



Extending Digital Image Correlation

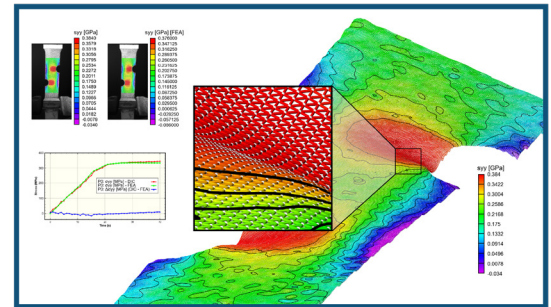
VIC-3D 11.2

Please contact your local
VIC-3D supplier to upgrade

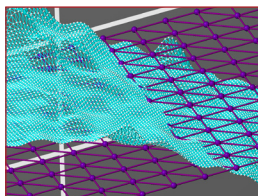
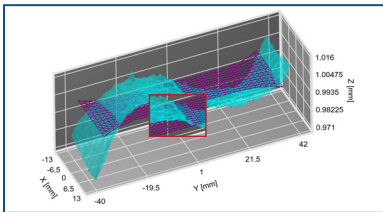
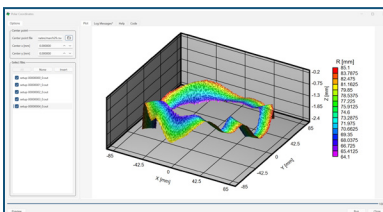
The industry-standard VIC-3D digital image correlation (DIC) platform continues to evolve with the release of version 11.2. Building on the **vicpyx** Python module introduced at iDICs, this update provides a high-level API for executing custom scripts directly within the VIC-3D workspace. This enables researchers to perform complex, user-defined calculations on full-field displacement and strain data without exporting to external environments.

VIC-3D 11.2 introduces a suite of extensions designed to streamline the integration of DIC results with complementary datasets. These enhancements facilitate seamless workflows for **Finite Element Analysis (FEA) validation**, the generation of **Forming Limit Curves (FLC)**, and other multi-modal applications. By bridging the gap between experimental data and numerical modeling, version 11.2 enhances both analytical precision and throughput.

For a technical overview of these new features or to discuss specific application requirements, please contact one of our [Sales Engineers](#).



ENHANCED ANALYSIS CAPABILITIES IN VIC-3D 11.2

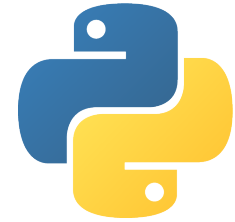


Top: Polar Coordinate extension window, middle: Mesh Alignment Workspace, and bottom, detail of the workspace showing node locations and wireframe mesh.

- **End-to-End Automation:** Build seamless pipelines from acquisition to post-processing using extensions that operate directly on raw data and image sequences.
- **Fluid Result Integration:** New single-execution extensions write AOIs, inspectors, and transformations directly back to your VIC-3D project.
- **Temporal Data Access:** Extensions can now access neighboring frames for advanced time-series analysis, velocity calculations, and noise reduction.
- **Persistent Configurations:** Save user-defined extension arguments as defaults to ensure cross-session consistency and eliminate repetitive setup.
- **Expanded Standard Toolset:** Native support for ISO 12004 (FLC), polar/cylindrical coordinates, and noise floor analysis with full access to all 3D variables.
- **Open Python Framework:** Write and deploy custom analyses as first-class features within the UI, eliminating the need for external data exports.

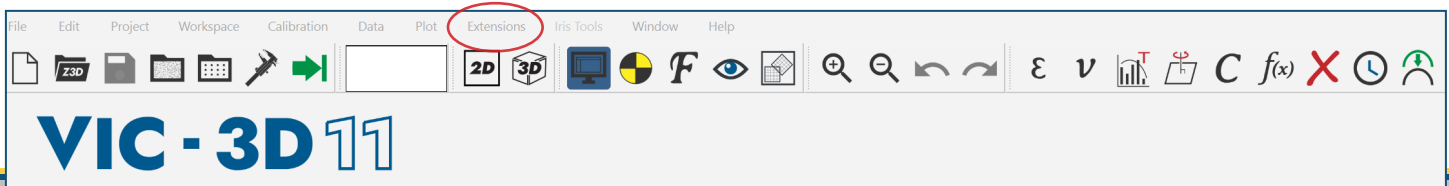


Introducing *vicpyx* Extensions



Introduced in VIC-3D 11, the *vicpyx* framework succeeds the previous VIC-Py architecture, providing a robust environment to manipulate, transform, and export DIC measurement data. By enabling direct execution of Python scripts within the VIC-3D workspace, *vicpyx* allows researchers to compute derived quantities and apply complex coordinate transformations without leaving the native environment. This integration streamlines the transition from raw full-field data to application-specific engineering metrics.

While *vicpyx* offers a high-level API for custom development, users can leverage its capabilities through a dedicated Extension Library without writing code. **VIC-3D 11.2** includes a suite of pre-configured extensions for common research workflows. These modules are fully customizable and can be shared across collaborative teams to ensure standardized data processing. Once the environment is configured, extensions are executed via a streamlined menu interface. The current library (as of April 2026) is categorized as follows:



Full-Field Processing

- Cylindrical Coordinates
- Displacement Magnitude
- Erode Boundary
- Interpolate/Extrapolate Data
- Polar Coordinates
- Restore Mask
- Time Derivatives

Extractions

- AOI Area
- Arc Length
- Data Statistics
- Extensometer Strip/
- Crack Opening
- Histogram
- Relative Displacement
- Rotation Angle

Finite Element Analysis

- Compute Strain from FEA
- Import JSON from FEA
- Subtract DIC and FE data
- Subtract DIC and FE data (2D)

Export (to)

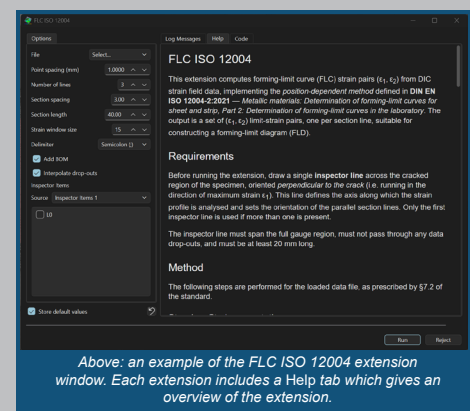
- CSV Format
- Matlab Format
- Wavefront obj Format
- PLY Format
- STL Format
- VTK Format

Misc

- Compute Volume
(Combined & Separate Data)
- Max Strain Inspector
- Noise Floor

Forming Limit Curves

- FLC ISO 12004
- FLC ISO 12004 Annex F



Above: an example of the FLC ISO 12004 extension window. Each extension includes a Help tab which gives an overview of the extension.

Have an idea for an extension that re-imagines how DIC data can be used with ancillary data? Our [Support Team](#) welcomes any suggestions for new extensions.

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