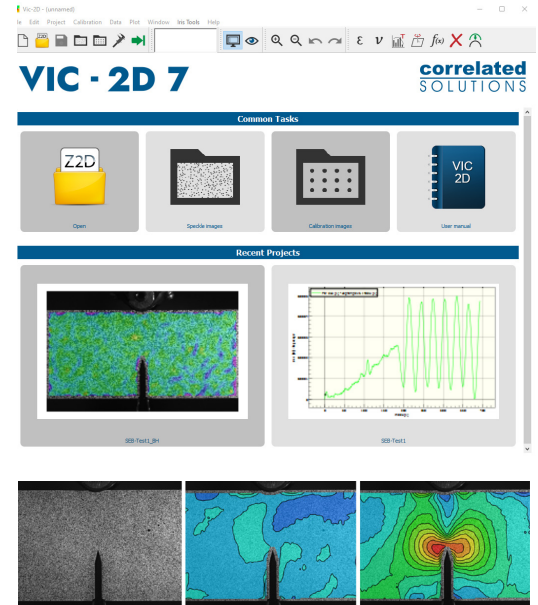


VIC-2D with *iris* System Specifications

The VIC-2D system is a fully integrated solution that utilizes our optimized correlation algorithms to provide non-contact, full-field, two-dimensional displacement and strain data for mechanical testing on planar specimens. In-plane displacements are measured at every pixel subset within the area of interest, and full-field strain is computed with many tensor options.

The VIC-2D system measures in-plane displacements and strains over 2000% with measurement resolution as low as 10 microstrain possible. Specimen sizes ranging from microns to meters are measured easily, and with a built-in microscope distortion correction and SEM drift correction module, the software is the most flexible and powerful 2D DIC software on the market.

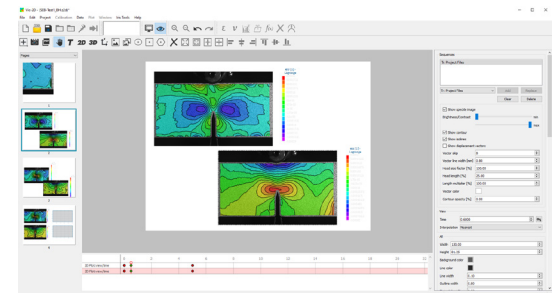
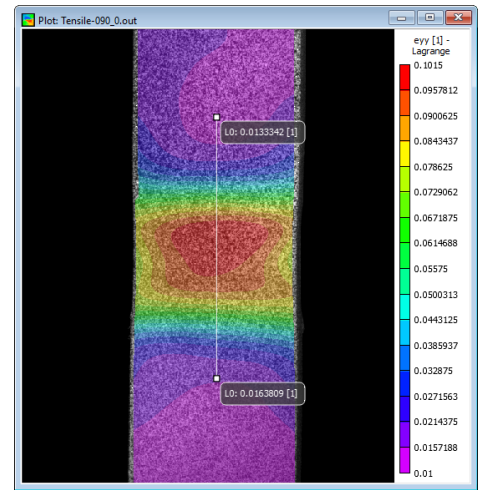
And now, included with the latest VIC-2D release, the all-new *iris* graphics engine brings a host of new functionality including the ability to export high resolution still and moving images with multiple page PDFs or MP4 presentations. You won't have to leave VIC-2D to achieve world-class data visualizations.



- ▶ **Turnkey Solution** – Get started immediately. Our systems are fully functional right out of the box. You'll never have to worry about compatibility issues or any other problems with this guarantee.
- ▶ **Full-Field Measurements** – Easily identify critical points and unrecognized hotspots by analyzing the entire area of a specimen rather than a single point.
- ▶ **Non-Contacting** – Eliminate all mechanical interaction with the sample for more accurate results.
- ▶ **Advanced Data Visualization** – Create high-resolution, publication-ready plots in PDF and ultra-high-definition video (from 720p to 4K) directly in the VIC-2D software with *iris*.
- ▶ **Customization** – Customize your system to meet your testing parameters. Whether your application requires high-magnification or high-speed data acquisition, we have a solution for you.

