

ALPHA DIC 2024 SP1

The 2024 SP1 (Service Pack) release brings a new improved version of the DIC measurement software ALPHA

KEY ENHANCEMENTS:

The company update policy keeps the X-Sight Alpha DIC software stable and relevant. Updates include selected features requested by customers, as well as various tweaks and improvements.

High-speed recording and camera support

Processing improvements

Export for advanced data analysis

Probes enhancements



HIGH-SPEED RECORDING

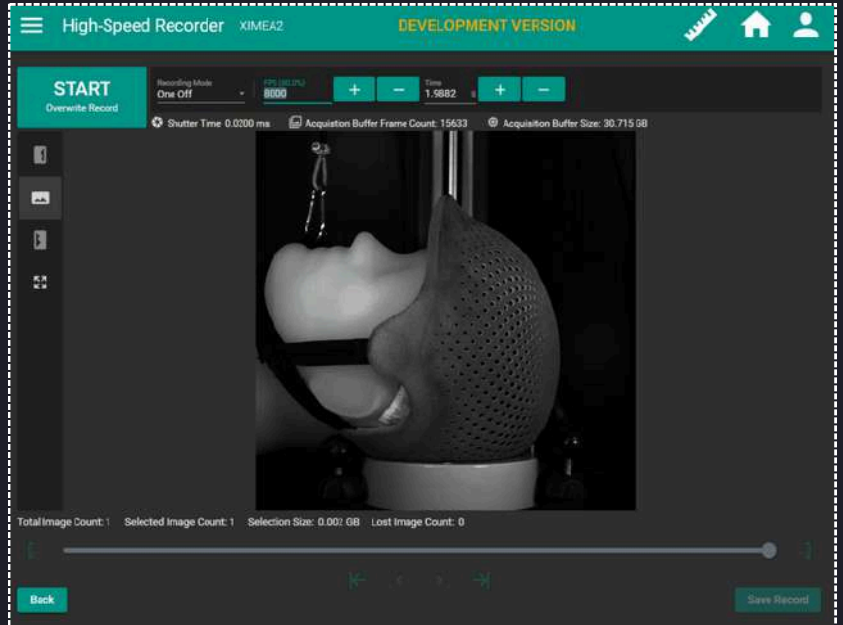
The new high-speed (HS) recorder feature elevates the X-Sight's optical measuring systems capturing images at exceptionally high frame rates directly into the system memory.

This enhancement enables detailed recording of rapid events, ideal for analyzing subtle details in dynamic tests like impact studies, material deformation, and vibration analysis.

The high-speed recording is fully integrated into the Alpha SW so that the standard workflow, including image preview and calibration, can be performed as per normal.

Recording images directly into the memory minimizes transfer delays and enables to user to directly selected only the interesting parts of the record.

The high-speed (HS) recorder allows for comfortable operation of cameras up to 128 Gbit/s per a camera stereo-pair with 3,6 kHz @ full resolution and up to 10 kHz with a reduced view.



CAMERA SUPPORT

Alpha DIC now supports the following industrial camera platforms:

FLIR, AVT, Basler, Optris, Ximea, Daheng, IDS and DynaColor

PROCESSING IMPROVEMENTS

Compute Every 10th + - ✂

Trim Data

This operation deletes all excess images from the disk and cannot be reverted. This includes the images preceding the reference frame, after the end frame, and others skipped due to the Compute Every N-th option if used. Please make sure that none of these images are necessary for a successful computation before pressing OK to continue.

