L-PRI – High Speed Camera

AOS Technologies AG

Combustion research of gas cylinders

L-PRI – a high performance compact high speed camera

High light sensitive high speed camera with Full HD Resolution 1920 x 1080 pixel at up to 2800 fps.

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

L-PRI 1000: up to 1000fps @1920 x 1080

L-PRI 1500: up to 1500fps @1920 x 1080

L-PRI 2000: up to 2000fps @1920 x 1080

L-PRI 2800: up to 2800fps @1920 x 1080

Unique features and benefits

- **Superior image quality** – With its 1920 x 1080 pixel sensor with newest 10 micron pixel technology the L-series offers ISO 6000 for color and ISO 8000 for mono.

- **Packed with memory** – L-PRI is available with stunning memory sizes of 4 / 8 /16 / 32 / 64 / 128 GB.

- **Software** – The Imaging Studio v4 SW suite leaves nothing to be desired for even the most demanding applications.

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Resloution vs frame rate

Resolution	L-PRI 1000	L-PRI 1500	L-PRI 2000	L-PRI 2800
1920 x 1080	1000	1500	2000	2800
1920 x 900	1200	1810	2410	3376
1920 x 720	1500	2260	3000	4195
1920 x 512	2080	3140	4160	5829
1920 x 256	4000	6030	8000	11'197
1920 x 128	7410	11,180	14'830	20'753
1920 x 16	29200	44,140	58'570	81'919

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)	L-PRI 1000	L-PRI 1500	L-PRI 2000	L-PRI 2800
4	2.0 sec	1.4 sec	1.0 sec	0.6 sec
8	4.1 sec	2.7 sec	1.5 sec	1.5 sec
16	8.2 sec	5.4 sec	4.1 sec	2.9 sec
32	16.5 sec	11.0 sec	8.2 sec	5.9 sec
64	33.0 sec	22.0 sec	16.4 sec	11.7 sec
128	66.0 sec	44.0 sec	32.8 sec	23.5 sec

Optical specifications

Sensor Type	CMOS Sensor
Pixel Size	10 micron
Sensor Format	4/3"
Light Sensitivity	ISO 8000 (mono) ISO 6000 (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 Requirements	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 35°C
Mounting	3 x M6 on top and bottom / 1/4" UNC for tripod mount
CE	Complies with CE