NEW VIC-2D 7 Features:

- The all-new graphics engine *iris* allows users to create multiple-page, high-resolution, publication-ready plots in PDF and ultra-high-definition video formats (from 720p to 4K).
- High-resolution isolines can be viewed on plots with scalable fonts.
- Unicode support is now available to edit labels.
- The all-new, user-friendly visualization engine *iris* can animate object position, scale, opacity, rotation, and much more.
- The multi-threaded rendering engine creates high-quality videos.
- The integrated adaptive motion blurring option creates life-like animations for fast-moving objects.
- Finite element data can be imported for visualization and comparison to measurement data directly in *iris*.
- Extraction points can be displayed on contour plots with customizable labels.
- Multiple variables can be viewed on contour plots at the extraction locations using a new escape code dialog.
- An unlimited number of data extractions are now saved with the project.
- The user-interface has been updated to improve user experience.



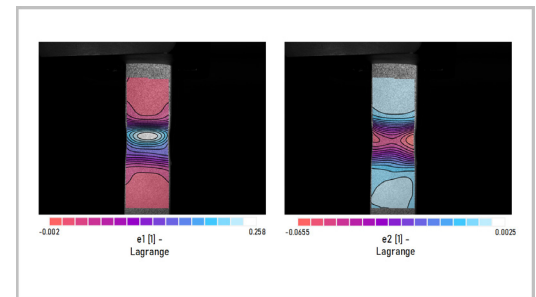
All-new *iris* user interface

System Type	VIC-2D SR	VIC-2D HR	VIC-2D XR	VIC-2D HS	VIC-2D UHS
Camera Resolution	1920 x 1200	2448 x 2048	From 12 to 31 MP	up to 4 MP	400 x 250
Frame Rate	155 Hz	75 Hz	up to 335 Hz	up to 300 KHz	5 MHz
In-Plane Resolution	0.000005 * FOV	0.000005 * FOV	0.000005 * FOV	0.00001 * FOV	0.00002 * FOV
Strain Resolution	down to 10 $\mu\epsilon$	down to 10 $\mu\epsilon$	down to 10 $\mu\epsilon$	down to 10 $\mu\epsilon$	down to 50 $\mu\epsilon$
Strain Range	from 0.005% to >2,000%	from 0.005% to >2,000%	from 0.005% to >2,000%	from 0.005% to >2,000%	from 0.010% to >2,000%

This table provides the specifications for common VIC-2D systems configurations.

The system includes the following features:

- **Full-field measurement of**
 - X & Y coordinates
 - X & Y displacements
 - In-plane velocities
 - Strain tensor, major and minor strains
- **High strain resolution:** down to 0.001% (10 microstrain)
- **Strain measurement:** 2,000% or higher possible
- **In-plane resolution:** 1/100,000 * FOV or better.
- **Image formats:** Most standard image formats that do not employ lossy compression are supported directly (tiff, pgm, bmp, pnm, etc.)
- **Software licenses:** The system will come with image acquisition and analysis software preinstalled on a desktop or laptop computer. An additional license will be provided on a USB dongle. This dongle permits the execution of the analysis software on any computer the user chooses. The post-processing software VIC-2D may also be purchased by itself, with flexible multiple licensing options available.
- **Data Export:** Data can be exported in CSV, Tecplot/plain ASCII, STL, and Matlab formats. Other formats may be supported on request as part of the technical support contract.
- **Software Interoperability:** On Microsoft Windows systems, Correlated Solutions software is fully integrated with cut & paste functionality.
- **Graphs and plots:** Can be copied directly into any Office suite software or saved in compatible image or video formats using the data visualization engine *iris*.
- **Analog Data recording:** The system is capable of acquiring external analog voltages simultaneously with the image acquisition. Several acquisition systems are available, depending on the number of analog channels required. All analog voltage measurements can be added to the VIC-2D project for use and manipulation as a measurement variable.
- **Data density:** The data density is freely selectable by the user by varying the spacing between analysis points.
- The analysis software includes the following:
 - Graphical display of all data as an overlay over the image taken of the test article with user-selectable transparency.
 - Data inspection/extractions that allow the user to export data from specific locations such as points, circular/rectangular/polygon regions, line slices, extensometers, and much more.
 - The capability to generate high-definition MP4 animations of strain distributions from the image-overlay contour plots, or just the images or contour plots independently.
 - A video player with adjustable frame rate, single step functionality and zooming is included for data display.
 - Automatic start point generation and sequence analysis. The software includes advanced predictive algorithms for both spatial as well as temporal start point generation.



High-resolution PDF exported
directly from iris.

