



MODAL AMPLIFIED™

Turn Hours and Days into Minutes

Modal Amplified™, a camera-based Modal Test and Analysis solution, enables a new shift from the time-consuming sensor mapping, placement, fixation, and animated modeling of typical Modal Testing to instant capture, visualization, and analysis on real-life structures.

Modal Amplified leverages simultaneous measurement of the force input with the response measured directly from the camera. Users can not only immediately visualize the resulting modes shapes, but they can place an unlimited number of sensors across the structure through virtual regions of interests. This approach allows users to have Modal results in a matter of minutes, from capture to visualizing the modes shapes, complete with dozens, even hundreds of sensors measured across the structure.



Rather than spend hours and days setting up a test site to determine what a structure theoretically could look like and how it might react using Modal Testing, camera-based Modal Amplified sets up in minutes, can be moved anywhere for multiple views, and instantly visualizes the actual real-life structure, significantly improving data capture, workflow, and cost for Modal solution users.



FEATURES

STABILITY

Plots show where mode shapes are stable in frequency and damping.

DATA EXPORT

Export waveform, spectrum, coherence, FRF, and phase to UFF file.

COHERNCE MAP

Shows colorized image overlays of coherence data.

VIDEO ANNOTATIONS

Add text, shape, annotations, and company logo overlays with export to video.

AUTOMATED FREQUENCY FILTERING

Automatically determine frequencies of interest from calculated mode shapes.

MEASUREMENT TYPES

Virtual sensors measurements include waveform, spectrum, coherence, FRF, phase, and force input.

SPECIFICATIONS

PLAYBACK/EXPORT FEATURE

4x original framerate to 1 fps

FREQUENCY RANGE

Up to 5,400 CPM @ 180 fps Maximum: 39,000 CPM at 1,300 fps with reduced resolution

MOTION AMPLIFICATION® FACTOR

1-500x.

DATA ACQUISITION SYSTEM

Sound and Vibration Module: AC/DC Coupling, 3 Input Channel, 24 bit, +/- 30V, 12.8 kSPS, BNC
IEPE Digital I/O Module: 4 I/O, 50 ns, LV TTL, BNC
*Voltage Output Module, C Series, 51.2 kSPS, 24 bit, 2 Output, BNC (Optional add on)

MINIMUM DISPLACEMENT

XY-axis: <0.01 mils (0.25 μ m) at 3.3 ft (1m) with 50mm lens, 0.005 mils (0.125 μ m) at close focus *Z-axis: 0.6 mils at 3.3 ft (1m) with 50mm lens (Optional add on configuration)

SAMPLE RATE

180 fps in HD, up to 1,300 fps at reduced resolution + 1,400 fps in HD, up to 3,200 fps at reduced resolution