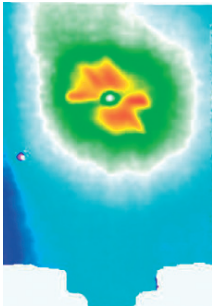
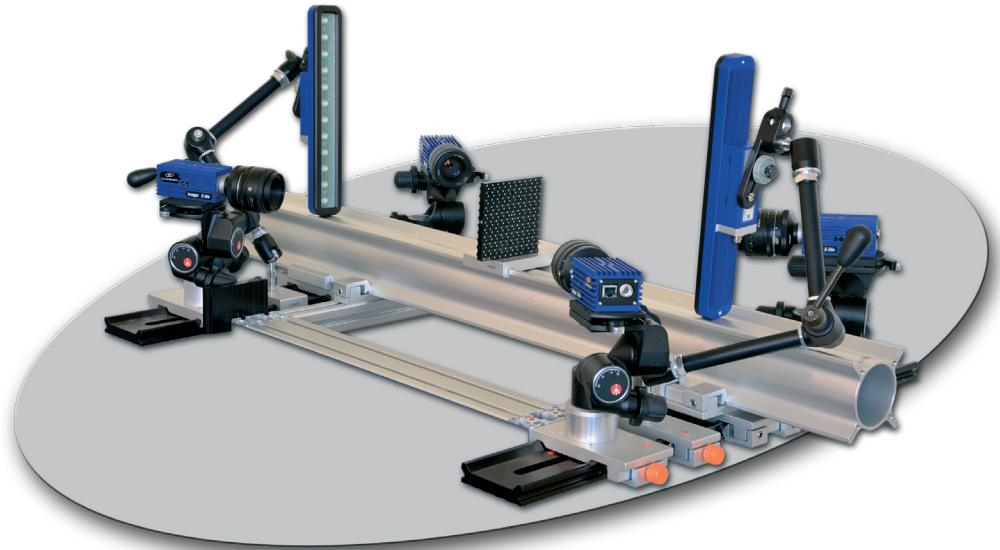


StrainMaster Multi-Camera



Thickness map of an impact damaged composite panel, courtesy of X. Sun and Dr. S. Hallett, University of Bristol

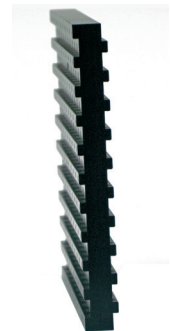
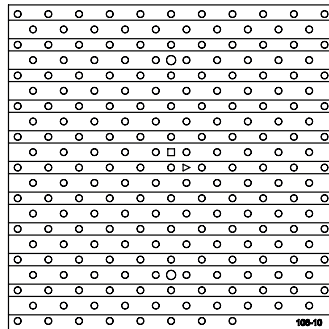
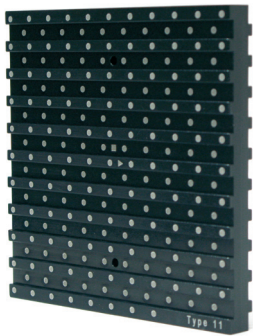


Applications

- ▶ panel thickness changes in compression and tension tests
- ▶ measure multiple views of a cylindrical object surface
- ▶ multi field of view: one set of cameras measures the global behaviour and the second set zooms in on a particular zone of interest
- ▶ combine 2D and 3D stereo measurements

Calibration

Accurate calibration is essential for successful DIC measurements, and in the case of multi-camera configurations it is even more critical. Our dual sided multi-level plates mean that calibration of a multi-camera system is as simple as a standard stereo-DIC system, and brings all cameras into the same co-ordinate system with ease.



LaVisionUK Ltd

2 Minton Place / Victoria Road
Bicester, Oxon / OX26 6QB / United Kingdom
E-Mail: sales@lvision.com / www.lvisionuk.com
Phone: +44-(0)-870-997-6532 / Fax: +44-(0)-870-762-6252

LaVision GmbH

Anna-Vandenhoeck-Ring 19
D-37081 Göttingen / Germany
E-Mail: info@lvision.com / www.lvision.com
Tel. +49-(0)551-9004-0 / Fax +49-(0)551-9004-100

LaVision Inc.