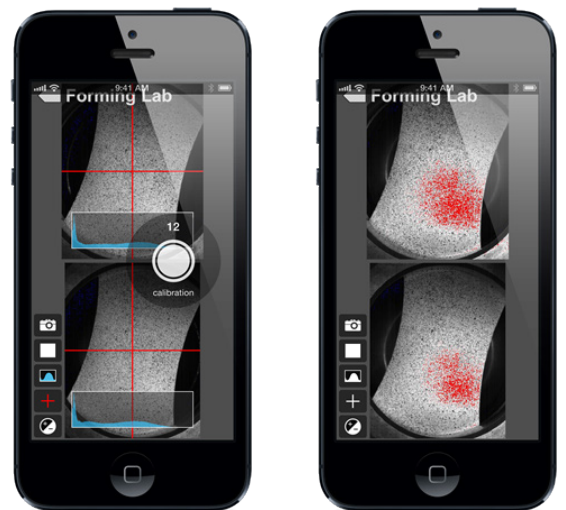
- Standard systems include a desktop computer with the following minimum specifications:
 - Intel i7 Quad-core Processor
 - 16 GB RAM
 - 4 TB hard drive, AND 500GB SSD
 - 24" LCD
 - DVD-R/W
 - OpenGL® Graphics card with 3D acceleration
 - Windows 10 Professional
 - Microsoft Office License
- Quasi-static testing systems include one high-resolution monochrome camera with resolutions from 2.3 to 31 Megapixels.
- Integrated systems for high-speed testing include one high-speed monochrome digital cameras with frame rates up to 40,000 fps at full resolution (1200 x 800 pixels), with up to 300,000 fps at reduced resolutions.
- Ultra-High-Speed systems are now available up to 10,000,000 fps.
- One year of technical support via telephone/email and software upgrades. Technical support is available Monday-Friday 9am-5pm EST. On-site support and consulting is also available.
- Systems include a 1-2 year replacement warranty for defects in materials and/or workmanship on all parts.

VIC-Snap Features:

- FlexCapture for variable frame rates that can be programmed before a test - Burst mode allowing images to be saved to RAM for short periods of time for faster acquisition rates
- Image rotation for non-upright camera setups
- Capture based on analog steps
- Support for the newest cameras including USB3 models
- Improved interoperability with VIC-2D
- Windows 10 Pro 64 bit support

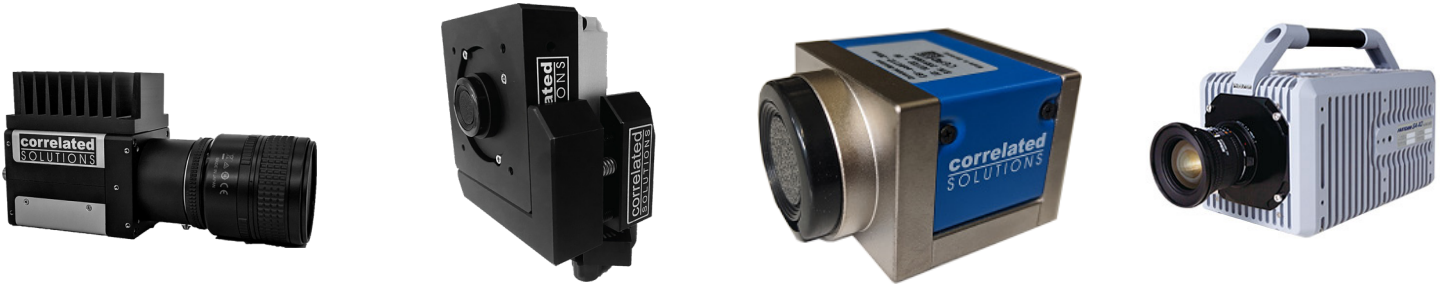
Hardware:

- New extremely low noise cameras available
- New range of high-speed and ultra-high-speed cameras available
- New LED lighting options



VIC-2D System Add-ons & Additions:

- **VIC-Gauge 2D:** Real-time output of virtual strain gauge or extensometer via DAQ up to 280 Hz (camera rate dependent)
- **VIC-2D Fulcrum:** Enables accurate triggering of vibration events up to 5 KHz (with stroboscope)



Training / Installation Services:

All VIC-2D systems include at least one year of software upgrades and unlimited technical support. Product support documentation for hardware, software, and troubleshooting is available online via the support portal www.correlatedsolutions.com/support, which includes an abundance of information and FAQs, such as how to set up systems for complex applications, common analysis questions, file downloading and transferring, and much more.