ultima 1024

FASTCAM

Our exceptionally versatile and affordable high-speed digital system

Photron's ultima 1024 brings high-resolution, high-speed video to the user at an affordable cost.

The ultima 1024 can be used in a stand-alone configuration, or as part of an advanced high-speed imaging network which allows synchronization of multiple cameras over long distances and difficult terrain. The system's compact, handheld keypad with backlit LCD display is intuitive and makes the camera easy to use without the need of a computer.

Whether in the field or in the laboratory, little or no training is required for operation. The advanced CMOS sensor technology results in frame rates of up to 500 fps at 1024 x 1024-pixel resolution, and up to 16,000 fps at reduced resolution. A frame-rate independent shutter ensures clear image capture of even the fastest events.

When you need versatility and affordability, the ultima 1024 is the one to choose, with exceptional capabilities in an easy-to-use system.

FEATURES

- Mega-pixel CMOS sensor eliminates image blooming (white-outs, tearing or smearing), offering unmatched image clarity and color fidelity
- Camera can be controlled from the easy-to-use handheld keypad or from your Windows-based computer
- Dual built-in FireWire (IEEE-1394/iLink) interfaces make daisy-chaining easy for reliable control of multiple cameras, facilitating image download to your computer
- Video output in both composite RS-170 and S-VHS formats (NTSC and PAL) while recording and image reviewing
- Option: with optical link provided, multiple cameras can be controlled over long distances, with the capability of controlling more than 60 cameras with one computer
- Option: IRG/GPS timing module to record standardized time codes on multiple cameras operating far apart and not directly connected. Enables the user to correlate timing of image sequences from different cameras

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Specifications ultima 1024

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Frame Rates in frames per second

60	125	250	500	1,000	2,000	4,000	8,000	16,000

Resolution 8-bit monochrome, 24-bit color

Frame Rate (fps)	Resolution Max		Resolution 2		Resolution 3		Resolution Min		Available Shutter Range
	H	V	H	V	H	V	H	V	
500	1,024	1,024	1,024	512	512	512	128	32	2 ms to 7.8 µs
1,000	1,024	512	512	512	512	256	128	32	1 ms to 7.8 µs
2,000	512	256	256	256	512	128	128	32	0.5 ms to 7.8 µs
4,000	512	128	256	128	256	128	128	32	0.25 ms to 7.8 µs
8,000	512	64	256	64	256	64	128	32	125 µs to 7.8 µs
16,000	256	32	–	–	–	–	128	32	62.5 µs to 7.8 µs

Record Time in seconds and frames

Frame Rate (fps)	Standard		Expanded		Maximum	
	Max. Res.	Min. Res.	Max. Res.	Min. Res.	Max. Res.	Min. Res.
500	1s (512)	7.8s (3,906)	2s (1,024)	15.6s (7,812)	3s (1,536)	23.4s (11,718)
1,000	1s (1,024)	2s (2,048)	2s (2,048)	4.1s (4,096)	3.1s (3,072)	6.1s (6,144)
2,000	2s (4.096)	4.1s (8,192)	4.1s (8,192)	8.2s (16,384)	6.1s (12,288)	12.3s (24,576)
4,000	2s (8,192)	8.2s (32,768)	4.1s (16,384)	16.4s (65,536)	6.1s (24,576)	24.6s (98,304)
8,000	2s (16,384)	16.4s (131,072)	4.1s (32,768)	32.8s (262,144)	6.1s (49,152)	49.2s (393,216)
16,000	4.1s (65,536)	12.3s (131,072)	8.2s (131,072)	16.4s (262,144)	8.2s (196,608)	24.6s (393,216)

Playback Speeds in frames per second

NTSC	1	2	5	10	15	30
PAL	1	2	4	8	12	25

Sensor	10-bit CMOS, 30-bit color (Bayer system color, single sensor) with 12µm square pixels
Shutter	Global electronic shutter from 2ms to 7.8µs
Saved Image Formats	JPEG, AVI, TIFF, BMP, RAW (compressed or uncompressed)
Camera Control	Camera gain changed via 3-position switch on rear of camera head
PC Control	IEEE-1394 FireWire. Live image during record, camera control, digital data transfer, file management and image analysis
Phase Lock	Enables cameras to be synchronized precisely together to a master camera or external source
Triggering	Switch closure, open collector and TTL
Lens Mount	C-mount standard
Camera Cable	16' (5m) standard. Longer cable lengths available upon request
Data Display	Frame Rate, ID Number, Date or Time (can be switched), Status (Playback/Record), Shutter Speed, Trigger Mode, Real Time and Frame Count
Output	Video RS-170 (NTSC or PAL); Monitor SVGA; Digital IEEE-1394 FireWire interface ports
Camera Control	Equipped with handheld, backlit LCD control unit; FireWire (IEEE-1394), Optical Link, RS-422
Dimensions and Weight	Camera Head: 3.4'' (85mm) H x 3.4'' (85mm) W x 1.82'' (46mm) D Weight: 0.25 lb (0.55 kg) Processor: 7.2'' (181mm) H x 6.4'' (161mm) W x 11.7'' (297mm) D Weight: 16 lb (7.0 kg)

Specifications subject to change without notice.

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