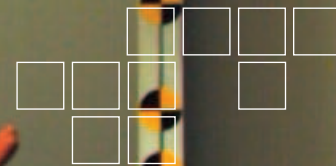


FASTCAM SA3

HIGH-G HIGH SPEED VIDEO SYSTEM



A rugged, megapixel High-Speed imaging system for General Application and Automotive Safety Test recording

2,000fps operation at 1024 x 1024 pixels

Designed referring to SAE-J211 to provide ruggedness and reliability, the Photron FASTCAM SA3 offers high performance recording for a broad range of applications in research and development and automotive safety testing.

Like the award winning FASTCAM MH4 multi-head camera system the FASTCAM SA3 ensures system stability under High-G conditions and long term system reliability.

FASTCAM SA3 offers remote control through user selectable camera controls on rear panel, Gigabit Ethernet communications or through optional RS422 keypad with built-in 5" LCD display.

FASTCAM SA3 provides exceptional light sensitivity, image quality and colour fidelity through genuine 12-bit ADC.

Two FASTCAM SA3 models are available:

Model 60K: 1024 x 1024 pixel resolution at frame rates up to 1,000fps

Model 120K: 1024 x 1024 pixel resolution at frame rates up to 2,000fps

Both systems offer higher frame rates at reduced image resolution and two microsecond global shutter.

Benefits

■ Performance:

FASTCAM SA3 Model 60K

- 1024 X 1024 pixels @ 1,000fps
- 768 x 768 pixels @ 1,500fps
- 512 x 512 pixels @ 3,000fps
- 256 x 256 pixels @ 7,500fps and at reduced resolution up to 60,000fps

FASTCAM SA3 Model 120K

- 1024 X 1024 pixels @ 2,000fps
- 768 x 768 pixels @ 3,000fps
- 512 x 512 pixels @ 6,000fps
- 256 x 256 pixels @ 15,000fps and at reduced resolution up to 120,000fps

- Suitable for operation in HiG environments. Operation tested to 100G, 10ms, 6 axis
- 17um pixel size to ensure high light sensitivity for demanding frame rate or low light applications
- 2us global shutter selectable independent of frame rate.
- Composite video output for real time monitoring during set up, recording and playback
- Optional remote keypad control with integrated viewfinder
- 2GB or 4GB recording memory options
- High performance Gigabit Ethernet interface



Photron

www.photron.com

FASTCAM SA3

HIGH SPEED VIDEO SYSTEM

POSSIBLE APPLICATIONS:

- Onboard vehicle impact testing
- Military test ranges where a sealed unit is beneficial
- Particle Image Velocimetry (PIV)
- Digital Image Correlation (DIC)

Specifications: Frame Rate/Resolution Table

FRAME RATE (fps)	MAXIMUM RESOLUTION Model 60K		MAXIMUM RESOLUTION Model 120K		RECORD DURATION (IN SECONDS)			
	Horizontal	Vertical	Horizontal	Vertical	2GB		4GB	
					60K	120K	60K	120K
1,000	1024	1024	1024	1024	1.361	1.362	2.726	2.726
1,500	768	768	1024	1024	1.613	0.907	3.231	1.870
2,000	512	512	1024	1024	2.723	0.681	5.453	1.363
3,000	512	512	768	768	1.815	0.807	3.635	1.616
5,000	512	256	512	512	2.178	1.089	4.363	2.181
6,000	-	-	512	512	-	0.908	-	1.818
7,500	256	256	512	256	2.904	1.452	5.817	2.908
10,000	512	128	512	256	2.178	1.089	4.363	2.181
15,000	128	128	256	256	5.808	1.452	11.634	2.908
20,000	256	64	512	128	4.356	1.089	8.725	2.181
25,000	256	64	256	128	3.485	1.742	6.980	3.490
30,000	512	32	128	128	2.904	2.904	5.817	5.817
50,000	256	16	256	64	6.970	1.742	13.961	3.490
60,000	128	16	512	32	11.617	1.452	23.268	2.908
75,000	-	-	256	32	-	2.323	-	4.654
100,000	-	-	256	16	-	3.485	-	6.980
120,000	-	-	128	16	-	5.808	-	11.634

Sensor	12-bit ADC (Bayer system color, single sensor) with 17µm pixel size
Shutter	Global electronic shutter from 16.7ms to 2µs independent of frame rate
Lens Mount	Interchangeable F-mount and C-mount using supplied adapters (Optional High-G block mount available)
Extended Dynamic Range	Selectable in twenty steps (0 to 95% in 5% increments) to prevent pixel over-exposure
Memory	2GB (standard), 4GB (optional)
Video Output	NTSC/ PAL composite VBS (BNC). Ability to zoom, pan and scroll within image via keypad (option). Live video during recording.
Camera Control	Through optional keypad with integrated viewfinder and Gigabit Ethernet or RS-422A
Low Light Mode	Low light mode selection for simple camera adjustment when working in low ambient light, high frame rate or short exposure modes
Triggering	Selectable positive or negative TTL 5Vp-p or switch closure
Trigger Delay	Programmable delay on selected input and output triggers, 100ns resolution
Timing	Internal clock or external source such as IRIG or GPS

Event Markers	Ten user entered event markers mark specific events within the image sequence in real time. Immediately accessible through software.
Recording Modes	Start, End, Center, Manual, Random
Saved Image Formats	JPEG, AVI, TIFF, BMP, RAW, RAWW, PNG, and FTIF. Images can be saved with or without image or comment data.
Data Display	Frame Rate, Shutter Speed, Trigger Mode, Date or Time, Status (Playback/Record), Real Time, Frame Count and Resolution
Partitioning	Up to 8 memory partitions may be set by the user.
High-G	Tested to 100G, 10ms, six-axis
Operating Temp.	0-40 degrees C
Mounting	1x ¼-20 UNC, 1x 3/8-16 UNC, 6x M6
Dimensions and Weight	120mm (4.72")H x 120mm (4.72")W x 215.8mm (8.50")D *excluding protrusions Weight: 9.48 lbs (4.3kg)
Power Requirements	100V - 240V AC ~ 1.5A, 50-60Hz optional DC operation 22-32VDC, 60VA

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