The record will be trimmed in the following way (the resulting size is approximate):

Image Count: 4246 → 425
Size on Disk: 10.9 GB → ~1.1 GB / 10 %

OK Cancel

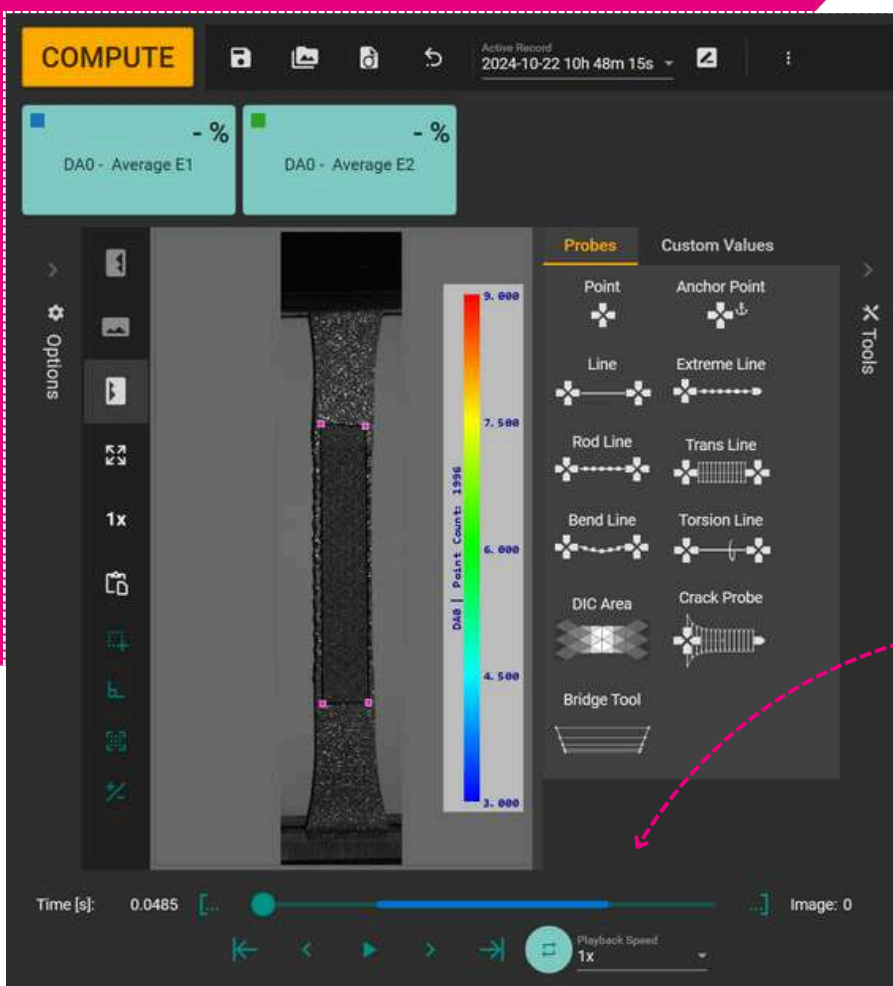
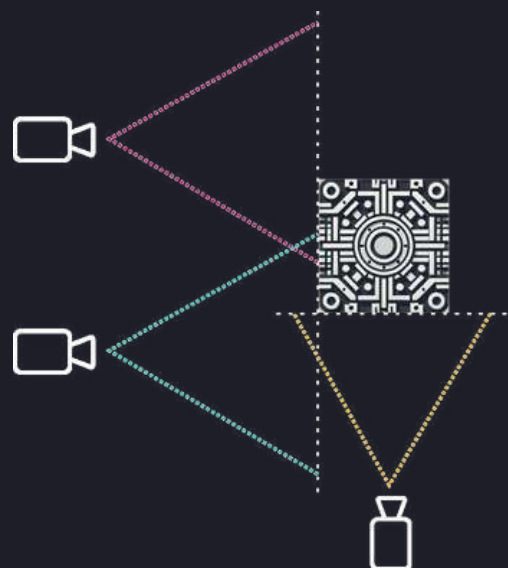
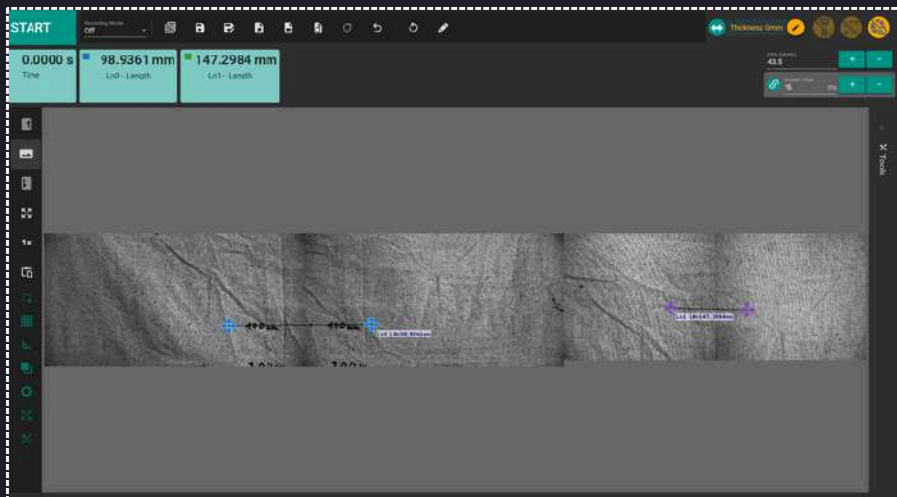
Data Trimming

