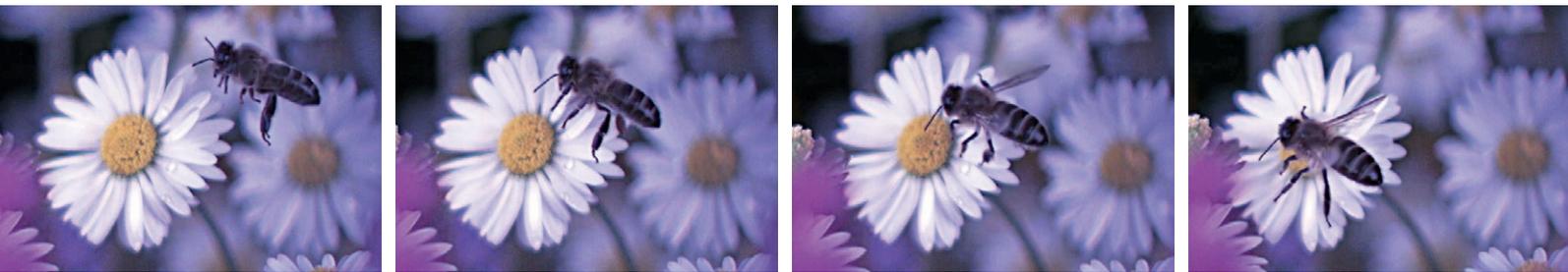# PROMON U750 – High Speed Camera

PROMON U750 – high speed power via USB3

PROMON U750 is a high speed camera that connects directly to your PC via a single USB3 cable. The comprehensive software controls image acquisition, instant playback, post recording analysis and file conversion. The high resolution sensor with 1.3 megapixel provides frame rates from 200 fps at full resolution up to 3225 fps by reducing the resolution.

PROMON U750 is a high speed camera system combination of unique software with state of the art camera hardware. The small USB3 camera delivers high resolution images directly to your PC. PROMON U750 is ideal for educational purposes and for true mobile applications. This extremely economical high speed camera is the perfect companion when traveling and mobility is of essence. Nevertheless PROMON U750 with its powerful camera control software leaves no compromise open in view of functionality and offers all advantages of a high speed camera such as circular buffer recording, triggering by external discrete signals or by motion detection. In addition, for longer recording time, you may stream directly to hard disk for minutes or hours making sure to capture the most intermittent events of your measurements. Easy export of data to the most common movie formats is just another one of the many features of the software.

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Unique features

- **Direct to PC** – While observing the scene in the live image PROMON U750 streams image data directly to your PC RAM or hard disk. The comprehensive software allows making the most demanding recordings and also supports 24/7h recordings.

- **Setup that works** – Camera and software come from the same supplier, install software, connect camera and you are ready to record.

- **Long recording times** – Recording times of minutes or even hours allow to record, analyze and archive a complete process in all detail, important to detect trends and to catch those sporadic and intermitted occurring incidents.

- **Image trigger** – Extends the versatility of your PROMON by letting the camera trigger the system when an incident is visually detected.

Typical recording times vs resolution/frame speeds

Resolution ▶	Resolution @ fps	Resolution @ fps	Resolution @ fps	Resolution @ fps	Resolution @ fps	Resolution @ fps
	1280 x1024 @ 203	1280 x 720 @ 284	1024 x1024 @ 249	800 x 600 @ 511	640 x 480 @ 751	320 x 240 @ 2070
Memory ▼	Recording time	Recording time	Recording time	Recording time	Recording time	Recording time
2 GB RAM	8 secs	8 secs	8 secs	8.5 secs	9 secs	13 secs
500 GB SSD	34 mins	34 mins	34 mins	36 mins	39 mins	56 mins

Table shows typical recording time and fps with good PC performance. Recording time in memory depending on available free memory in PC

Typical frame rates vs resolution

	1024	800	720	640	600	512	480	320
1280	**203**	257	284	318	338	392	417	604
800	311	392	432	482	**511**	591	626	892
640	378	475	523	582	617	710	**751**	1060
480	481	602	662	734	777	895	939	1305
320	663	823	900	994	1049	1193	1254	**1700**

Table shows typical resolution vs. fps, Resolution is freely adjustable within limitations of camera/sensor