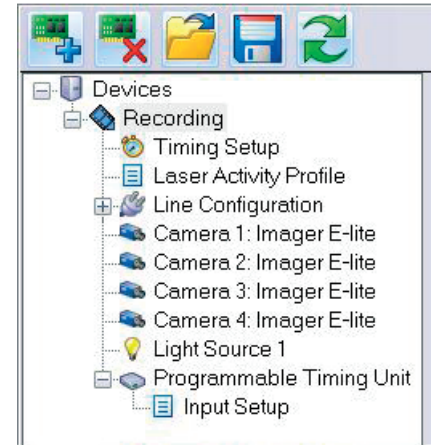
211 W. Michigan Ave. / Suite 100
Ypsilanti, MI 48197 / USA
E-mail: sales@lvisioninc.com / www.lvisioninc.com
Phone: (734) 485 - 0913 / Fax: (240) 465 - 4306

Fully integrated hardware

All cameras (including high-speed) are driven from the **DaVis** platform, from which you have complete control of the device settings. Data management of multi-camera datasets is straightforward within the **DaVis** platform.

Many different types of hardware can be connected and controlled by **DaVis** in addition to the multiple cameras.

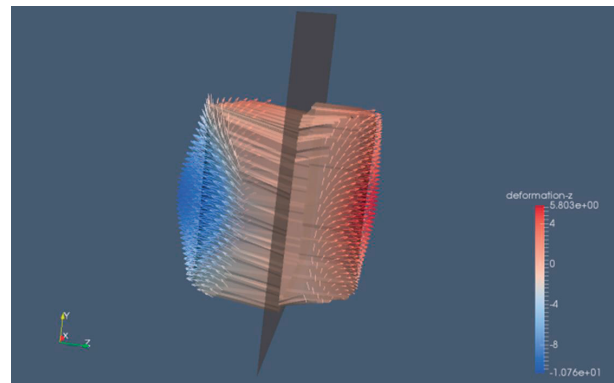
- ▶ standard and high-speed cameras
- ▶ data loggers for analogue data acquisition
- ▶ translation stages
- ▶ pulsed light sources



Export for specialist visualization

A common use of full field experimental data is to compare with and validate Finite Element simulations. To facilitate this it is possible to export data in ABAQUS™ INP format, allowing the user to compare experiment and simulation within the ABAQUS™ post-processor, and even think about utilizing experimental data as boundary conditions for the simulation. Several dedicated formats are supported for export.

- ▶ MATLAB™
- ▶ ParaView™
- ▶ Tecplot™
- ▶ ABAQUS™



Visualization in ParaView™

The **StrainMaster Multi-Camera** system is an easy upgrade for existing conventional stereo-DIC users, and offers another aspect to their measurements. The multi-camera systems can be split into separate standalone 2D or 3D stereo systems, allowing maximum flexibility to the purchasing group(s). It may also allow other multi-parameter imaging possibilities such as fluid-structure interaction (FSI) where one system measures the surface shape via DIC, and the other measures the fluid flow using the Particle Image Velocimetry (PIV) technique.

Please contact LaVision for your multi-camera system requirements today.

Data provided by LaVision are believed to be true. However, no responsibility is assumed for possible inaccuracies or omissions. All data are subject to change without notice.

Oct-15

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Phone: +44-(0)-870-997-6532 / Fax: +44-(0)-870-762-6252

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D-37081 Göttingen / Germany
E-Mail: info@lvision.com / www.lvision.com
Tel. +49-(0)551-9004-0 / Fax +49-(0)551-9004-100

LaVision Inc.

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Ypsilanti, MI 48197 / USA
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Phone: (734) 485 - 0913 / Fax: (240) 465 - 4306