

Model 100

PRODUCT FEATURES:

Frame Rate Performance Examples:

- 4,000fps at 1280x1024 pixel resolution
- 5,000fps at 1280x1000 pixel resolution
- 6,250fps at 1280x800 pixel resolution
- 8,000fps at 1280x624 pixel resolution
- 20,000fps at 1280x248 pixel resolution
- 200,000fps at 1280x24 pixel resolution
- 800,000fps at 640x8 pixel resolution

Compact and Lightweight :

120mm x 120mm x 90mm Camera Body
Weight: 1.5Kg

Dynamic Range (ADC):

12-bit Monochrome, 36-bit Colour.

High Light Sensitivity:

Unique image sensor technology combining high light sensitivity and small pixel size.

Global Electronic Shutter:

Minimum Shutter Speed 3.76µs to 1µs dependent on frame rate selection.

Gigabit Ethernet Interface:

Provides reliable system communication and fast image download.

Recording Memory Options:

To meet all application requirements: 4GB, 8GB and 16GB.

1 inch C-mount Compatible Sensor Size and integrated Nikon G type lens mount:

Allowing operation with both current Nikon DSLR F/G type lenses and full compatibility with 1 inch C- mount lenses at all image resolutions.



Compact and light weight camera system offering outstanding performance and ease of use in a wide-range of high-speed imaging applications

The Photron FASTCAM Mini UX100 high speed camera provides outstanding high speed imaging performance in a small and lightweight camera design. Providing 1.3 Megapixel image resolution (1280x1024 pixels) at frame rates up to 4,000fps frames per second and 1 Megapixel resolution (1280x800 pixels) at 6,250fps, the Mini UX-100 system offers both impressive high speed imaging performance and convenience of use.

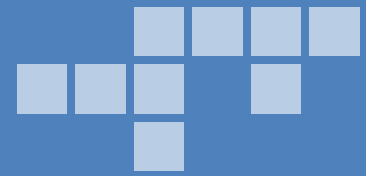
Housed within a 120mm x 120mm x 90mm camera body weighing just 1.5kg, the FASTCAM Mini UX-100 is ideally suited for use in a wide range of scientific and industrial applications. The camera is available with recording memory options up to 16GB providing extended recording times and triggering flexibility.

Using innovative proprietary CMOS image sensor technology, the FASTCAM Mini UX-100 achieves high light sensitivity from a sensor having a 10µm pixel size fitted with a micro lens. At full image resolution, the image sensor size is compatible with readily available 1" C mount lenses allowing the user a wide choice of small, low cost and very high aperture (up to f0.95) objectives to use with the system and may also be coupled to scientific microscopes and borescopes. In addition, the camera is supplied with a Nikon F mount lens fitting fully compatible with G type Nikon DSLR objectives.

FASTCAM Mini UX-100 is fitted with a high speed Gigabit Ethernet interface providing reliable system control and fast image download. The system is supplied with intuitive and feature rich Photron FASTCAM Viewer (PFV) software and Photron Device Control SDK (software development kit), allowing integration with user-specific software. Alternatively, the camera can be controlled as a device within a MATLAB or LabVIEW environment.

FASTCAM Mini UX

COMPACT HIGH-SPEED CAMERA SYSTEM



Camera Performance Specifications:

Frame Rate (full image resolution)	4,000fps at 1280 x 1024 pixels
Maximum Frame Rate (reduced image resolution)	800,000fps at 640 x 8 pixels
Shutter Time	Global shutter minimum exposure time dependent on frame rate 3.76µs to 1µs
Dynamic Range (ADC)	12-bit Monochrome 36-bit Colour
ISO 12232 Ssat sensitivity	ISO 10,000 mono, ISO 5,000 color (equivalent > ISO 16,000 T mono including near IR response)
Memory Capacity Options	4GB: 2,220 frames at full resolution 8GB: 4,360 frames at full resolution 16GB: 8,720 frames at full resolution
Memory Partitions	Up to 64 memory segments
Trigger Inputs	Selectable +/- TTL 5V p-p and switch closure
Input / Output	Input: Trigger(TTL/Switch), Sync, Ready, Event, IRIG Output: Trigger, Sync, Ready, Rec, Exposure
External Sync	+/- TTL 5Vp-p Variable Frequency Synchronization
Trigger / Synchronization Outputs	For synchronisation of multiple cameras or external equipment +/- TTL 5V p-p
Trigger Modes	Start, End, Centre, Manual, Random
Time Code Input	IRIG-B
Camera Control Interface	High Speed Gigabit Ethernet
Image Data Display	Frame rate, Shutter speed, Trigger Mode, Date/Time, Status, Real time / IRIG Time, Frame count, Resolution
Saved Image Formats	BMP, TIFF, JPEG, PNG, RAW, RAWW, MRAW, AVI, WMV, FTIF, MOV.

Frame Rate / Image Resolution:

Frame Rate (FPS)	Horizontal	Vertical
1,000 to 4,000fps	1280	1024
6,250 fps	1280	800
6,400 fps	896	720
6,400 fps	768	768
8,000 fps	1280	624
8,192 fps	768	512
10,000 fps	896	496
10,240 fps	640	480
12,500 fps	640	320
Detailed frame rate / resolution table on request		
200,000 fps	1280	24

High-Speed Gigabit Ethernet Interface:

FASTCAM Mini UX100 camera system is equipped with a high-speed Gigabit Ethernet interface to provide reliable network communication and fast download of image data.



