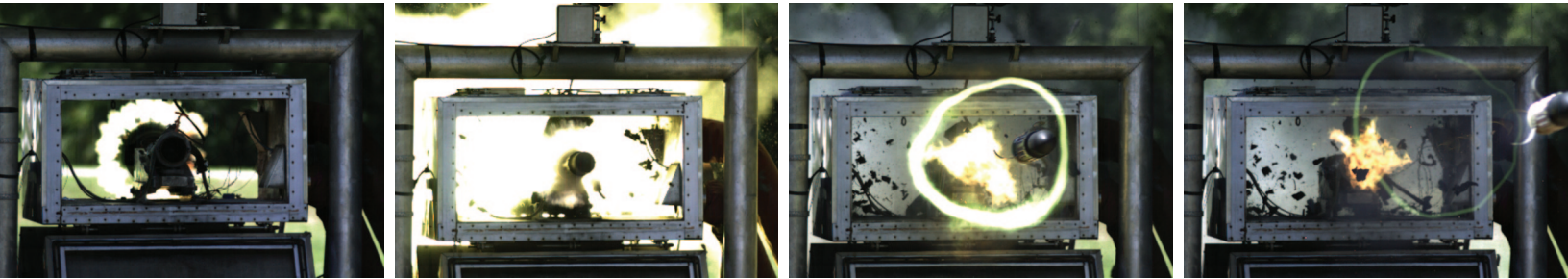


FASTCAM Mini AX100/AX50

COMPACT HIGH-SPEED CAMERAS



Outstanding Light Sensitivity in a Compact Package

The Photron FASTCAM Mini AX100 and Mini AX50 high-speed cameras provide high frame rates, extraordinary light sensitivity and superior image quality in a compact, lightweight and rugged camera design. Providing 1,024 x 1,024 pixel resolution at up to 4,000 frames per second (fps) and reduced resolutions to 540,000 fps, the Mini AX100 and Mini AX50 deliver the performance required for demanding industrial, military and laboratory applications.

With light sensitivity of ISO 40,000 monochrome and ISO 16,000 color (using the ISO 12232 Ssat standard), the FASTCAM Mini AX100 and Mini AX50 have better sensitivity than other mid-range high-speed cameras. Higher light sensitivity means that less additional lighting is required to capture a high-speed event. It also means that faster frame rates, shorter shutter speeds and greater depths of field are provided under equivalent lighting conditions.

Contained within a 120mm x 120mm x 94mm camera body weighing just 1.5kg, the FASTCAM Mini AX100 and Mini AX50 are uniquely suited for use in a wide range of applications. The cameras are designed for operation in high shock and vibration environments, allowing them to be utilized in automotive crash test facilities and on military test ranges.

The FASTCAM Mini AX100 and Mini AX50 are identical with a single exception. The Mini AX100 is the faster camera, providing 4,000 fps at full resolution. The lower priced Mini AX50 allows 2,000 frames per second at full resolution.

Target applications include:

- Biomechanics
- Life sciences
- Material sciences
- Onboard and offboard automotive safety testing
- Defense and aerospace research
- Fluid dynamics / PIV

Benefits

- Performance examples (assumes Mini AX100):
 - 4,000 fps @ 1,024 x 1,024 pixels
 - 10,000 fps @ 768 x 528 pixels
 - 20,000 fps @ 384 x 384 pixels
 - 50,000 fps @ 256 x 128 pixels
 - 100,000 fps @ 128 x 96 pixels
 - 540,000 fps @ 128 x 16 pixels
- Self-contained, compact and lightweight camera
120mm (4.7") H × 120mm (4.7") W × 94mm (3.7") D
excluding protrusions, and 1.5kg (3.3lbs)
- Sensitivity: ISO 12232 Ssat standard
 - ISO 40,000 monochrome
 - ISO 16,000 color
- Suitable for operation in High-G environments. Operation tested to 100G, 10ms, 6 axes
- 4GB, 8GB and 16GB memory options and high performance Gigabit Ethernet interface to PC



