amplitudes) with high precision. Practical applications also benefit from the excellent low-noise digital signal processing that allows measurements on nearly all types of surfaces and from a large distance.

OptoMET has implemented its ultrafast digital signal processing technology (ultraDSP), which combines efficient algorithms with extremely powerful hardware, to achieve exceptional resolution, high frequency bandwidths and extremely large dynamic range of up to 9 decades for velocity measurements (nm/s - m/s).

Acceleration decoders

OptoMET offers a range of digital decoder options that can be used to upgrade or expand all models of so that you can tailor them to your measuring requirements.

Each vibrometer can also be equipped with an acceleration decoder in addition to the velocity decoder already installed. These decoders produce a real-time output signal that is proportional to the acceleration of the measured object. Depending on the performance class, these decoders have a working frequency range of up to 10 MHz.

D-AD-5 Features:

- Digital Decoder
- 14 acceleration measuring ranges
- Max. frequency up to 10 MHz
- Max. acceleration 32,000,000 g
- Best acceleration resolution $1.8 \mu\text{g} / \sqrt{\text{Hz}}$ *
- Max. permissible velocity of the measured object 10 m/s

Technical data

The D-AD-5 acceleration decoder was specially developed for use with velocity decoder D-VD-5. It expands the laser Doppler vibrometers of the Vector Series with the capability of a real-time output of the acceleration value.

D-AD-5 technical data

Pos.	Full Scale Output (Peak) g	Max. Frequency kHz	Max. Velocity m/s
1	1.6	2.5	10
2	6.4	5	10
3	32	10	10
4	160	25	10
5	640	50	10
6	3,200	100	10
7	16,000	250	10
8	64,000	500	10
9	320,000	1,000	10
10	960,000	1,500	10
11	3,200,000	2,500	10
12	32,000,000	10,000	10
13	25,600,000	5,000	10
14	16,000,000	2,500	10

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