For lengthy measurement recordings that require efficient data handling, the new trimming function allows users to process every n-th image or discard every alternate image, retaining only the selected n-th frames and conserving disk space.

PROCESSING IMPROVEMENTS

Merge Joined 2D Calibration

Widens the scope of possible 2D camera configuration options. Multiple camera groups, each calibrated within a common coordinate system, can capture the scene from various angles.



Computation Range Selection for Post-Process

Allows the user to select a time interval for data computation. This is particularly useful if the recording starts too early or if a specific time interval needs separate evaluation.

EXPORT FOR ADVANCED DATA ANALYSIS



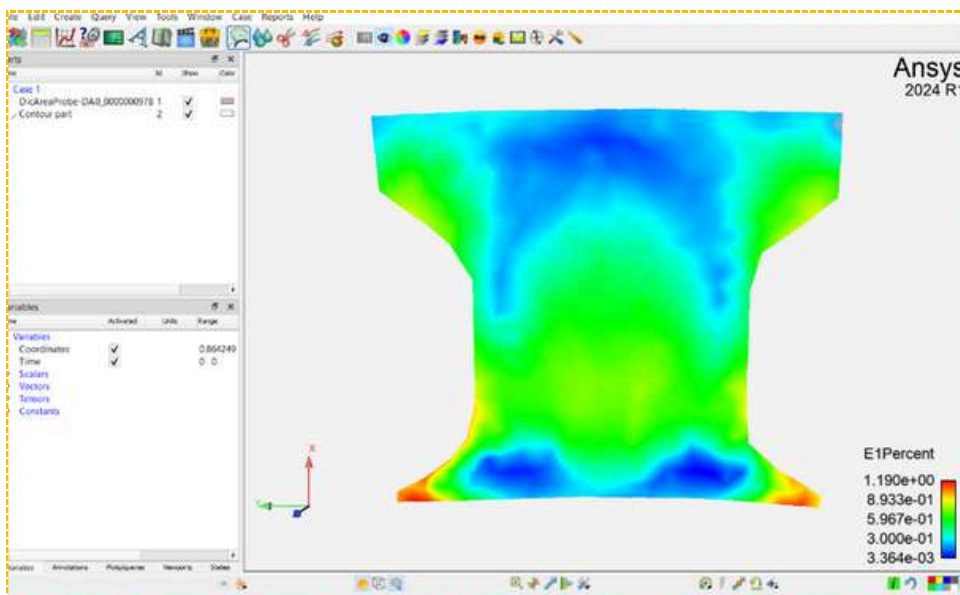
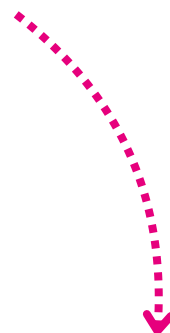
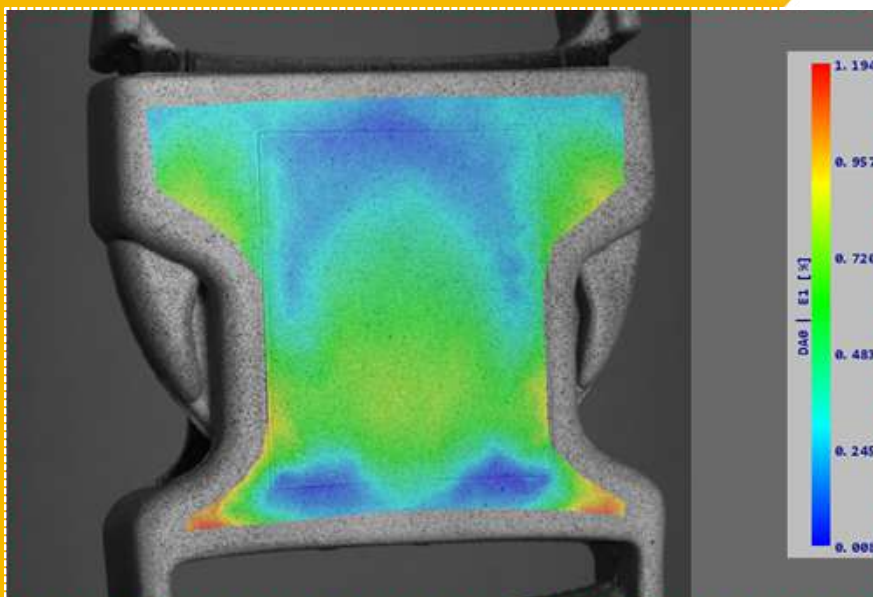
VTK export for Extreme line and Bend line

