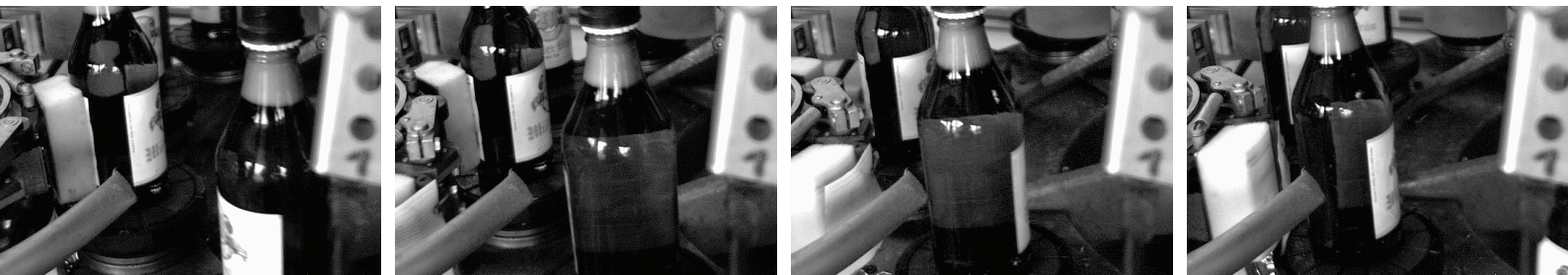
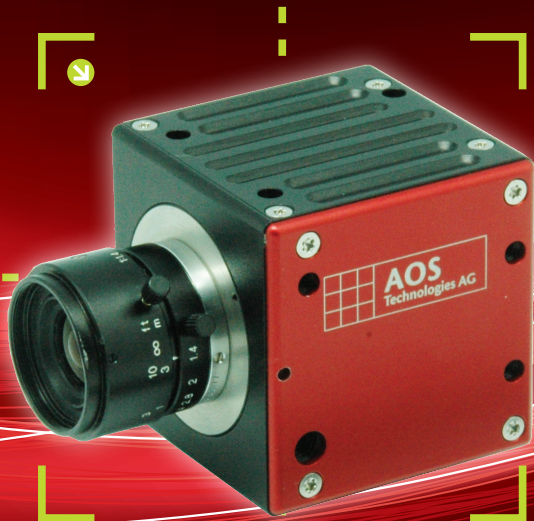


PROMON 501 High Speed Streaming Camera



PROMON 501 – a high speed camera for direct into your PC recording.

PROMON 501 is a high speed camera that connects directly to your PC via Gigabit Ethernet link. The camera offers stunning data rates, one example: 560 frames per second with 640 x 480 pixels. Configurable resolution and frame rates the camera can record image formats such as 1280 x 720 pixels @ up to 125 fps and up to 7400 fps at a reduced resolution. Intuitive yet powerful software helps you to control the data acquisition either to you PC-RAM or directly to your hard disk and is ready for later playback and analysis of the sequences.

PROMON 501 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 501 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.

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Unique features

- **Direct to PC** – PROMON 501 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 501 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 501 system by having the camera trigger or insert an event marker in the image sequence when an incident is visually detected.

PROMON 501 – Key Specifications

Frame rate vs resolution vs recording time (partial)

| Resolution ▶ | Resolution @ fps | Resolution @ fps | Resolution @ fps | Resolution @ fps | Resolution @ fps | Resolution @ fps | Resolution @ fps | Resolution @ fps | Resolution @ fps |
|--------------|-------------------------|-------------------------|-------------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| | 2048 x 1088 @ 85 fps | 1280 x 1024 @ 90 fps | 1280 x 720 @ 125 fps | 800 x 600 @ 300 fps | 640 x 480 @ 560 fps | 512 x 512 @ 700 fps | 352 x 352 @ 1000 fps | 256 x 256 @ 1370 fps | 128 x 128 @ 2620 fps |
| Memory ▼ | Recording time | Recording time | Recording time | Recording time | Recording time | Recording time | Recording time | Recording time | Recording time |
| 4 GB RAM | 7 secs | 11 secs | 12 secs | 9 secs | 8 secs | 7 secs | 11 secs | 15 secs | 32 secs |
| 500 GB HDD | 1 hr 5 mins | 1 hr 45 mins | 1 hr 50 mins | 1 hr 25 mins | 1 hr 10 mins | 1 hr 5 mins | 1 hr 40 mins | 2 hrs 20 mins | 4 hrs 50 mins |
| 1 TB HDD | 2 hrs 10 mins | 3 hrs 30 mins | 3 hrs 40 mins | 2 hrs 50 mins | 2 hrs 20 mins | 2 hrs 10 mins | 3 hrs 20 mins | 4 hrs 40 mins | 9 hrs 40 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

| | | | |
|----------------------------|---|-----------------------|--------------------------|
| Image Sensor | PROMON 501 color | PROMON 501 monochrome | PROMON 501 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 85 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 |
|--|---|

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 | 50 x 50 x 52 mm / 160 gr (0.4 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 |
| | Software on CD with USB key |
| | Power supply 12 V |
| | PCI express Ethernet Card (desktop) and Ethernet express card (Laptop) |
| | CS-Mount adapter |
| | Optional (accessory package available) - LED lights - Mounts and Tripods - Lenses - Extended cabling solutions |

Your local AOS partner:

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