AOS Technologies AG

L-VIT 1000 – High Speed Camera

L-VIT 1000 – the rugged, ultra-compact high speed camera

Hi-G-rated for 150+ G, Full HD @ 1000 fps, ready to be used in the most severe environments. A robust high resolution camera for demanding applications in research and development.

The L-VIT 1000 is particularly suited for all applications where a compact, portable, high resolution and robust camera is essential. The highly light-sensitive sensor covers the most ambitious application. The L-VIT 1000 is designed and certified to withstand G-forces in excess of 150 G /11 msec (all axes) and spikes of up to 200 G. Offering a wide range of signals for external control or feedback on camera status during tests, the L-VIT 1000 is a genuine all-in-one camera. To round it all up, the comprehensive Imaging Studio software allows easy piloting from PC, laptop or tablet PC.

Unique features and benefits

- **Superior image quality** – with 1920 x 1080 Full HD resolution at up to 1000 fps L-VIT 1000 delivers crisp clear images.

- **Ultra compact and all in one** – L-VIT 1000 is an ultra-compact camera ready to shoot in rugged environments.

- **Sensitivity** – High light sensitive sensor.

- **Extensions** – Extensions such as CFast card or HDMI output on camera are available.

Typical frame rates vs resolution

1920	1080	1000 fps
1920	720	1500 fps
1920	540	2000 fps
1920	256	4000 fps

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

Recording time

Memory Size	2 GB	4 GB	8 GB	16 GB
1920 x1080 @1000 fps	0.9 sec	1.8 sec	3.6 sec	7.2 sec

Optical/Sensor specifications

Image Sensor	CMOS Sensor
Pixel Size	10 micron
Light Sensitivity	ISO 8000 (monochrome), ISO 3600 (color)
Dynamic Range	Adjustable 8/10 Bit
Shutter Type	Global, independent of frame rate
Exposure Time	Free adjustable from 2 μsec to 1 / framing rate by software
Lens Mount	C-Mount or optional F-Mount

Camera and control features

Image Memory	2 GB standard up to 16 GB optional
Nonvolatile Memory	Optional CFast card interface. Camera can save image data on flash disk w/o PC attached
Power	10–36 VDC / 25–30 Watts depending on options and extensions
I/O Tolerance	TTL level, all I/O are 0–24 V tolerant
LED Control	LEDs on back and front indicates camera status
Reset	Reset function to reset camera status w/o affecting image memory
Power On/Off	Switch on/off, Remote Switch on
Battery	Refer to system configuration and optional extensions
Trigger Delay	Programmable up to 65 sec
Trigger Windowing/ De-bouncing	User programmable trigger window to eliminate false triggering by external devices
Trigger Modes, Positions	Pre-post recording, freely adjustable in steps of 1 frame of total camera memory
Timing	High precision time base, temperature compensated
Multi-Buffer	Split buffer for up to 100 individual buffers
Auto-Download	Auto download to PC for 24/7 recording or automatic download to optional CFast card
Pre-Program of Camera	L-VIT 1000 may be pre-programmed with a specific set of commands. Ideal when camera can no longer be accessed before test and switch on is possible only by remote switch on
OSD	Information on camera, recording features, time stamp, and event marker may be added in image data. Position of OSD is set by user

Imaging studio features

Imaging Studio	Software suite to parameterize and control camera, handle data download and conversion of native files into most common single images and movie formats. Runs on Win 7/10, 32/64 Bit
Parameterization	Set all camera parameters for recording by convenient and easy-to-use software interface supports graphical setting of resolution
Display	Display multiple cameras simultaneously
Editing	Play back, edit and save sequences after recording with few clicks
OSD (on screen display)	OSD with camera parameters
Overlay	Overlay of recorded image with user adjustable opacity
Point & Click	Easy point and click measurement and manual tracking features
Export	Export of AOS native file format to avi, mpeg, mpeg4, bmp, tif, png, jpg
Image Processing	Manual or automatic color correction and white balance functionality
Batch Converter	Convert native files to movie files using off-line batch conversion

Data interface

Data Interface	Gigabit Ethernet (10/100/1000) with lockable RJ45 connector Option: 18 pin LEMO connector with all signals
I/O Interface	Solid 14 pin LEMO connector Option: 18 pin LEMO connector with all signals
Synchronization	Sync in / Sync out for phase-locked master-slave operation with other cameras or synchronization to external frequency
Armed Out	Armed out indicates camera is in recording mode and ready to receive trigger
Trigger In	Trigger input, rising, falling edge, TTL, switch closing/opening
Triggered Out	Indicates camera is triggered
Set_To_Rec	Used to set the camera from idle mode into recording
Remote Switch On	Switch on camera by simple 2 wire connection over a distance of up to 100 m (300 feet)
Event Marker	Event marker to record/mark events during image data acquisition
Strobe	Strobe out to synchronize external equipment to camera. Pulse width represents shutter time
IRIG-B	IRIG-B 122 input

Physical specifications

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

System configuration and optional extensions

Model/Extension	L-VIT 1000	L-VIT 1000 with 30 min battery	L-VIT 1000 with 30 min battery and CFast / HDMI output
Battery time	No backup battery	30 min	30 min
Size	75 x 75 x 75 mm	75 x 75 x 107 mm	75 x 75 x 124 mm

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