The new VTK export functionality allows precise transfer of line-based probe data into VTK format, facilitating advanced 3D visualization and detailed data analysis. This feature ensures smoother workflows and greater accuracy in visual representation, supporting engineers in obtaining deeper insights and improving analysis quality.



TSV Mesh export

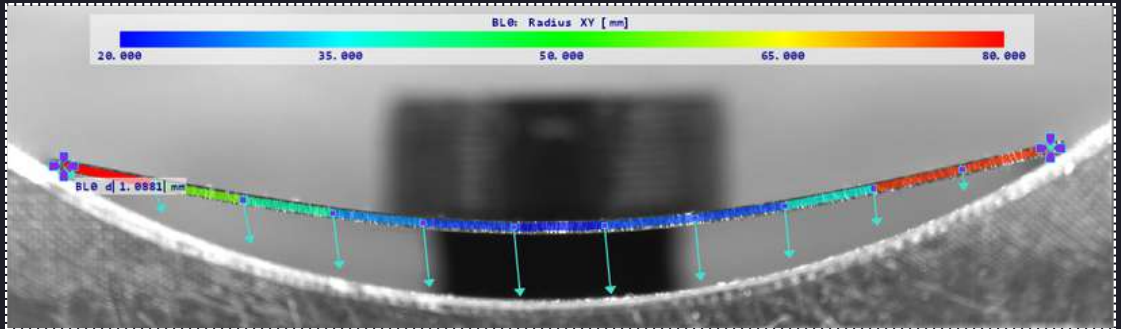
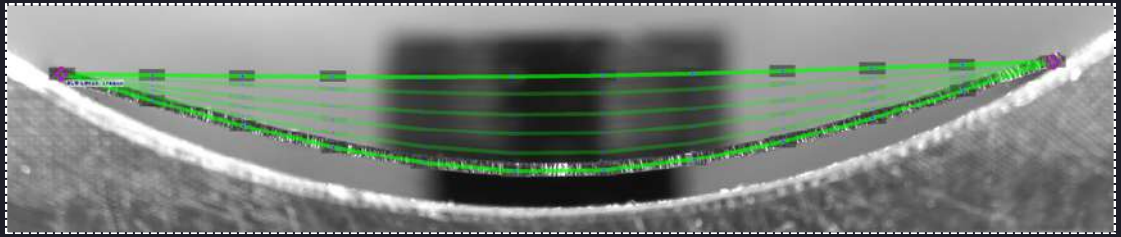
Our updated TSV export feature simplifies the transfer of mesh data directly into FEM software. By eliminating the need for manual data conversions, this functionality enhances workflow efficiency, enabling engineers to seamlessly utilize mesh data in external analysis environments. This streamlined process supports a more integrated and efficient approach to data utilization across platforms.



