



## M-VIT 4000 High Speed Camera

**Very light sensitive high speed camera HD ready up to 4000 fps**

The M-VIT is an ultra-compact high speed camera particularly suited for situations such as on board vehicular crash test applications. The rugged, sealed camera withstands High-G loads and vibrations. With 1 megapixel at 4000 fps, this highly light sensitive sensor provides crisp clear images even in dim light conditions. The camera is optionally equipped with a built-in rechargeable battery.

### Unique features and benefits

- **Fast** – with 1280 x 800 pixel of up to 4000 fps the M-VIT 4000 provides highly detailed recordings.
- **Very light sensitive** – using a sensor with cutting edge pixel technology the M-VIT 4000 offers superb light sensitivity.
- **Onboard ready** – the M-VIT 4000 takes shocks of up to 150 g / 11 msec all axis.

# M-VIT 4000 – Key Specifications

## Frame rates vs resolution

1280	864	3700 fps
1280	800	4000 fps
1280	720	4450 fps
1280	630	5000 fps
1280	512	6200 fps

Resolution and fps may be set individually in the given speed ranges. Gain in fps by reducing the vertical resolution. Max fps is 227'000 @ 1280 x 4

## Recording time in sec vs memory size

Memory Size (GB)	M-VIT @ 1280 x 800 @ 4000 fp (in seconds)
4 (standard)	1.0
8	2.0
16	4.0

Extended recording time by reducing resolution and/or framing speed.

## Camera and optical specifications

<b>Sensor Type</b>	CMOS Sensor
<b>Pixel Size</b>	14 micron
<b>Sensor Format</b>	1"
<b>Light Sensitivity</b>	ISO 10'000 (mono) ISO 6000 (color) (without gain)
<b>Exposure Time</b>	Global, from 1 / framing speed down to 2 µsec
<b>Dynamic Range</b>	10 Bit / 30 Bit color
<b>Gain</b>	3 gain settings available, controlled by software
<b>Lens Mount</b>	C-Mount

## Software and camera operation

<b>Live Video</b>	Live Video out via Ethernet or when installed HDMI, WiFi
<b>Buffer Type</b>	Circular buffer, parametrized by software
<b>Number of Buffers</b>	Up to 100 buffers, individually configurable by software
<b>Trigger Modes</b>	Pre-post recording, adjustable in steps of 1 frame, rising falling edge, delayed trigger, trigger debouncing
<b>Auto Exposure</b>	Auto exposure for automatic brightness control
<b>Auto Download</b>	Auto download to PC or CFast card (CFast card optional)
<b>Export Formats</b>	Export in all popular movie and single image formats supported
<b>Control SW</b>	AOS Imaging Studio v4 for parametrization, recording, editing and exporting/converting of recordings included

## Data interface

<b>Data</b>	Gigabit Ethernet RJ45 lockable
<b>I/O</b>	Solid 14 pin LEMO connector, compatible with all AOS camera series
<b>I/O Tolerance</b>	TTL compatible I/O, up to 24 V tolerant
<b>Trigger In</b>	Input for start stop recording, falling edge, switch closure
<b>Armed Out</b>	Armed out to indicate camera status ready for recording
<b>Triggered Out</b>	Indicates that trigger is received and camera finishes recording
<b>Remote On</b>	For remote switch on of camera
<b>Sync In/Out</b>	Sync in/out on camera
<b>Strobe</b>	Strobe out for synchronization of LED illumination
<b>IRIG-B</b>	IRIG-B 122b synchronization
<b>Power Requirements</b>	10...36 V / 28 Watts



M-VIT 4000 mounted in ChillBox. No additional cabling etc. is required. Simply put camera in ChillBox, connect the power supply via I/O connector and connect Ethernet to camera.

## Options and add-on

<b>Camera Memory</b>	Optional 4-8-16 GB
<b>Battery</b>	Rechargeable battery for up to 30 mins operation and/or memory backup
<b>Video Out</b>	HDMI Video out on camera
<b>Nonvolatile Memory</b>	Removable CFast interface with auto download functionality
<b>WiFi</b>	Live view and camera set-up via wireless network
<b>ChillBox</b>	For longer offboard use without passive cooling via metal surface use the camera mounted in the ChillBox
<b>C-F Mount Adapter</b>	For F-Mount lenses, with dial for F-stop
<b>Single Connector Interface</b>	Single push-pull interface according German "Arbeitskreis" optional

## Physical specifications

<b>Size &amp; Weight</b>	width: 75 mm / height: 75 mm / length: 75 mm / 910 gr width: 2.95" / height: 2.95" / length: 2.95" / 1.4 lb
<b>Operating Temperature</b>	-10 ... +45 °C / +14 ... +113 °F
<b>Storage Temperature</b>	-40 ... +70 °C / -40 ... +158 °F
<b>Shock Resistance</b>	150 G / 11 msec all axis, spikes up to 200 G according EN 60068-2-27:2009
<b>I/O Connector</b>	LEMO type ref. FGG.2B.314.CLAD72Z (cable type)
<b>CE</b>	In compliance with relevant standards
<b>Mounting</b>	¼" UNC thread, bottom / M6 mounting threads on 4 sides

## System configuration and optional extensions

Model/Extension	M-VIT 4000	M-VIT 4000 with battery	M-VIT 4000 with CFast/HDMI output
<b>Battery Time</b>	No backup battery	30 min	20 min
<b>Size</b>	75 x 75 x 75 mm	75 x 75 x 107 mm	75 x 75 x 124 mm

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