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Specifications: Partial Frame Rate / Recording Duration Table

FRAME RATE (fps)	Mini AX100					Mini AX50				
	MAXIMUM RESOLUTION		RECORDING TIME * (Sec.)			MAXIMUM RESOLUTION		RECORDING TIME * (Sec.)		
	Horizontal	Vertical	4GB	8GB	16GB	Horizontal	Vertical	4GB	8GB	16GB
2,000	1,024	1,024	1.36	2.73	5.46	1,024	1,024	1.36	2.73	5.46
4,000	1,024	1,024	0.68	1.36	2.73	640	640	3.49	6.99	13.98
6,000	1,024	736	0.63	1.26	2.53	640	480	1.55	3.10	6.21
10,000	768	528	0.71	1.41	2.82	384	384	1.94	3.88	7.76
20,000	384	384	0.97	1.94	3.88	256	256	2.18	4.37	8.73
50,000	256	128	1.75	3.49	6.99	128	96	4.65	9.31	18.63
76,500	128	128	2.28	4.56	9.13	128	64	4.56	9.13	18.26
100,000	128	96	2.33	4.66	9.32	128	32	6.98	13.97	27.95
170,000	128	32	4.11	8.22	16.44	128	16	8.21	16.44	32.88
540,000	128	16	2.59	5.17	10.35	n/a	n/a	n/a	n/a	n/a

* Multiply frame rate by time to determine approximate number of frames recorded.

Sensor	1,024 x 1,024 pixels, 20µm pixel size, 12-bit ADC (Bayer system color, 36 bit-single sensor)	Saved Image Formats	JPEG, AVI, TIFF, BMP, RAW, RAWW, MRAW, PNG, MOV and FTIF. Images can be saved with or without embedded camera settings
Sensitivity	ISO 40,000 monochrome, ISO 16,000 color (ISO 12232 Ssat standard)	Partition	Up to 64 memory segments (includes option to record images to one segment while downloading images from another segment)
Shutter	Global electronic shutter from 1ms to 1.05µs independent of frame rate	Data Display	Frame Rate, Shutter Speed, Trigger Mode, Date or Time, Status (Playback/Record), Real Time, Frame Count and Resolution
Extended Dynamic Range	Selectable in twenty steps (0 to 99%, in 5% increments) to prevent over-exposure of pixels in brightly lit areas of the image	Cooling	Actively cooled
Lens Mount	Interchangeable G-type F, C standard; M42 optional	High-G Operation	Tested to 100G, 10ms, 6 axes
Memory	4GB (2,726 frames @ maximum resolution) standard 8GB (5,457 frames @ maximum resolution) optional 16GB (10,918 frames @ maximum resolution) optional	Fan Control	Allows fan to be temporarily disabled, eliminating vibration
Camera Control	High-speed Gigabit Ethernet	Operating Temp/Humidity	0 - 40C (32 - 104°F) / 85% or less (no condensation)
Low Light Mode	Low light mode drops the frame rate and shutter time to their maximum values, while maintaining other set parameters, to enable users to position and focus the camera	Storage Temp/Humidity	0 - 60C (32 - 140°F) / 85% or less (no condensation)
Triggering	Selectable positive or negative TTL 5Vp-p or switch closure	Mounting	4 x 1/4-20UNC, 4 x M5
Timing	Internal clock or external source	Dimensions	120mm (4.7") H × 120mm (4.7") W × 94mm (3.7") D excluding protrusions
I/O	Input: Trigger (TTL/Switch), Sync, Ready, Event, IRIG Output: Trigger, Sync, Ready, Rec, Expose	Weight	1.5kg (3.3lbs)
Phase Lock	Enables cameras to precisely synchronize to a master camera or external source, such as IRIG time codes	Power Requirement	100V-240V AC 55W , 50-60Hz DC operation 22-32 VDC, 55W
Trigger Modes	Start, Center, End, Manual, Random, Random Reset		

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