Photron's high-speed camera captures a 40 mile per hour vehicle impact test. All vehicles are subjected to rigorous crash and sled tests, every one of which must be recorded at 1,000 frames per second for the engineers to analyze to see how the vehicle and dummy occupants interact. These images are selected from the original 1,000 fps recording.

1024 PCI

FASTCAM-X

Mega pixel resolution at 1,000 frames per second for the personal computer.

The **FASTCAM-X 1024 PCI** from Photron is the world's first PC-based high-speed imaging system to provide 1,000 frames per second (fps) recording at full mega pixel image resolution.

Utilizing the same super light sensitive 10-bit CMOS sensor as the **Ultima APX** with large 17 micron square pixels, the **1024 PCI** operates from 60 to 1,000 fps at full 1,024 x 1,024-pixels resolution, and at reduced resolution all the way to a top speed of 109,500 fps.

A global electronic shutter, operating down to 1.5 microseconds ensures even the fastest moving objects are frozen, blur free, in every image.

A user selectable 'Region Of Interest' function enables the active image area to be defined in steps of 128 pixels wide by 16 pixels high to allow the most efficient use of frame rate, image resolution and memory capacity for any event. Up to 20 commonly used configurations can be saved to memory for future operation.

A single flexible sixteen foot (5 meter) cable allows the lightweight camera head easy access to any location.

BENEFITS

Variable speed resolutions, including:
- 1,024 x 1,024-pixels at 1,000 fps
- 512 x 512-pixels at 3,000 fps
- 27,000 fps at 128 x 128-pixels
- 109,500 fps at reduced resolution

Global shuttering to 2µs, independent frame rate selected

Expandable memory offers several different configurations (PCI card and memory daughter PCB still fit in a single PCI slot) providing a wide range of record times:
- 2GB for 1.6 seconds at 1,000 fps full resolution
- 4GB for 3.08 seconds at 1,000 fps full resolution
- 6GB for 4.6 seconds at 1,000 fps full resolution
- 8GB for 6.2 seconds at 1,000 fps full resolution
- 12GB for 9.2 seconds at 1,000 fps full resolution
- 16GB for 12.3 seconds at 1,000 fps full resolution
- 24GB for 18.5 seconds at 1,000 fps full resolution

Fits in single PCI slot, regardless of memory configuration selected

Camera is connected to PCI card via 16 foot (5m) flexible cable

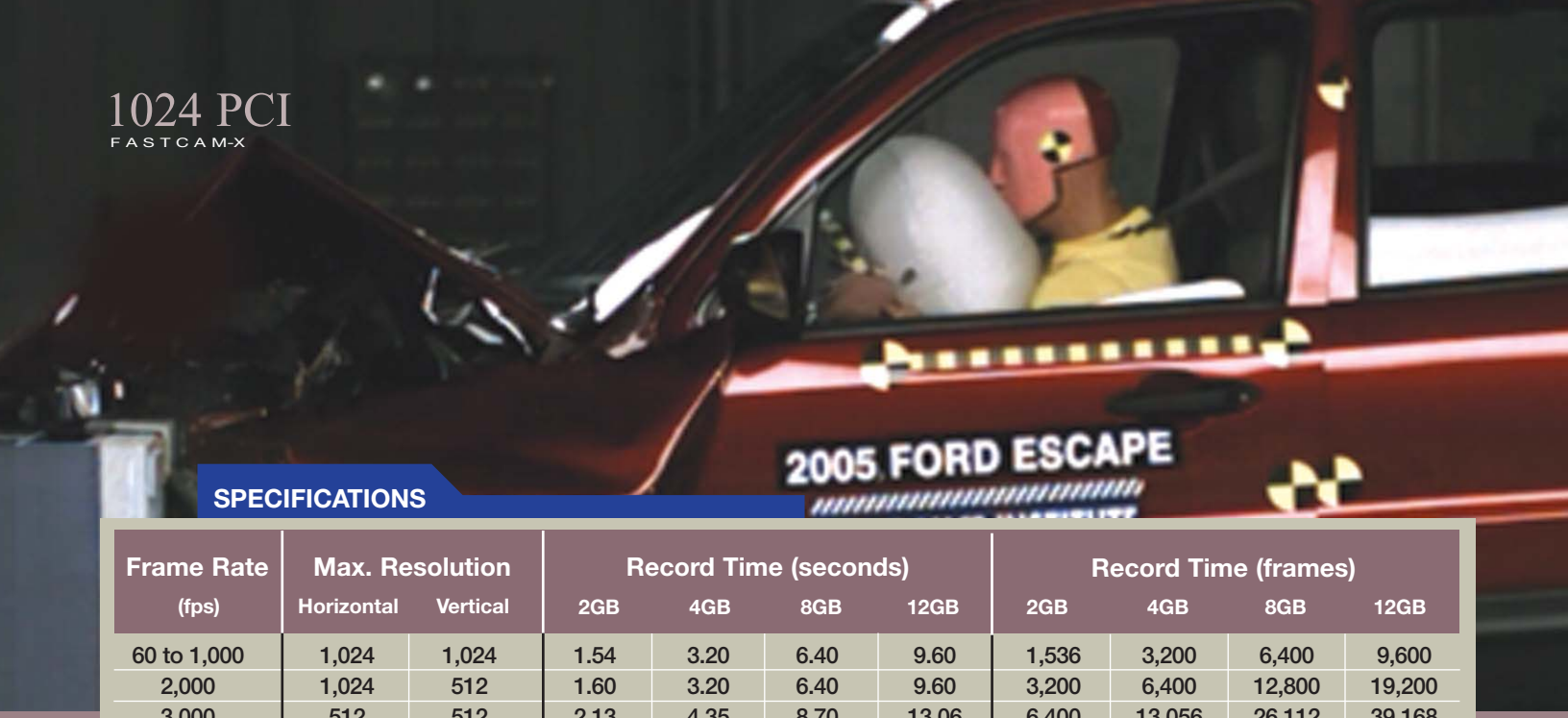
User defined 'Region Of Interest'