Camera/Sensor specifications

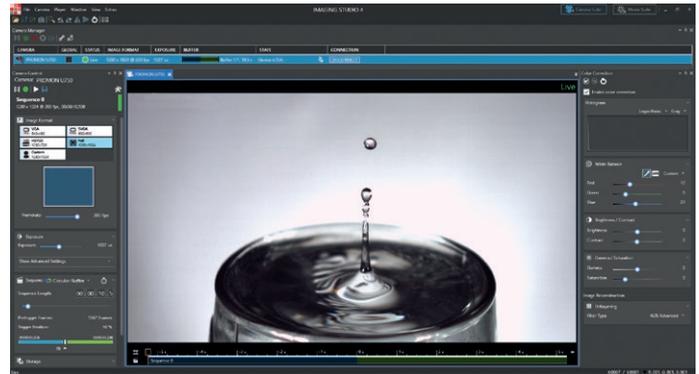|	
Camera Model	USB 3 camera with CMOS sensor
Light Sensitivity	Color: ISO 2400 Mono: ISO 3600
Image Sensor	1280 x 1024 pixel with 8 Bit dynamic range
Sensor Size	4.8 µm pixel size / 1/2" (6,14 mm x 4,92 mm)
Optical Fill Factor	56 %
Shutter Type	Global, independent of frame rate
Exposure Time	Free adjustable from 59 µsec to 1 / fps by software
I/O Interface	Hi-Rose HR10A-7P-6S Trigger Set: AOS Art. Nr. 2200204 (Opto-isolated, 30 V tolerance)
Camera Mount	C-Mount
Temperature	Operating: 0 … +50 °C / +32 … +122 °F Storage: -40 … +70 °C / -40 … +158 °F
Mounting Threads	2 x M4 mounting threads on bottom UNC ¼" on bottom for tripod mounting

PC requirements

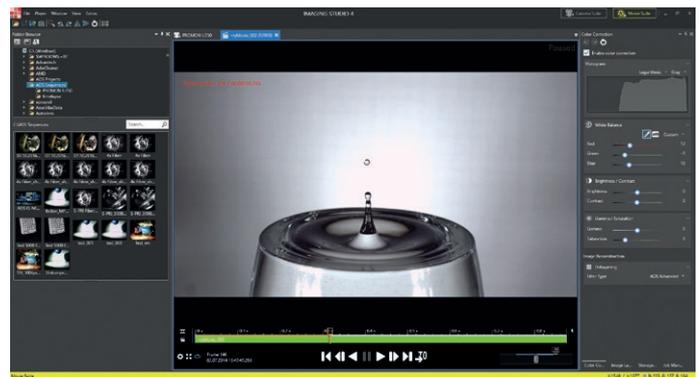|	
Operation System	Win 7/10 64 bit
CPU	Pentium Core i5 or better
RAM	4 GB or higher (only part of it usable for recording)
Hard Disk	**Separate SSD for image data recording is strongly recommended in order to avoid damage to operation system partition**
Interface	USB3: Full open USB3 interface dedicated for camera Recommended chipset: Intel USB 3.0 eXtensible host controller

Ordering information

510011-00-0000	• PROMON U750 camera color • 3 m USB cable, lockable on camera side • Software, manual and documentation > download from aos cloud
510013-00-0000	• PROMON U750 camera monochrome • 3 m USB cable, lockable on camera side • Software, manual and documentation > download from aos cloud
2200204	• AOS USB Trigger Set
Optional Accessories	• LED lights • Mounts and tripods • Lenses

Software

PROMON U750 cameras are delivered with comprehensive Imaging Studio v4-software. This modern and intuitive operating software can be installed on any number of computers, in order to edit recorded sequences without a camera, convert these into other formats, or perform further analysis. If connected to a camera, all device and recording parameters can be easy and clearly set. This is software that is unmatched.

Complete graphical parametrization of the camera setting with Imaging Studio v4 CameraSuite

Comprehensive editing- and export function of the recorded sequence with Imaging Studio v4 MovieSuite

Parameters	Camera control, recording settings, playback and file conversion
Auto-store Function	Auto-store function in PC for 24/7 recording supported
Trigger Modes, Positions	Pre-post recording, adjustable by software to 0 % / 10 % / 25 % / 50 % / 75 % / 90 % / 100 % of total available recording time Re-arm after trigger for instantaneously new recording
File Formats	Recording in AOS native format for performance reasons, conversion to avi, mpeg, mpeg4 single image formats such as BMP, JPEG, TIFF, Gif etc.
Snap Shot	Single snapshot of live images supported
Motion Detection	Motion trigger and motion event marking in file
Event Markers / Bookmarks	Events in the sequence can be tagged by bookmarks for easy orientation / finding
OSD	Information on camera, recording features, time stamp, camera name may be added in image data, Position of OSD is set by user
Custom Specific	Extended functions for custom specific use are easy to integrate Contact us for further details

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