

# M-PRI – High-speed camera



Airbag testing

## M-PRI – high performance compact high speed camera

Very high light sensitive high speed camera with 1280 x 800 pixel at up to 4000 fps.

The M-PRI is particularly suited for all applications where a compact, portable, high resolution, highly light sensitive and robust camera is essential. The highly light-sensitive sensor covers the most ambitious application. The M-PRI camera models are available in various speed grades:

M-PRI 1000: up to 1000fps @1280 x 800

M-PRI 2000: up to 2000fps @1280 x 800

M-PRI 3000: up to 3000fps @1280 x 800

M-PRI 4000: up to 4000fps @1280 x 800

### Unique features and benefits

- **Superior image quality** – With its 1280 x 800 pixel sensor with state-of-the-art 14 micron pixel technology, the M-series offers ISO 8000 for color and ISO 10'000 for mono.
- **Packed with memory** – M-PRI is available with impressive memory sizes of 4/8/16/32/64/128 GB.
- **Software** – The Imaging Studio v4 SW suite leaves nothing to be desired and functions well with the most demanding applications

# M-PRI – Key Specifications

## Resloution vs frame rate

Resolution	M-PRI 1000	M-PRI 2000	M-PRI 3000	M-PRI 4000
1280 x 800	1000	2000	3000	4000
1280 x 720	1210	2390	3600	4590
1280 x 512	1680	3320	5000	6370
1280 x 256	3220	6350	9580	12'190
1280 x 128	5930	11'710	17'650	17'650
1280 x 16	22'560	44'510	44'510	85'360

Resolution and fps may be set individually in the given speed ranges. Gain in fps by reducing the vertical resolution.

## Recording time in sec vs memory size at full resolution and max fps

Memory size (GB)	M-PRI 1000	M-PRI 2000	M-PRI 3000	M-PRI 4000
4	4.0 sec	2.0 sec	1.3 sec	0.95 sec
8	8.0 sec	4.0 sec	2.6 sec	1.9 sec
16	16.0 sec	8.0 sec	5.2 sec	3.8 sec
32	32.0 sec	16.0 sec	10.6 sec	7.7 sec
64	64.0 sec	32.0 sec	21.2 sec	15.5 sec
128	128.0 sec	64.0 sec	42.4 sec	31.0 sec

## Optical specifications

<b>Sensor Type</b>	CMOS Sensor
<b>Pixel Size</b>	14 micron
<b>Sensor Format</b>	4/3"
<b>Light Sensitivity</b>	ISO 10'000 (mono) ISO 8000 (color)
<b>Exposure Time</b>	Global, from 1/framing speed down to 2 µsec
<b>Dynamic Range</b>	10 Bit
<b>Gain</b>	3 gain settings available by means of control software
<b>Lens Mount</b>	C-Mount, adapter for F-Mount optional

## Camera and control features

<b>Buffer Type</b>	Circular buffer, parametrized by software
<b>Trigger IN</b>	Trigger input for start stop recording, falling edge, switch closure
<b>Trigger Modes</b>	Pre- post recording settings adjustable in steps of 1 frame
<b>Lens Mount</b>	C-Mount, adapter for F-Mount optional
<b>I/O Tolerance</b>	TTL compatible I/O
<b>Power Requirements</b>	10...36V / 20Watts
<b>Sync in / out</b>	Sync in / out on camera
<b>Auto Download</b>	Auto download to PC after recording

## Imaging studio features

<b>Imaging Studio</b>	Software suite to parameterize and control camera, handle data download and conversion of native files into most common single images and movie formats. Runs on Win 7/10, 32/64 Bit
<b>Parameterization</b>	Set all camera parameters for recording by convenient and easy-to-use software interface supports graphical setting of resolution
<b>Display</b>	Display multiple cameras simultaneously
<b>Editing</b>	Play back, edit and save sequences after recording with a few clicks
<b>OSD (on screen display)</b>	OSD with camera parameters
<b>Overlay</b>	Overlay of recorded image with user adjustable opacity
<b>Motion Analysis</b>	Basic 2D motion analysis with automatic tracking of up to 5 points optional
<b>Export</b>	Export of AOS native file format to avi, mpeg, mpeg4, bmp, tif, png, jpg
<b>Image Processing</b>	Manual or automatic color correction and white balance functionality
<b>Batch Converter</b>	Convert native files to movie files using off-line batch conversion

## Data interface

<b>Data</b>	Gigabit Ethernet
<b>I/O</b>	Solid 14 pin LEMO connector
<b>Trigger Modes</b>	Pre- post recording settings adjustable in steps of 1 frame
<b>Armed OUT</b>	Armed out to indicate camera status ready for recording

## Physical specifications

<b>Size</b>	w:98 x h:98 x l:118 mm ( w: 3.8" x h3.8" x 4.6")
<b>Weight</b>	1.5kg
<b>Storage Temp.</b>	-40°C ... +70°C non condensing
<b>Working Temp.</b>	-5°C to 35°C
<b>Mounting</b>	3 x M6 on top and bottom / 1/4" UNC for tripod mount
<b>CE</b>	Complies with CE