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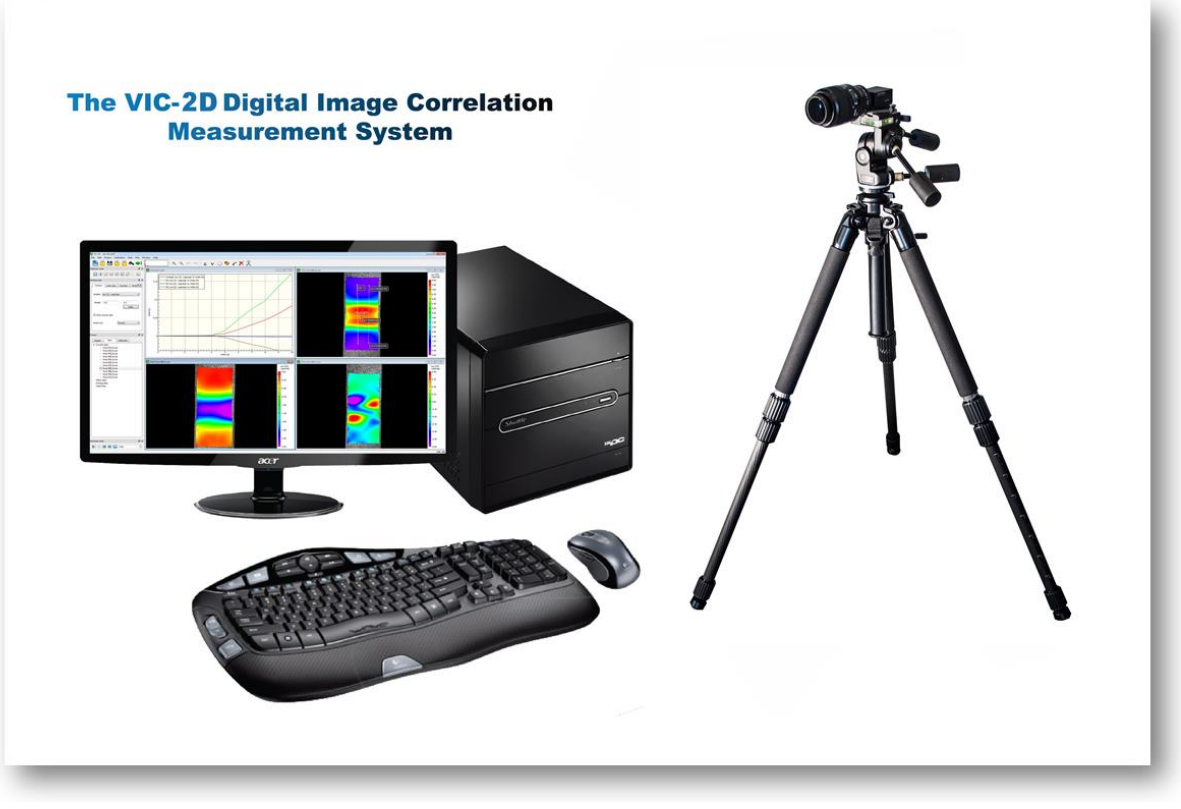
VIC-2D v6 Full-Field Deformation Measurement System



Measurement System Feature Overview:

VIC-2D is offered as either a turnkey deformation measurement system for speckle correlation measurements, or as a software-only solution compatible with almost any industrial digital camera. 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: 0.005% (50 microstrain) local or 0.001% global or better
- Strain measurement of 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 execution of the analysis software on any computer the user chooses.
- Data Export: Data can be exported in Tecplot, ASCII as well as spreadsheet-compatible (e.g., Microsoft Excel) files. Other formats can be supported on request as part of technical support.
- Software Interoperability: On Microsoft Windows systems, Correlated Solutions software is fully integrated with Cut & Paste functionality.
- All graphs and plots can be copied directly into any office suite software or saved in compatible image or video formats.
- 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
- The data density is freely selectable by the user by varying the spacing between analysis points.
- The analysis software includes graphical display of all data as an overlay over the image taken of the test article with user-selectable transparency.
- The analysis software includes post-processing features such as minimum/maximum, mean and standard deviation, time-slice extraction, stress-strain curve generation, data extraction along lines, etc.
- The analysis software includes the capability to generate compressed AVI 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.
- The analysis software is capable of automatic start point generation and sequence analysis. The software includes advanced predictive algorithms for both spatial as well as temporal start point generation.
- Turnkey systems include a desktop computer with the following minimum specifications:
- Intel i7 Quad-core Processor
    - 16 GB RAM
    - 2 TB hard drive, AND 250GB SSD
    - 24” LCD
    - DVD-R/W
    - OpenGL® Graphics card with 3D acceleration
    - Windows 10 Professional
    - Microsoft Office 2016
    - Turnkey systems for quasi-static testing include one high-resolution monochrome camera with resolutions available at 2, 5, 11, 16, and 29 Megapixels

- Turnkey systems for high-speed testing include one high-speed monochrome digital cameras with frame rates up to 20,000 fps at full resolution (1024 x 1024 pixels), with up to 300,000 fps at reduced resolutions.
- Ultra-High-Speed systems now available up to 10,000,000 fps.
- The system includes one year of technical support via telephone/email and software upgrades. Technical support is available Mo-Fr 9am-5pm EST. On-site support and consulting is available.
- The system includes a one-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-3D
-Windows 10 Pro 64 bit support

NEW VIC-2D 6 Features:

-Improved data processing speed up to 135,000 data points/sec using a modern PC with a single quad-core CPU.
-Improved strain algorithms for quicker and more accurate results.
-Completely redesigned user interface for increased ease of use.
-New and improved tools for defining AOIs (Areas of Interest).
-Improved initial guess window interface.
-Completely redesigned inspector tools for easier data extraction. All extraction locations are now saved with the project, and have click and drag functionality.
-New "Apply Function" feature that allows the user to enter customized equations to generate new contour variables.
-New graph widget for displaying multiple data extractions on one graph (points, line slices, circles, rectangles, and extensometers).
-Results can now be viewed in user-selectable units such as inches and micrometers.
-Overall improved project saving (extractions, analysis settings, plot settings, etc.)
-New recent projects menu and thumbnail display on home page.
-Newly integrated post-processing feature for applying time filters to extracted data.
-Large project loading performance improvement with faster animation playback.

Hardware changes:

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