



PROMON 502 – a high speed camera for direct into your PC recording.

PROMON 502 is a high speed camera that connects directly to your PC via Gigabit Ethernet link. The camera offers stunning data rates, one example: 1280 x 720 pixels up to 250 fps. Configurable resolution and frame rates the camera can record with maximum resolution of 2048 x 1088 pixels (covering also HD-TV Format) @ up to 170 fps.

PROMON 502 cameras are available in monochrome, color or as NIR (near infrared) version. Due to a sophisticated image algorithm in the camera image frame rates are achieved not seen before over a standard Gigabit Ethernet link. This extremely economical high speed camera is the ideal companion when traveling and for mobile application. Nevertheless PROMON 502 with its camera control software leaves no compromise open in view of functionality compared with competitive high speed cameras. Circular buffer recording, triggering by external discrete signals or by motion detection are available in the standard system. 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 image data to the most common movie formats is just another one of the many features of the software.

AOS Technologies AG
Taefernstrasse 20
CH-5405 Baden-Daettwil

Tel. +41 (0)56 483 34 88
Fax +41 (0)56 483 34 89
info@aostechnologies.com
www.aostechnologies.com

Unique features

- **Direct to PC** – PROMON 502 records and streams image data directly to your PC RAM or hard disk. Data is instantaneously ready for future analysis or export in to standard movie formats. The comprehensive software allows making the most demanding recordings and can also support 24/7 h recordings.
- **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 intermittent occurring incidents.
- **Harsh environments** – PROMON 502 cameras are available for use under harsh environments and can also run with IRIG-B time stamping.
- **Image trigger / Event Marker** – Extends the versatility of your PROMON 502 system by having the camera trigger or insert an event marker in the image sequence when an incident is visually detected.

PROMON 502 – Key Specifications

Frame rate vs resolution vs recording time (partial)

Resolution ▶	Resolution @ fps	Resolution @ fps	Resolution @ fps	Resolution @ fps	Resolution @ fps	Resolution @ fps
	2048 x 1088 (1920 x 1080) @ 170 fps	1920 x 1080 @ 170 fps	1280 x 1024 @ 180 fps	1280 x 720 @ 250 fps	800 x 600 @ 600 fps	640 x 480 @ 750 fps
Memory ▼	Recording time	Recording time	Recording time	Recording time	Recording time	Recording time
4 GB RAM	7 secs	7.5 secs	11 secs	12 secs	9 secs	8 secs
500 GB HDD	1 hr 5 mins	1 hr 9 mins	1 hr 45 mins	1 hr 50 mins	1 hr 25 mins	1 hr 10 mins
1 TB HDD	2 hrs 10 mins	2 hrs 19 mins	3 hrs 30 mins	3 hrs 40 mins	2 hrs 50 mins	2 hrs 20 mins

Table shows typical resolution vs. fps, resolution is freely adjustable within limitations of camera / sensor, recording time and fps depends on PC performance

Camera/Sensor specifications

Camera Model	PROMON 502 color	PROMON 502 monochrome	PROMON 502 near infrared
Light Sensitivity	ISO 2400	ISO 3600	5.56 V/luxsec
Image Sensor	2048 x 1088 pixel with 8 Bit dynamic range, monochrome color or NIR, max 170 fps @ full resolution		
Sensor Size	5.5 µm pixel size / 2/3" (12.76 mm diagonal)		
Dynamic Range	Sensor: 60 db, Output 8 Bit		
Optical Fill Factor	42 %		
Shutter Type	Global, independent of frame rate		
Exposure Time	Free adjustable from 13 µsec to 1 / fps by software		
Power	12 – 24 VDC / 6 Watts		
I/O Tolerance	TTL level, all I/O are 0 to +30 V tolerant		
Camera Mount	C-Mount / CS-Mount		

Data Interface (standard)

Data Interface	Gigabit Ethernet 1000 with RJ45 connector
I/O Interface	Solid 12 pin Hi-Rose connector Cable connector required: Hi-Rose HR10A-10P-12S (female)
Trigger In	TTL level, max +30 V, Switch closing contact (via AOS power trigger adapter included in delivery)

Data Interface All-in-one cable (optional)

All-in-one Interface (optional)	Single connector option 12 pin Lemo connector with power, discrete I/O and Gigabit Ethernet, Cable does have splits output on PC side with RJ45 and Lemo connector Cable connector required: LEMO Type: FGG.2B.312.CLAD82Z ODU: S22LOC-P12MFG0-8200
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PC requirements

Operation System	Win 7/8 32/64
CPU	Pentium Core i5 or better
RAM	4 GB or better
Hard Disk	500 GB or better, SATA-3 standard Separate HD for image data recording is strongly recommended in order to avoid damage to operation system partition
Interface	USB: To mount USB key for operation of camera Gigabit Ethernet Interface: Capable of supporting 9 k Jumbo frames Alternative: PCI express slot for Gigabit Ethernet Interface (supplied with camera)
Streaming to external Disk	Supported via external eSATA
Graphic Card	Supports Full HD format 1920 x 1080
Multiple Camera on PC	Supported up to 4 but depending on PC performance Individual Gigabit Ethernet card and individual hard disk per camera required NOTE: contact us for specific computer settings

Software

Parameters	Camera control, recording settings, playback and data 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
Boost Mode	Record with lower frequency and on demand record with high frequency for a certain period of time and go back to lower frequency
Motion Detection	Motion trigger and motion event marking in file
Multi-Camera	Multiple camera on PC possible (depending on PC specifications)
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

Physical specifications

Size	54 x 54 x 54 mm / 300 gr (0.7 lb)
Operating Temperature	-0 ... +45 °C / +32 ... +113 °F
Storage Temperature	-40 ... +70 °C / -40 ... +158 °F
Mounting Threads	M4 Mounting threads on all sides UNC ¼" on bottom and side for tripod mounting
I/O Connector	Standard: Gigabit Ethernet RJ45 Discrete I/O: Hi Rose, cable connector part # HR10A-10P-12S (female) Optional: single connector solution 12 pin LEMO connector with power, discrete I/O and Gigabit Ethernet LEMO Type: FGG.2B.312.CLAD82Z ODU: S22LOC-P12MFG0-8200
CE	In compliance with relevant standards

Scope of Supply

	Camera with specific connector (RJ45 and Hi-Rose or alternatively Lemo 12 pin)
	Cables for specific camera model including trigger adapter cable
	PC Software on CD
	Power supply 12 V
	PCI express Ethernet Card (desktop) and Ethernet express card (Laptop)
	CS-Mount adapter
	Manual and documentation on CD
	Optional (accessory package available) <ul style="list-style-type: none"> - LED lights - Mounts and Tripods - Lenses - Extended cabling solutions

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