

**The acknowledged
standard in high-speed
video recording**



The Photron ultima SE is the result of the continuing development of Photron's series of high-speed recording systems. Designed specifically for industrial, military and scientific applications, the ultima SE is recognized as a leader in its field.

The ultima SE system offers exceptionally high-speed recording rates of 4,500 frames per second at full resolution and up to 40,500fps with reduced frame sizes. Throughout its speed range the ultima SE system retains practical image aspect ratios.

The proprietary technology N-MOS image sensor unique to the system offers particularly high light sensitivity. This combination of high frame rates, remarkable sensitivity and ease of use have made the ultima SE an indispensable tool in the analysis of a wide range of critical high-speed events, including automotive airbag deployment testing, product engineering development and ballistics research.

F E A T U R E S

- Exceptionally high frame rates, full resolution up to 4,500 frames per second; 9,000, 13,500, 18,000, 27,000 and 40,500fps with reduced image formats.
- Ultra-high sensitivity N-MOS sensor allows imaging of low light level events and subjects requiring illumination by ultra- short duration laser strobes.
- Optional IEEE1394 Firewire or SCSI and RS232 interfaces for PC system control and image download.
- High memory capacity options allow recording times of up to 24,576 frame sequences providing up to 5.5 seconds recording at 4,500fps.
- System compatibility with HS4540, MX and ultima 40K series products.



Frame Rates in frames per second

30	60	125	250	500	750	1,125	2,250	4,500	9,000	13,500	18,000	27,000	40,500
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Resolution

Frame Rate (fps)	Resolution Max	
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30 to 4,500	256	256
9,000	256	128
13,500	128	128
18,000	256	64
27,000	128	64
40,500	64	64

Playback Speeds in frames per second

	2	5	10	15	30
NTSC	2	5	10	15	30
PAL	2	4	8	12	25

Record Time in seconds and frames

Frame Rate (fps)	Standard 512 MB	Expanded 1 GB	Maximum 1.5 GB
500	16.28s (8,192)	32.77s (16,384)	49.15s (24,576)
750	10.92s (8,192)	21.85s (16,384)	32.77s (24,576)
1,125	7.28s (8,192)	14.56s (16,384)	21.85s (24,576)
2,250	3.64s (8,192)	7.28s (16,384)	10.92s (24,576)
4,500	1.82s (8,192)	3.64s (16,384)	5.46s (24,576)
9,000	1.82s (16,384)	3.64s (32,768)	5.46s (49,152)
13,500	2.43s (32,768)	4.85s (65,536)	7.28s (98,304)
18,000	1.82s (32,768)	3.64s (65,536)	5.46s (98,304)
27,000	2.43s (65,536)	4.85s (131,072)	7.28s (196,608)
40,500	3.24s (131,072)	6.47s (262,144)	9.71s (393,216)

- Sensor** N-MOS, 10.24mm x 10.24mm image area, pixel size 40µm x 40µm
- Dynamic Range** 8 bits, 256 steps
- Sensitivity** Equivalent to ISO 3000 at high gain setting
- Exposure rate** 1 / frame rate
- PC Control** Optional IEEE1394 (FireWire) interface, system control, file management and replay software supplied (FireWire)
- Remote Control** Hand-held keypad for full system control or RS232C
- Image Download to PC** Either IEEE 1394 (FireWire) **Operating Systems:** Windows 98SE, Windows ME, Windows 2000, Windows XP are supported.
Or SCSI-2, requires Adaptec ASPI, **Operating Systems:** Windows 95, Windows 98, Windows 98SE, Windows ME, and Windows NT4 are supported
- Analog Image Output** RS 170 video (NTSC or PAL), 2 channels
- Triggering** Switch closure, open collector and TTL
- Recording Modes** Start, Center, End, Random Trigger (1, 2, 3, 4, 16, 64, 128 or 256 frames/trigger)
- Data Display** Recording rate, Frame count, Elapsed time, ID number, Imager Status, Mode
- Lens Mount** C mount
- Camera Cable** 16' (5 meters) standard, 47' (15 meters) optional
- External sync output** 5V peak to peak, negative going
- Dimensions and Weight** **Imager:** 3.7" (92mm)W x 3.4" (86mm)W x 7.6" (196mm)D **Weight:** 4lbs (1.8kg)
Processor: 13.4" (340mm)W x 8.7" (220mm)H x 19.7(500mm)D **Weight:** 47lbs (21.5kg)
- Operating temperature** 32° to 113° F, (0° to 45° C)

Specifications subject to change without notice.

PHOTRON USA, INC.
9520 Padgett Street, Suite 110
San Diego, CA 92126-4446
858.684.3555
800.585.2129
fax 858.684.3558
email: image@photron.com
www.photron.com

PHOTRON (EUROPE) LIMITED
Willowbank House
84 Station Road
Marlow
Bucks. SL7 1NX
United Kingdom
+44 (0) 1628 894353 fax +44 (0) 1628 894354
email: image@photron.com
www.photron.com

PHOTRON LIMITED
Shibuya 1-9-8
Shibuya-Ku, Tokyo 150-0002
Japan
+81 (0) 3 3486-3471
fax +81 (0) 3 3486-8760
e-mail sales@photron.co.jp
www.photron.co.jp