AOS Technologies AG

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

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M-PRI – Key Specifications

Reslolution vs frame rate

Resolution	M-PRI 1000	M-PRI 2000	M-PRI 3000	M-PRI 4000
1280 x 820	1000	2000	3000	4140
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	22'460
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

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

Camera and control features

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

Imaging studio features

Imaging Studio	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
Parameterization	Set all camera parameters for recording by convenient and easy-to-use software interface supports graphical setting of resolution
Display	Display multiple cameras simultaneously
Editing	Play back, edit and save sequences after recording with a few clicks
OSD (on screen display)	OSD with camera parameters
Overlay	Overlay of recorded image with user adjustable opacity
Motion Analysis	Basic 2D motion analysis with automatic tracking of up to 5 points optional
Export	Export of AOS native file format to avi, mpeg, mpeg4, bmp, tif, png, jpg
Image Processing	Manual or automatic color correction and white balance functionality
Batch Converter	Convert native files to movie files using off-line batch conversion

Data interface

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

Physical specifications

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

Your local AOS partner:

AOS Technologies AG

Technical specifications and dimensions are subject to change without any prior notice - March 2021