Photron

HIGH-SPEED CAMERAS FOR SLOW MOTION ANALYSIS

Photron

DESCRIPTION	FASTCAM SA-Z	FATSCAM NOVA S20	FASTCAM NOVA S6 / S9 /S12 / S16	FASTCAM NOVA R5-4K	FASTCAM NOVA R3-4K	MINI AX 50/100/200	MINI UX 50/100	MINI WX 100	FASTCAM MH6	FASTCAM MH6-ST
Speed at full image resolution (fps)	21,837	18,750	6.4K / 9K / 12.8K / 16K	1,250	750	2K / 4K / 6.4K	2,000 / 4,000	1,080	750 / 1,000	1,000
Maximum image resolution (pixels)	1024 x 1024	1024 x 1024	1024 x 1024	4096 x 2304	4096 x 2304	1024 x 1024	1280 x 1024	2048 x 2048	1920 x 1400 1920 x 1080	800 x 600
Maximum speed at reduced image resolution (fps)	2,100,000	1,100,000	800,000 900,000 1,000,000 1,100,000	200,000	150,000	170,000 540,000 900,000	160,000 800,000	80,000	10,000	10,000
Sensitivity (excluding IR response) Mono (Color)	50,000 (20,000)	64,000 (16,000)	64,000 (16,000)	10,000 (5,000)	10,000 (5,000)	40,000 (16,000)	10,000 (5,000)	(2,000)	12,500 (5,000)	12,500 (5,000)
Minimum shutter speed (µs)	1	1	1	2	2	1	3.9	2.7	4	4
Free optional sub-microsecond shutter – Subject to export control	159ns	0.2µs	0.2µs	x	x	260ns (AX200)	x	x	x	x
Memory capacity (Gigabytes)	32GB - 128GB	8GB - 128GB	8GB - 128GB	16GB - 128GB	16GB - 128GB	8GB - 32GB	8GB - 32GB	8GB - 32GB	4GB /channel (6 heads) to 24GB /channel (single head) shared memory	2GB /channel (12 heads) to 12GB /channel (1 to 2 heads) shared memory
Base memory capacity (frames)	5,453	6,524	5,437	1,213	1,213	5,457	4,365	1,361	1 camera head: 12,600 2 camera heads: 5,400 3-4 camera heads: 2,700 5-6 camera heads: 1,800	1-2 camera heads: 26,843 1-4 camera heads: 13,421 1-8 camera heads: 6,710 1-12 camera heads: 4,473
Recording duration (seconds) @ max fps and full image resolution (with minimum memory)	1.092	0.348	0.85 / 0.61 / 0.43 / 0.34	0.97	1.617	2.73 / 1.36 / 0.85	1.09 / 0.54	1.81 / 1.26	1.8 (FHD 6 heads) to 12.6 (FHD single head)	4.40 (SVGA 12 heads) to 26.8 (SVGA 12 heads)
Non-volatile storage	2x SD or 4TB external FAST Drive	4TB external FAST Drive	4TB external FAST Drive	4TB external FAST Drive	4TB external FAST Drive	x	x	x	512GB non-removable SSD	512GB non-removable SSD
Pixel size (µm)	20	20	20	6.5	6.5	20	10	10	6.6	6.6
Bit-depth	12 / 8	10	12	12	12	12	12	12	8	8
Variable region of interest (ROI)	✓	✓	✓	✓	✓	✓	✓	✓	x	x
Multi-head support	x	X	x	x	x	x	x	x	6	12
Lens mounts	Nikon F / G , EF, C	M42, Nikon F / G , EF, C	M42, Nikon F / G , EF, C	Nikon F / G, EF, C, M42	Nikon F / G, EF, C, M42	Nikon F / G, EF, C, M42	Nikon F / G, EF , C	Nikon F / G, EF, C, M42	C	M10.5
Closed Case "Range Version"	✓	✓	✓	✓	✓	x	x	x	x	x
High-G operation	25g	30g	30g	30g	30g	100g	100g	100g	160g	160g
Fan Stop Function	✓	✓	✓	✓	✓	✓	✓	✓	x	x
Gigabit Ethernet Connection	✓ (dual)	✓ (10-Gigabit)	✓ (10-Gigabit)	✓ (10-Gigabit)	✓ (10-Gigabit)	✓	✓	✓	✓ (& USB3)	✓ (& USB3)
PC-Less operation with keypad	Optional	Optional	Optional	Optional	Optional	x	x	x	x	x
Saved image formats	BMP, TIFF, JPEG, PNG, RAWW, MRAW, AVI, MOV, MP4									
Supports Photron DAQ plugin	✓	✓	✓	✓	✓	✓	✓	✓	✓ incld. built-in accelerometer	✓ incld. built-in accelerometer

Specifications subject to change without notice.

CREDIBILITY AND REPUTATION THROUGH TECHNOLOGICAL ACHIEVEMENT

Developments in advanced imaging technologies pioneered by Photron over the past 25 years are now being utilized in high-speed camera systems designed for a range of scientific and industrial applications. Photron has invested in the development of unique, advanced CMOS image sensors, the core technology of high-speed photography. Innovations in this area have lead to a rapid increase in camera performance, allowing high-speed imaging to be applied to important new application areas.

THE HIGHEST QUALITY DESIGN, MANUFACTURING AND SUPPORT

As an ISO9001:2008 certified manufacturer, Photron manufactures its full range of high-speed camera systems at its own facility located in Yonezawa City, Yamagata Prefecture, Japan. International technical support centers located in the USA, Europe, Japan, and China ensure fast and professional local support for Photron camera users around the world.

PHOTRON IS A LEADING NAME WORLDWIDE IN HIGH-SPEED IMAGING

Used in internationally renowned research facilities in more than 30 countries worldwide, Photron FASTCAM high-speed cameras are trusted to provide high quality results in the most challenging applications and environments. Photron continues to utilize the latest technological innovations to further advance product performance to meet the most demanding requirements from users around the world.

HIGH-SPEED IMAGING APPLICATIONS KNOWLEDGE

For more than 30 years, Photron has focused on the design and application of high-speed imaging products. Photron application engineers have a wealth of knowledge and experience in demanding imaging requirements and are able to advise both new and experienced users on high-speed imaging solutions and imaging techniques to achieve optimum results.

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