Selection of images taken from a 4,000 frames per second recording, with a 25 microsecond shutter (two microsecond shuttering is possible), of an arrow piercing a soda can. These images clearly show the arrows 'wobble' as it deflects inside the can.

ultima APX-RS
FASTCAM

Superb light sensitivity, speed and resolution defines Photron's APX-RS high-speed system as the industry leader.

The **ultima APX-RS** provides full mega pixel resolution images at frame rates up to 3,000 frames per second (fps), 512 x 512-pixels resolution at 10,000fps and at reduced frame rates to an unrivaled frame rate of 250,000fps.

Utilizing Photron's advanced CMOS sensor technology, the **APX-RS** provides the higher light sensitivity than any other comparable high-speed imaging system. Designed as a solid one piece camera, able to withstand shock forces as high as 100G's. Both color and monochrome models are available, both with excellent anti-blooming capabilities.

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.

Available with Gigabit Ethernet, FireWire and fiber optic communications, this compact camera can provide exposure durations as short as 2 microseconds and is easily operated in the field with or without a computer through use of the supplied remote keypad; enabling full camera setup, operation and image replay. When a PC is used, Photron's PFV software makes setting up and operating multiple cameras easy and intuitive.

BENEFITS

FireWire, Gigabit Ethernet and Optical interfaces available for maximum flexibility and fastest image download and reliable camera control, regardless of distance

High-G proven for reliable operation in the harshest environments. A sealed unit is available for reliable use in hot and dusty locations

Now available with 16GB memory option for longer recording times such as 12 seconds at 1,000 full resolution frames per second

Full 1024 x 1024-pixels resolution up to 3,000 fps

10,000 fps at 512 x 512-pixels

250,000 fps at reduced resolution – an industry record

Global electronic shutter to 2µs

IRIG or GPS timing is recorded in real time on every frame – not appended later

User selectable 'Region Of Interest' function

SLOW MOTION IMAGING SOLUTIONS

Photron®

www.photron.com

image@photron.com

ultima APX-RS
FASTCAM

SPECIFICATIONS

Frame Rate	Max. Resolution		Record Time (seconds)			Record Time (frames)		
(fps)	Horizontal	Vertical	2GB	8GB	16GB	2GB	8GB	16GB
60	1,024	1,024	34.1	102.4	204.8	2,048	6,144	12,288
125	1,024	1,024	16.4	49.2	98.3	2,048	6,144	12,288
250	1,024	1,024	8.2	24.6	49.2	2,048	6,144	12,288
500	1,024	1,024	4.1	12.3	24.6	2,048	6,144	12,288
1,000	1,024	1,024	2.0	6.1	12.3	2,048	6,144	12,288
2,000	1,024	1,024	1.0	3.1	6.1	2,048	6,144	12,288
3,000	1,024	1,024	0.7	2.0	4.1	2,048	6,144	12,288
5,000	768	768	0.7	2.2	4.4	3,641	10,923	21,845
9,000	640	480	0.8	2.3	4.7	6,991	20,972	41,943
10,000	512	512	0.8	2.5	4.9	8,192	24,576	49,152
10,000	512	528	0.8	2.4	4.8	7,944	23,831	47,663
15,000	384	384	1.0	2.9	5.8	14,564	43,691	87,381
30,000	256	256	1.1	3.3	6.6	32,768	98,304	196,608
50,000	256	144	1.2	3.5	7.0	58,254	174,763	349,525
70,000	128	128	1.9	5.6	11.2	131,072	393,216	786,432
100,000	384	48	1.2	3.5	7.0	116,508	349,525	699,051
150,000	128	48	2.3	7.0	14.0	349,525	1,048,576	2,097,152
210,000	256	16	2.5	7.5	15.0	524,288	1,572,864	3,145,728
250,000	128	16	4.2	12.6	25.2	1,048,576	3,145,728	6,291,456

Sensor	10-bit CMOS (Bayer system color, single sensor) with 17µm pixels, 16.7ms to 2µs global electronic shutter independent of frame rate and overexposure protection
Saved Image Formats	AVI, JPEG, PNG (10-bit), TIFF, FTIF (10-bit), BMP, and Bayer and RS-170 Video output. Images can be saved with or without image or comment data
Extended Dynamic Range	Selectable from 4 presets to prevent over exposure
Phase Lock	Enables cameras to be synchronized precisely together to a master camera or external source
Triggering	Selectable positive or negative TTL 5Vp-p, switch closure
Lens Mount	Interchangeable F-mount and C-mount supplied standard. Optional High-G block mount
Data Display	Frame Rate, Shutter Speed, Trigger Mode, Date or Time (can be switched), Status (Playback/Record), Real Time, Frame Count, Resolution System or IRIG time, and user-edited comments can be displayed beside or in the saved image area for all formats
Video Output	NTSC or PAL. Live video during recording. Ability to zoom and pan within image via keypad
Dual Speed Recording™	Enables the recording speed to be changed, up or down, by a factor of 2, 4 or 8 during a recording
Timing	Internal clock or external source such as IRIG or GPS. Indicators show current status of timing source
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, Random Reset, Random Center, Random Manual, and Dual Speed Recording™
Partitioning	Up to 64 memory segments for multiple recordings in memory
Camera Control	Through supplied keypad and RS-422A. And either via the Photron Gigabit Optical Network, Gigabit Ethernet or FireWire
Software	Includes image rotation and ability to save images with or without time codes or comment data
Shock	100G @ 10ms any axis
Dimensions (no lens mount)	H 6.24" (158.6mm) (add 2.13" [54mm for handle and feet] x W 5.17" (131.4mm) x L 11.39" (289.2mm)
Weight	10.8lb (4.9kg)

Specifications subject to change without notice