SLOW MOTION IMAGING SOLUTIONS

Photron®

www.photron.com
image@photron.com

1024 PCI
FASTCAM-X



SPECIFICATIONS

Frame Rate (fps)	Max. Resolution		Record Time (seconds)				Record Time (frames)			
	Horizontal	Vertical	2GB	4GB	8GB	12GB	2GB	4GB	8GB	12GB
60 to 1,000	1,024	1,024	1.54	3.20	6.40	9.60	1,536	3,200	6,400	9,600
2,000	1,024	512	1.60	3.20	6.40	9.60	3,200	6,400	12,800	19,200
3,000	512	512	2.13	4.35	8.70	13.06	6,400	13,056	26,112	39,168
6,000	512	256	2.13	4.35	8.70	13.06	12,800	26,112	52,224	78,336
10,000	256	256	2.61	5.22	10.44	15.67	26,112	52,224	104,448	156,672
18,000	256	128	2.90	5.80	11.61	17.41	52,224	104,448	208,896	313,344
27,000	128	128	3.87	7.74	15.47	23.21	104,448	208,896	417,792	626,688
45,000	128	64	4.64	9.28	18.57	27.85	208,896	417,792	835,584	1,253,376
73,000	128	32	5.72	11.45	22.89	34.34	417,792	835,584	1,671,168	2,506,752
109,500	128	16	7.63	15.26	30.52	45.79	835,584	1,671,168	3,342,336	5,013,504

Sensor	CMOS (Bayer system color, single sensor) with 17µm pixel
Shutter	Global electronic shutter from 16.7ms to 1.5µs independent of frame rate
Extended Dynamic Range	Four presets prevent pixel over-exposure
Saved Image Formats	JPEG, AVI, TIFF, BMP, RAW (compressed or uncompressed) PNG (10-bit), and FTIF (10-bit). Images can be saved with or without image or comment data
Memory	Currently four options available: 2GB, 4GB, 8GB and 12GB. (16GB and 24GB options are planned)
Resolution	In addition to pre-selected resolutions, twenty memory slots are available for users to store custom frame rate and resolution combinations conforming to the 128 pixels wide by 16 pixels high pattern
Phase Lock	Enables cameras to be synchronized precisely together to a master camera or external source
Triggering	Positive TTL 5Vp-p or switch closure
Lens Mount	Interchangeable F-mount and C-mount using supplied adapters
Camera Cable	16.4' (5m)
Data Display	Frame Rate, Shutter Speed, Trigger Mode, Date or Time (can be switched), Status (Playback/Record), Real Time, Frame Count and Resolution
Timing	Internal clock or external source such as IRIG or GPS (requires optional software module)
Recording Modes	Start, End, Center, Manual, Random, Random Reset, Random Center, Random Manual and Dual Speed Recording™
Partitioning	Dependent on memory configuration used; up to 48 partitions can be used
Dimensions	**Camera Head:** (no lens mount) 4.72" (120mm) W x 4.72" (120mm) H x 4.19" (106.4mm) D
Weight	3.5 lb (1.6 kg)

Specifications subject to change without notice

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