PROBES ENHANCEMENTS

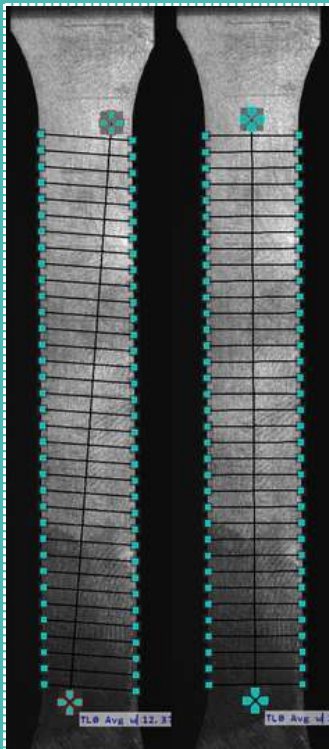
Bend Line enhancements

Initial curvature for the Bendline can be specified as an interactive parameter, ensuring a smooth and precise alignment.



This function ensuring accurate and smooth initial distribution along the slightly bent shapes easily with no need for a point by point manual modification. Furthermore, the process of adding new points has been improved. Rather than resetting all points, the system now inserts new points between the two existing ones with the maximum distance while preserving the original shape.

This feature is particularly useful when visualizing the radius of a curvature in a plot.

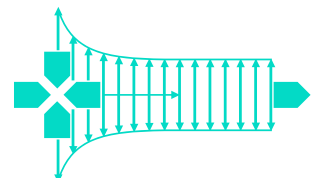


Trans Line automation

Being uncertain about centering the Trans Line is now a thing of the past! With new edge detection, the Trans Line's axial line is automatically placed precisely between detected edges, ensuring perfect alignment.

Crack Probe tweak

The new feature allows users to hide the axial (center) line when it obstructs the view during measurements with the Crack Probe, ensuring unimpeded visibility of crack propagation.



X-Sight ALPHA DIC 2024 SP1 release includes the following 18 new features:

- Added High-Speed Recorder screen for XIMEA cameras
- Added IDS Peak camera library support (for IDS UI and U3 models)
- Added Detail Camera Alignment feature to 2D calibration
- Added computation range selection to Post-Process
- Added DynaColor SDK support
- Added optional Contour to DIC areas with discrete color scale
- Added VTK export to Lines and Bend lines
- Added TSV mesh info export to DIC Areas
- Added raw camera video export from Playback (incl. API commands)
- Added encoder / codec selection to all video exports
- Added option to merge existing 2D joined calibrations
- Added data trimming
- Added radius as a new LSV map type to Bend Line
- Added Bend Line positioning by initial deflection
- Improved Bend Line ergonomic input in “Free Edit” mode
- Added “Show/Hide Axial Line” option to Crack Probe
- Trigger high-speed acquisition via Alpha API
- Added “Align Axial Line” detection option to Trans Line

Bug Fixes / Minor Tweaks:

- Show warning about restricted FPS when using FLIR anti-aliasing
- Moved Discrete Scale settings to Method parameters
- Added option to copy 2D graph to clipboard with printable colors
- Added option to discard newly created records
- Set AcquisitionFrameRateMode to Off in secondary Daheng cameras
- Make Color Map Only option of 3D graph opaque
- Fixed frame ID of Daheng cameras resetting itself to 0
- Fixed setting L0 via API when the Probe panel is open
- Enabled brightness indicator feature during calibration
- Tweaked UI of Vibrography parameters
- Removed Incremental Output feature from Digital Output
- Open a license request when license is missing
- Handle corrupt image files in a user-friendly manner
- Remade tare of output (computed) values as on/off
- Removed velocity and acceleration values from most line-based probes
- Fixed resilience of open methods against errors
- Fixed activation of licensed products from DEMO licenses
- Loaded default User Set when opening applicable cameras
- Removal of non-localizable strings from .resx files

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Technical support

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