



MotionView

The world's first full-function microscopic laser vibrometer



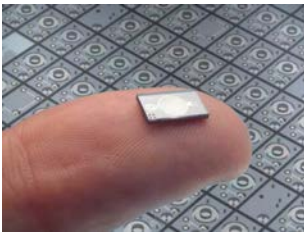
- ✓ LDV with microscope image
- ✓ Support both optical & digital zoom, up to 450x
- ✓ Up to 4mm image resolution
- ✓ Spot size of measurement laser <100um
- ✓ With 1310nm measurement laser & 655nm indication laser
- ✓ X/Y/Z adjustment capability
- ✓ Vibration amplitude resolution:1nm
- ✓ Frequency resolution: 0.1Hz
- ✓ DC~2.5MHz measurement range
- ✓ Maximum full scale vibration speed: 20meter/s
- ✓ With trigger IN to support synchronized measurement

1 Introduction

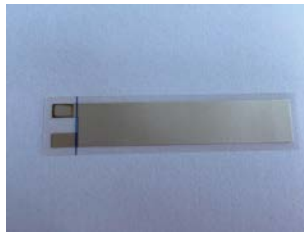
MotionView is an integrated measurement system that combines laser vibrometer sensors and digital microscopes. With built-in data processing unit, **MotionView** does not have other host units and can be directly connected to the host computer through Ethernet. The user GUI features with measurement acquisition capability, signal processing capability and microscope display and control capability. **MotionView** includes an X/Y adjustable stage and Z-axis focus adjustment stage. **MotionView** vibrometer has excellent noise performance. The noise floor is less than $5\mu\text{m}/\sqrt{\text{Hz}}$, and the full scale vibration speed can be as large as 20m/s .

MotionView can be widely used in many areas, such as vibration characterization of micro-structures, semiconductor material testing, and micro electro-mechanical device's testing, etc.

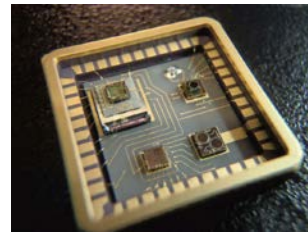
2 Typical Industries



Semiconductor

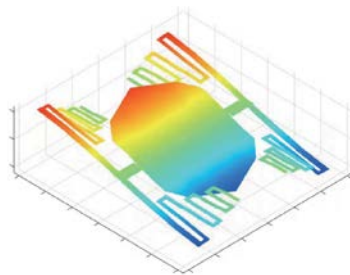
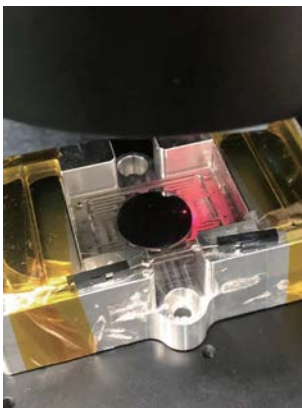


Material science



MEMS

3 Testing case

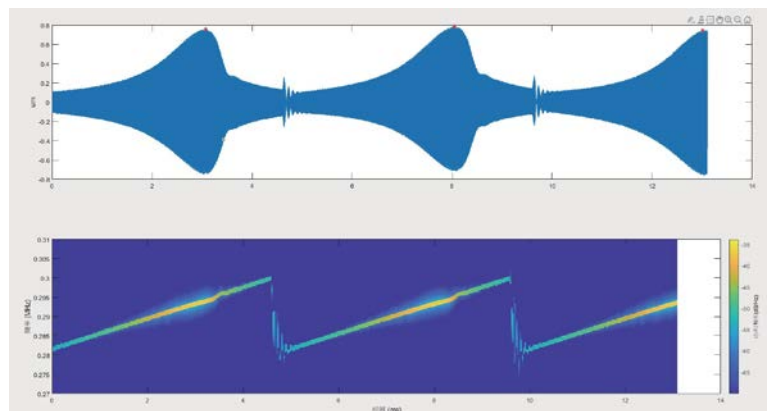


Testing case 1:

At each pre-defined position of the cantilever of MEMS (Left), the displacement are measured synchronously. Then operational modal analysis (OMA) results are processed off-line (Right).

Testing case 2:

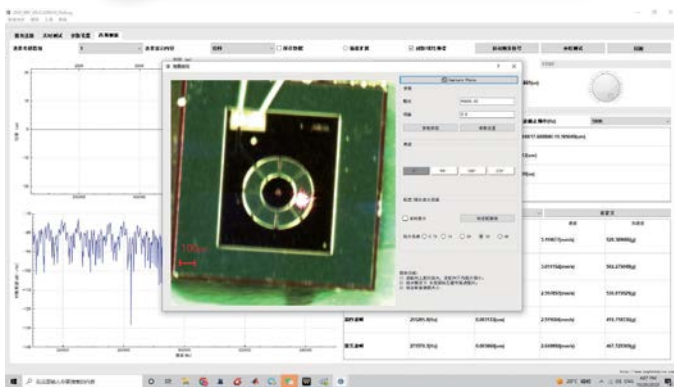
In the field of studies of MEMS or of other micro mechanical structures, it's important to obtain the resonance characteristic curve of the devices. **MotionView** can greatly facilitate these kinds of measurements.



