

PROMON U1000

High Speed High Resolution Streaming Camera

Easy - portable - economical



High Speed Power via USB3

Simply connect to USB3 port and start working.



A Powerful Software Suite

Imaging Studio V4 is all you need for your high speed recordings.



Long Recording Time

Stream to your SSD without any expensive add-on memory.



External Inputs

External input for Trigger and Synchronization of multiple cameras

PROMON U1000 - high-speed high-resolution camera power via USB3

- **Direct to PC – PROMON U1000 streams image data directly to your PC RAM or hard disk. The comprehensive software allows making the most demanding recordings and supports 24/7h recordings.**
- **Setup that works – Camera and software come from the same supplier, install software, connect camera & you are ready to record**
- **Image trigger - Extends the versatility of your PROMON U1000 by detecting events that are recognized by the camera through changes in the image.**

The PROMON U1000 is a high-speed camera system that combines unique, powerful software with state-of-the-art camera hardware. This compact USB3 camera delivers high-resolution images directly to your PC, making it ideal for industrial trouble shooting, educational purposes and true mobile applications. This highly economical high-speed camera is the perfect companion when traveling, where mobility is essential. Despite its compact size, the PROMON U1000's powerful camera control software makes no compromises on functionality, offering all the features of a high-speed camera, including circular buffer recording, triggering by external discrete signals, synchronization of multiple cameras, and motion detection. For extended recording times, you can stream directly to your SSD for minutes or even hours, ensuring that you capture the most fleeting events in your measurements. Easy data export to popular video formats is just one of the many convenient features of the software.



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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 @ 150	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 sec	6.7 sec	6.7 sec	7.4 sec	8.6 sec	20 sec
500 GB SSD	26 min	27 min	27 min	30 min	35 min	80 min

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	447	422	527	578	641	817

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

Optical / Sensor specifications

Camera Model	USB3 camera with CMOS sensor
Sensor / Pixel Size	1984 x 1264 pixel with 8 Bit dynamic range
Sensor Format	2/3" (9.2 mm x 5.8mm)
Light Sensitivity	Color: ISO 2400 Mono: ISO 3600
Pixel Size	4.8microns
Optical Fill factor	56%
Shutter Type	Global, independent of frame rate
Exposure time	Free adjustable from 59 µsec to 1 / framing rate by software
Lens Mount	C-Mount or optional EF / F-Mount

Software and camera operation

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, 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.

Live Video	Live video out via USB3 link
Buffer Type	Circular buffer in PC DRAM or streaming to internal SSD, parametrized by software
Number of Buffers	Up to 100 buffers, individually configurable by software
Trigger Modes	Pre-post recording, adjustable in steps of 1 frame, rising falling edge, delayed trigger, trigger debouncing, shock trigger (high g trigger)
Event Bookmarks	Events in the sequence can be tagged by bookmarks for easy orientation / finding
Snap Shot	Make a SnapShot of the image displayed for documentation purposes
Auto Exposure	Auto exposure for automatic brightness control
Auto Store Function	Auto-store function in PC for 24/7 recording supported
File Formats	Recording in AOS native format for performance reasons, conversion to avi, mpeg, mp4 single image formats such as BMP, JPEG, TIFF and PNG.
OSD	Information on camera, recording features, time stamp, camera name may be added in image data, Position of OSD is set by user
Point & Click Measurement	AOS Imaging Studio v4 includes a easy point & click measurement for on-the-spot analysis of sequences
Control SW	AOS Imaging Studio v4 for parametrization, recording, editing and exporting/convertng of recordings included
Languages	English, French, German, Spanish, Portuguese, Korean, Chinese, Czech

Data interface

USB3 I/O	Lockable Micro B-Plug Hi-Rose HR10A-7P-6S. Trigger Set: AOS Art. Nr. 2200204
I/O Tolerance	TTL compatible I/O, up to 24V tolerant
Sync In/Out	Sync in/out on camera Needs AOS# 2200206 Pigtail Cable PROMON U-Series Synch I/O
Power	Via USB3 connection

PC requirements

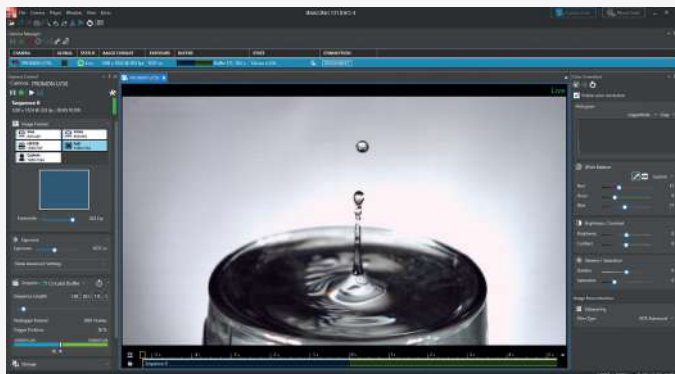
Operation system	WIN 10 / 11 64Bit recommended
CPU	Pentium Core i5 or better
RAM	8GB or better
SSD	for best performance: Separate SSD for image data streaming strongly recommended
USB3 Interface	Full performance USB3 interface, no USB-hub

Physical specifications

Size & Weight	30 x 30 x 30 mm / 80 gr 1.18" x 1.18" x 1.18" 0.18lb
Temperature	Operating: 0 ... +50 °C / +32 ... +122 °F Storage: -40 ... +70 °C / -40 ... +158 °F
CE	In compliance with relevant standards
Mounting	3x M3 mounting threads on bottom, UNC ¼" for tripod mount via adapter plate

Ordering Information

Model	
PROMON U1000 color	AOS# 510111-00-0000
PROMON U1000 monochrome	AOS# 510113-00-0000
Trigger Set (spare)	AOS# 2200204
	Shipment includes:
	♦ Camera ♦ 3 m USB cable, lockable on camera side ♦ Trigger adapter with BNC connector ♦ Software, manual and documentation > download from AOS cloud



Parametrization of camera settings with Imaging Studio v4 CameraSuite

Your local AOS partner:



Specifications are subject to change without prior notice – v12.2024