



THE INNOVATOR IN  
**SOUND & VIBRATION  
TECHNOLOGY**

+1.616.669.3028  
**VibrationResearch.com**  
**vrsales@VibrationResearch.com**

# VR10500

## Vibration Controller



Sine | Random | Shock | Sine Resonance Track and Dwell | Shock Response Spectrum | Sine-On-Sine | Recorder | Sine-on-Random | Random-On-Random | Transient Capture | Field Data Replication (FDR) | Instant Degrees Of Freedom® (iDOF) | Sine Tracking, Analysis and Generation™ (STAC®) | Kurtosion® | Fatigue Damage Spectrum (FDS) |

### VALUABLE BENEFITS

#### Mix-n-Match

Each module can be used independently on separate shakers or together in a single stack for jobs requiring a higher channel count. This economic solution creates substantial cost savings for our customers.

#### Warranty

Three-year hardware warranty can be extended to a lifetime warranty with continual renewal (no lapse) of a support agreement.



### GENERAL SPECIFICATIONS

- Up to 512 channels (mix-n-match)
- 104,000 lines of resolution
- Control sine, random, or shock vibration to 50,000Hz
- Total harmonic distortion < -100dB THD+N
- Digital remote Inputs/Outputs
- Emergency stop

### INPUT CHANNELS

- Single-ended with 100kΩ impedance
- Custom units can be defined for other sensor types

#### Protected

200V tolerant inputs protect your device from transients

#### Resolution

24-bit

#### Dynamic Range

> 110dB dynamic range  
> 130dB with tracking filters

#### Filtering

Analog multiple pole anti-aliasing filter, and digital anti-aliasing filter with >105dB attenuation

#### Noise Floor

<50nV/√Hz suprious free

#### Sample Rate

256kHz simultaneous sample rate

#### Voltage Range

±1V, ±10V: 100kΩ input impedance  
±0.5V, ±5V: 10MΩ input impedance

#### Set-up Parameters

Accelerometer constant current supply (4mA IEPE)  
TEDS transducer interface

### OUTPUT CHANNELS

#### Channels

Four analog  
Two digital

#### Filtering

Analog multiple pole filter plus a digital filter  
Analog reconstruction filters

#### Resolution

32-bit

#### Voltage Range

±10V

#### Frequency Range

50,000Hz  
216,000 samples per second

#### Other

Drive up to 4 shakers  
4 independent or phase controlled outputs to drive multiple shakers  
Safety relay prevents shaker, amplifier, and product damage from transient  
Optionally drive a differential input device

## DARE TO COMPARE - FOR 30 DAYS.

Skeptical that we can't meet your standards? Put us to the test. We'll let you try our products for 30 days. Once you use them, we think you'll be hooked.