Sensor size compatible with 1" format C-mount lenses:

Offering the user a wide choice of small, low cost and very high aperture (up to f0.95) objectives to use with the system.



Nikon G type Compatible Lens Fitting:

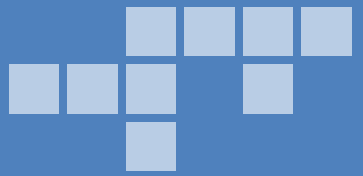
The FASTCAM Mini UX100 camera is equipped with an objective lens mount, compatible with readily available Nikon G type lenses. Controls provided within the lens mount allow the control of lens aperture on lenses without external iris control.



Photron
High-Speed Imaging Solutions

FASTCAM Mini UX

COMPACT HIGH-SPEED CAMERA SYSTEM



Mechanical and Environmental Specifications:

Mechanical:

External Dimensions (excluding protrusions) 120mm x 120mm x 90mm

Weight 1.5kg

Environmental:

Operating Temperature 0 ~ 40 deg. C

Storage Temperature -20 ~ 60 deg. C.

Humidity 85% or less (non -condensing)

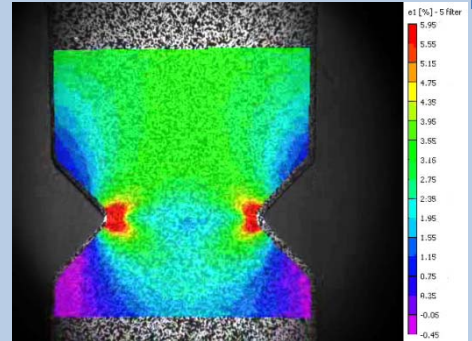
Cooling Internal fan cooling

Power

DC Power 22 to 32 V, 40 VA

AC Power (with supplied adapter) 100 ~ 240V, 50 ~ 60Hz

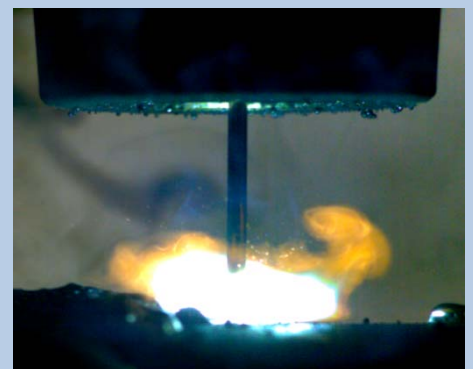
Applications include:



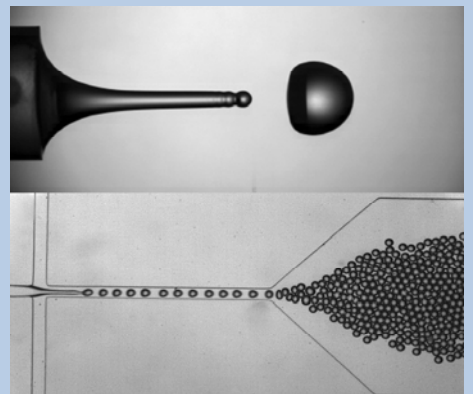
Material Testing & DIC



Biomechanics



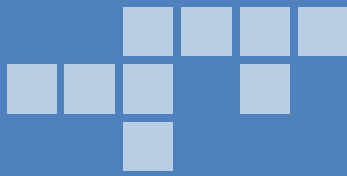
Welding & Plasma Research



Fluid Dynamics & Microfluidics



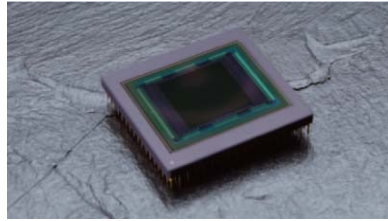
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High-Speed Imaging Solutions



FASTCAM Mini UX

COMPACT HIGH-SPEED CAMERA SYSTEM

Credibility and reputation through technological achievement:



Developments in advanced imaging technologies pioneered by Photron over the past 20 years are now being utilized in high-speed camera systems designed for a range of scientific and industrial development applications. Photron has invested in the development of unique

advanced CMOS image sensors, the core technology of high speed photography. Innovations in this area have led to a rapid increase in camera performance, allowing high-speed imaging to be applied to important new subject areas.

The highest quality design, manufacturing and support:

As an ISO9001:2008 certified manufacturer, Photron manufactures its full range of imaging systems at its own facility located in Yonezawa City Yamagata Prefecture, Japan.

International technical support centres located in the USA, Europe and China, staffed by factory trained engineers and holding a full range of support equipment, ensure fast and professional local support for Photron camera users around the world.



FASTCAM, the leading name worldwide in high speed imaging:



Used internationally in renowned research facilities in more than 30 countries worldwide, Photron FASTCAM high speed cameras are trusted to provide high quality results in the most challenging applications and environments. Photron continues to utilise the latest technological innovations to

further advance product performance in order to meet the most demanding requirements from users around the world.

Specialist high-speed imaging applications knowledge:

For more than 30 years, Photron has focussed on the design and application of high-speed imaging products. Photron's specialist applications engineers have a wealth of knowledge and experience in demanding imaging requirements and are able to advise both new and experienced users on high-speed imaging solutions and imaging techniques to achieve the optimum results.



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