3 Technical specifications

Parameter	Value
Laser vibration sensor	
Measuring frequency range	DC~2.5MHz
Working distance	50-70mm
Working range	±15% working distance
Speed range	Maximum 20 m/s
Vibration detection resolution	≤1nm
Measuring laser wavelength	1310nm (Invisible light)
Measuring laser safety level	Class 1, <5mW
Indicate laser wavelength	655nm
Indicate laser safety level	Class 2, <1mW
Spot size of measurement laser	<100um
Digital microscope	
Optical zoom	0.7x~4.5x
Digital zoom	100x
The depth of field	0.1~1.9mm
Resolution ratio	4~11um
System	
Size	350*400*523mm ³
Marble countertop	350*400mm
X/Y stroke	150mm
Weight	~25kg
Operation temperature	0~50°C
Power	12V, ≥40W
Digital interface	Ethernet
Software	GUI

5 Software interface



Device alignment with imaging assistance

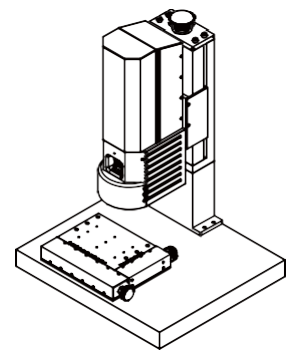
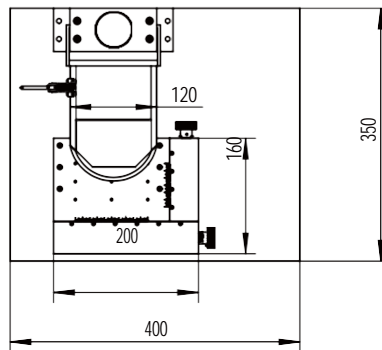
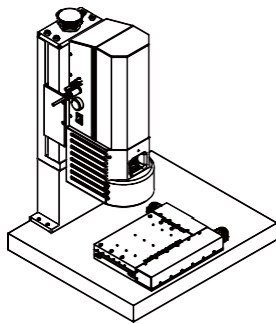
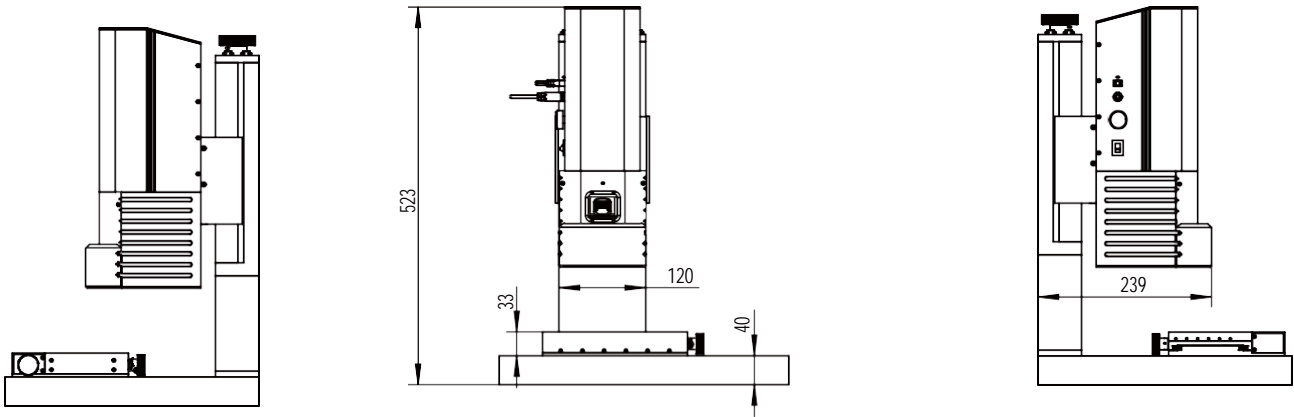
- ✔ Includes data playback, zoom in/out functions
- ✔ Includes digital filter functions
- ✔ Include windowing functions (Han, Hanning, blackman, etc.)
- ✔ Optional short-time DSP package



- ✔ Support digital zoom (x1,x2,x3,x4)
- ✔ Support image adjustment of exposure and contrast

6

Product dimensions



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