

# Imager *HS* 4M

digital high speed 12 bit CMOS  
camera



Flexible Resolution/Framerate

The **Imager HS 4M** is a high sensitivity, high resolution digital camera used in LaVision FlowMaster high speed PIV systems. The camera comes with an advanced CMOS sensor and allows frame rates up to 2277 Hz at full resolution of 2k x 2k pixels and 7039 Hz at a reduced area of interest of 1k x 1k.

A PIV mode is included to enable very short interframe times.

### General System Specifications:

<b>Resolution</b>	2000 x 2000 pixel
<b>Rate</b>	2277 Hz @ full resolution (up to 7039 Hz with 1000 x 1000 pixel resolution)
<b>Min. Interframe Time</b>	3.15 µs
<b>Pixel Size</b>	11 µm x 11 µm
<b>Sensor format</b>	22.0 x 22.0 mm <sup>2</sup>
<b>Dynamic range A/D</b>	12 bit
<b>Memory</b>	9, 18 or 36 GByte
<b>Interface</b>	CamLink
<b>Dimensions</b>	160 mm x 196 mm x 282 mm (W x H x L)
<b>Weight</b>	8.1 kg
<b>Operating temperature</b>	5 ... 40°C
<b>Power requirements</b>	90 V-260 V AC optional DC operation 12 V DC
<b>Lens mount</b>	F-mount

Frame Rate [fps]	Resolution Max [Pixel]		Record Time on 36 GB memory [s]	Images
	H	V		
2 277	2000	2000	5.6	12 729
5 469	1400	1050	6.2	33 943
8 226	1280	720	6.4	52 839
7 039	1000	1000	6.9	48 497
12 841	800	600	7.7	98 491
17 985	640	480	8.8	157 958
46 746	320	200	14.0	653 411

Table of frame rate examples. Other rates/ resolutions can be selected.  
Highest flexibility for frame rate selection via DaVis/ HighSpeed Controller.

#### LA VISION UK LTD

DOWNVIEW HOUSE/ GROVE TECHNOLOGY PARK  
GROVE/ OXON/ OX12 9FF, UNITED KINGDOM

E-MAIL: SALES@LAVISION.COM/ WWW.LAVISIONUK.COM

PHONE: +44-(0)-870-997-6532/ FAX: +44-(0)-870-762-6252

#### LA VISION GMBH

ANNA-VANDENHOECK-RING 19  
D-37081 GOETTINGEN / GERMANY

E-MAIL: INFO@LAVISION.COM / WWW.LAVISION.COM

TEL. +49-(0)5 51-9004-0 / FAX +49-(0)551-9004-100

#### LA VISION INC.

211 W. MICHIGAN AVE. / SUITE 100  
YPSILANTI, MI 48197 / USA

E-MAIL: SALES@LAVISIONING.COM / WWW.LAVISIONING.COM

PHONE: (734) 485 - 0913 / FAX: (248) 465 - 4306



# LA VISION

WE COUNT ON PHOTONS

## Control

- state-of-the-art PC, DaVis, HighSpeed Controller
- Windows 7 (64 bit)
- multi camera synchronization
- synchronization to external events and rates
- synchronization of other devices (e. g. lasers, IRO)

## Software

- ▶ **Acquisition and visualization software** DaVis (64 bit)
- ▶ **High speed imaging package** based on DaVis
- ▶ live image display for online adjustments
- ▶ unambiguous recording and storage of frame 1 and frame 2 for PIV
- ▶ sequence trigger of first, last or random frame
- ▶ loop recording
- ▶ start or stop recording upon mouse, key or trigger
- ▶ dark image subtraction, black level calibration
- ▶ quick movie preview from camera memory
- ▶ storage of selected frames into a set
- ▶ movie player of sets
- ▶ experiment manager for data handling of sets
- ▶ batch processing on sets of recorded frames

## Ordering Information

Part number	Description
1102257	Imager <i>HS</i> 4M camera, 9 GB
1102258	Imager <i>HS</i> 4M camera, 18 GB
1102259	Imager <i>HS</i> 4M camera, 36 GB
1108217	CamLink framegrabber to connect up to two cameras

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.

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