



## PROMON U1000 – high speed power via USB3

**PROMON U1000 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 2.3 megapixel provides frame rates from 150 fps at full resolution up to 3145 fps by reducing the resolution.**

PROMON U1000 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 U1000 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 U1000 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 U1000 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.

# PROMON U1000 – Key Specifications

## Typical recording times vs resolution/frame speeds

Resolution ▶	Resolution @ fps	Resolution @ fps	Resolution @ fps	Resolution @ fps	Resolution @ fps	Resolution @ fps
	1900x1200@151	1280x720@350	1024x1024@305	800x600@604	640x480@817	320x240@1393
Memory ▼	Recording time	Recording time	Recording time	Recording time	Recording time	Recording time
2 GB RAM	6.2 secs	6.7 secs	6.7 secs	7.4 secs	8.6 secs	20.1 secs
500 GB SSD	26 mins	27 mins	27 mins	30 mins	35.7 mins	83.6 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

	1264	1200	1080	1024	800	720	640	480
1984	139	146	162	170	216	239	267	349
1920	143	151	167	175	222	246	275	359
1280	206	151	217	252	318	350	390	507
1024	250	263	290	305	383	422	469	606
640	348	365	402	422	527	578	641	817

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

## Camera/Sensor specifications

<b>Camera Model</b>	USB 3 camera with CMOS sensor
<b>Light Sensitivity</b>	Color: ISO 2400 Mono: ISO 3600
<b>Image Sensor</b>	1984 x 1264 pixel with 8 Bit dynamic range
<b>Sensor Size</b>	4.8 µm pixel size / 2/3" (9.2 mm x 5.8 mm)
<b>Optical Fill Factor</b>	56 %
<b>Shutter Type</b>	Global, independent of frame rate
<b>Exposure Time</b>	Free adjustable from 105 µsec to 1 / fps by software
<b>I/O Interface</b>	Hi-Rose HR10A-7P-6S Trigger Set: AOS Art. Nr. 2200204 (Opto-isolated, 30V tolerance)
<b>Camera Mount</b>	C-Mount
<b>Temperature</b>	Operating: 0 ... +50 °C / +32 ... +122 °F Storage: -40 ... +70 °C / -40 ... +158 °F
<b>Size</b>	30 x 30 x 30 mm / 80 gr 1.18" x 1.18" x 1.18" 0.18lb
<b>Mounting Threads</b>	4 x M2 mounting threads on bottom UNC ¼" on bottom for tripod mounting

## PC requirements

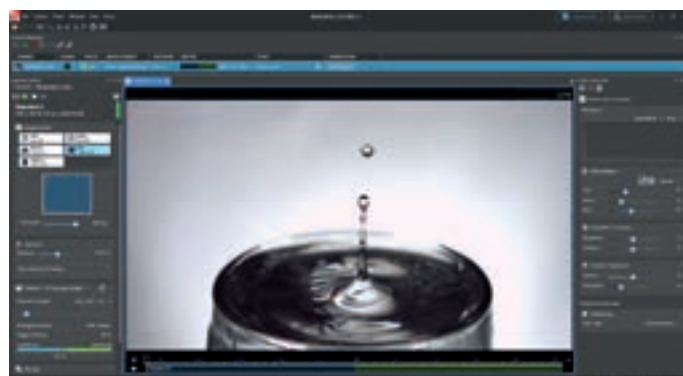
<b>Operation System</b>	Win 7/10 64 bit
<b>CPU</b>	Pentium Core i5 or better
<b>RAM</b>	4 GB or higher (only part of it usable for recording)
<b>Hard Disk</b>	<b>Separate SSD for image data recording is strongly recommended in order to avoid damage to operation system partition</b>
<b>Interface</b>	USB3: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

## Ordering information

<b>510111-00-000</b>	<ul style="list-style-type: none"> <li>PROMON U1000 camera color</li> <li>3 m USB cable, lockable on camera side</li> <li>Triggeradapter with BNC connector</li> <li>Software, manual and documentation &gt; download from aos cloud</li> </ul>
<b>510113-00-0000</b>	<ul style="list-style-type: none"> <li>PROMON U1000 camera monochrome</li> <li>3 m USB cable, lockable on camera side</li> <li>Triggeradapter with BNC connector</li> <li>Software, manual and documentation &gt; download from aos cloud</li> </ul>
<b>Optional Accessories</b>	<ul style="list-style-type: none"> <li>LED lights</li> <li>Mounts and tripods</li> <li>Lenses</li> </ul>

## Software

PROMON U1000 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

<b>Parameters</b>	Camera control, recording settings, playback and file conversion
<b>Auto-store Function</b>	Auto-store function in PC for 24/7 recording supported
<b>Trigger Modes, Positions</b>	Pre-post recording, adjustable by software from 0% to 100% in increments of 1% of total available recording time Re-arm after trigger for instantaneously new recording
<b>File Formats</b>	Recording in AOS native format for performance reasons, conversion to avi, mpeg, mpeg4 single image formats such as BMP, JPEG, TIFF, Gif etc.
<b>Snap Shot</b>	Single snapshot of live images supported
<b>Motion Detection</b>	Motion trigger and motion event marking in file
<b>Auto Exposure</b>	Auto exposure, free adjustable ROI
<b>Event Markers / Bookmarks</b>	Events in the sequence can be tagged by bookmarks for easy orientation / finding
<b>OSD</b>	Information on camera, recording features, time stamp, camera name may be added in image data, Position of OSD is set by user
<b>Custom Specific</b>	Extended functions for custom specific use are easy to integrate Contact us for further details

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