

ARTeMIS Modal is a powerful and versatile tool designed for the following analysis types:

Operational Modal Analysis **(OMA)** Experimental Modal Analysis **(EMA)** Operating Deflection Shapes **(ODS)** Structural Health Monitoring **(SHM)** 

The major features are listed here, along with their availability in each of the three different versions of ARTeMIS Modal: **Basic, Standard and Pro.** 



ARTeMIS Modal Features	Basic	Standard	Pro
Setup Task - Prepare Geometry			
- Create test geometry from scratch			
- Import/modify existing geometry	•		
Setup Task - Manage Measurements			
- Import measurement files	•		
- Merge measurement files	-		
- Integrate/differentiate measurements	•	•	
- View raw time series	-	•	
- Connect/disconnect channels and Test Setups	•	•	
Setup Task - Assign DOF Information			
- Link channels with geometry nodes and directions	•	•	
- Link using Drag & Drop or by direct editing	•	•	
- Automatic identification of reference channels	•	•	•
- Easy replication of a lest Setup and its reference channels	•	•	•
Analysis Task - Prepare Data			
- Configure all preprocessing of measurements	•	•	•
- View processed data of channels and lest Setups	•	•	•
- Option for automatic selection of projection channels	•	•	•
	•	•	•
- Outlier detection and signal repair		•	•
Analysis lask - Operating Denettion Shapes			
Animate physical behavior at user-selectable frequencies		<u> </u>	
- Animate physical behavior as displacements velocities or accelerations in time	-	<u> </u>	
- Store specific ODS shapes in frequency domain			
Analysis Task - Modal Estimation (OMA)	-	-	
- Estimation of natural frequencies			
- Estimation of damping ratios			
- Estimation and animation of mode shapes			
- Estimation of normal mode shapes			
- Estimation of uncertainties of modal parameters			
- Frequency Domain Decomposition (FDD)			
- Enhanced Frequency Domain Decomposition (EFDD)			
- Curve-fit Frequency Domain Decomposition (CFDD)			
- Crystal Clear SSI® Stochastic Subspace Identification (SSI-UPC)			
- Crystal Clear SSI® Stochastic Subspace Identification (SSI-PC)			
- Crystal Clear SSI® Stochastic Subspace Identification (SSI-CVA)			
- Crystal Clear SSI® Stochastic Subspace Identification (SSI-UPC Merged Test Setups)			
- Crystal Clear SSI® Stochastic Subspace Identification (SSI-UPCX)			
Analysis Task - Modal Estimation (EMA plugin required)			
- Complex Mode Indicator Function (CMIF)	•	•	
- Rational Fraction Polynomial in Z Domain (RFP-Z)	•	•	
Analysis Task – Validation			
- Mode shapes animation, overlaid, side-by-side or top-bottom		•	•
- Mode shapes difference animation		•	•
- Modal Assurance Criterion with uncertainty bounds for SSI-UPCX		•	•
- Comparison of Mode Complexity with confidence ellipsoids for SSI-UPCX		•	•
- Comparison between estimated and imported modes		•	•
- Frequency versus Damping diagrams with confidence ellipsoids for SSI-UPCX		•	•
For coloring of graphics and tables			
Some contraction with Microcoff® Office 22bit/6/.bit	-	• •	
- Generate Word documents and Power Point presentations		<u> </u>	
- Derdefined standard templates			
- Exporting mode shapes animations in AVI or GIE formats			
Plugin Modules			
- Data Manager Base Module including Historical Measurement Statistics			
- Damage Detection, Classic and Robust methods as well as unifving Control Chart			
- Modal Parameter History including automatic mode tracking and tracked modes export			
- Interstory Drift Analysis			
- Data Acquisition - Automatic File Upload			
- Data Acquisition - Direct control of National Instruments Data Acquisition Modules			
- Data Acquisition - Direct control of SINUS Messtechnik Data Acquisition Modules		•	
- Data Acquisition - Direct control of HGL Dynamics Data Acquisition Modules		•	
- Data Acquisition - Direct control of HBM Data Acquisition Modules	•	•	
- Experimental Modal Analysis – EMA		•	
- Harmonic Detection and Reduction – Detect and / or remove harmonic components in OMA analysis		•	



Structural Vibration Solutions Niels Jernes Vej 10 DK- 9220 Aalborg East Denmark PH: +45 9635 4422 F: +45 9635 4575 E: info@svibs.com www.svibs.com