



CAMRAPID500 - XM

Specifications, ver. 1.4

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FAST DIGITAL VIDEO CAMERA WITH EXTENDABLE MEMORY



CamRapid500-XM is a fast video camera. It comes in 2 versions: a standard version with up to 16 GB memory and a split version with **unlimited memory** which can record several minutes of fast video. The CMOS sensor has 1280 x 1024 x 10 bits resolution. A standard USB2 link is used for control, image display and transfer of recorded images. A B&W NTSC/PAL live video output is also available.

Camrapid500-XM features :

- The acquisition rate goes from 518 images/s at 1280x1024 resolution to 250 000 images/s at 1200x2 resolution. It can go down to 1 Hz.
- Image exposition by full frame shutter can go down to 2 μ s.
- Sensor's reference voltages controlled by software to adjust gain, noise, offset
- Real time image analysis can trigger acquisitions. An internal calculator detects movements and sparks in real time to start or stop recording.
- Asynchronous external control of exposition, which can be used for PIV applications (Particle Image Velocimetry): Image couples can have exposition delays down to 5 μ s. Details in **Application note 3**.
- The camera comes in 2 versions:
 - Compact camera with up to 16 GB memory
 - Split camera with a sensor head and a memory box. They can be up to 3 meters apart. A standard SCSI3 cable is used to transfer the images and control signals.
The split version can be custom designed with **unlimited memory**, the limiting factors being the volume, weight, power consumption and price. A standard version with up to 64 GB memory is already available.
The split version also allows to have one B&W head and one colour head which can be used as necessary.
- A monochrome live video output is available.
- A video sync. input may be used to synchronize images to multiples of 60 / 50 Hz.
- A configurable input signal may be used to time-stamp the images.
- An optional battery can save the images in case of power failure.
- Optional analog inputs enable the acquisition of 4 analog signals at a rate of 45 KHz, with 12 bits resolution to record additional parameters.

The software controls the acquisition, display, image archival and compression. Application modules can be added to process sequences as required by our customers. The control PC can send and receive messages on ethernet for control and monitoring purposes.