Q-MIZE HD v2 – the rugged, ultra-compact high resolution high speed camera

Hi-G-Rated for 100+ G, ready for automotive on-board testing, certified for use in shock and vibration applications. A robust high resolution camera for demanding applications in research and development.

The Q-MIZE HD v2 is particularly suited for all applications where a compact, portable, high resolution and robust camera is essential. The highly light sensitive sensor and the sophisticated image quality algorithm embedded in the camera suit the most ambitious application. The Q-MIZE HD v2 is designed and certified to withstand G-forces in excess of 100 G / 10 msec / all axes and spikes up to 200 G. Offering a wide range of signals for external control or feedback on camera status during tests the Q-MIZE HD v2 is a genuine all-in-one camera. Fast download of your image sequence is achieved via Gigabit Ethernet. Multiple options are available such as compact flash card in camera and IRIG-B.

Unique features

- **Excellent image quality** – Q-MIZE HD v2cameras incorporate a high-accuracy image algorithm, which is the primary element for superb image quality and proper image format.

- **Ultra compact – all in one** – Q-MIZE HD v2 is an ultra-compact all in one camera ready to fit into tight areas where other cameras simply do not. The built-in battery allows camera operation without external power cables and power supplies and insures safe back up of your valuable recorded image data.

- **High sensitivity** – the Q-MIZE HD v2 is a very light sensitive camera ideal for recording with less light and shorter shutter times to minimize motion blur of fast moving objects.

- **Extensions** – Q-MIZE HD v2 offers a variety of options and extensions. Recording synchronized to IRIG-B time base or download images to built-in flash memory card interface are some examples.

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Q-MIZE HD v2 – Key Specifications

Image Format vs Frame rate

Image Format vs max. fps	1920 x 1080 @ 1000 fps	1024 x 1024 @ 2000 fps	1280 x 720 @ 2500 fps	853 x 480 @ 5000 fps
Recording Times	1.3 GB memory: 0.9 sec	2.6 GB memory: 1.8 sec	5.2 GB memory: 3.6 sec	10.4 GB memory: 7.2 sec

fps = max fps @ format, fps adjustable by software in steps of 1 fps.

Optical/Sensor specifications

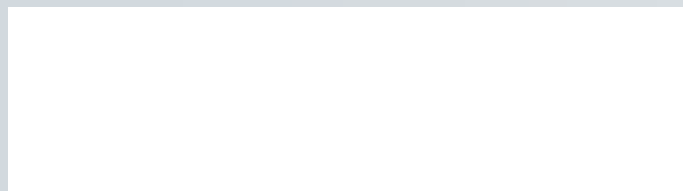|	
Image Sensor	CMOS Sensor
Image Formats	Formats supported: 1920 x 1080 / 1024 x 1024 / 1280 x 720 / 853 x 480
Light Sensitivity	ISO 2200 (monochrome), ISO 1600 (color)
Dynamic Range	Standard 8 Bit
HDR Mode	Built-in High Dynamic Range Mode (HDR) for higher image dynamic up to 12 Bit, user adjustable by slider in control software
Pixel Correction	Built-in pixel correction for highest image accuracy
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	Standard: 1.3 GB, optional 2.6 / 5.2 / 10.4 GB
Nonvolatile Memory	Optional flash card interface for up to 64 GB flash disk in camera. Camera can save image data on flash disk w/o PC attached
Power	9–16 VDC / 12–15 Watts depending on options and extensions Optional: 24–36 VDC input
I/O Tolerance	TTL level, all I/O are 0–24 V tolerant
LED Control	LED 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 180° Version	Re-chargeable NiMH battery inside for up to 15 min autonomous operation of camera
Battery 90° Version	Re-chargeable NiMH battery inside for up to 30 min autonomous operation of camera
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% of total camera memory
Timing	High precision time base, temperature compensated
Multi-Buffer	Split buffer for up to 32 individual sub-buffers
Auto-Download	Auto download to PC for 24/7 recording or automatic download to optional flash card until flash card full
Pre-Program of Camera	Q-MIZE HD v2 may be preprogrammed with a specific set of commands. Ideal when camera can no longer be accessed before test and switch on is possible only be 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.

Data interface

Data Interface	Gigabit Ethernet (10/100/1000) with lockable RJ45 connector Optional: Ethernet on 8 pin LEMO connector
I/O Interface	Solid 14 pin LEMO connector
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

Physical specifications

Size 180° Version	74 x 71 x 80 mm / 700 gr (1.5 lb) (connectors on the back)
Size 90° Version	95 x 71 x 67 mm / 700 gr (1.5 lb) (connectors on the side)
Operating Temperature	-10 … + 45 ℃ / +14 … +113 °F
Storage Temperature	-40 … +70 ℃ / -40 … +158 °F
Shock Resistance	100 G / 10 msec all axis, spikes up to 200 G
I/O Connector (mating connector for cable)	LEMO type: FGG.2B.314.CLAD82Z ODU: S22LOC-P14MFG0-8200
CE	In compliance with relevant standards
Mounting	¼" UNC thread, bottom / M6 mounting threads on 4 sides

Extensions (change of camera size)

Width x height x length

		Q-MIZE HD v2	Q-MIZE HD v2 90°
IRIG-B	IRIG-B 122 input for synchronization and/or time stamp	74 x 71 x 80 mm (size unchanged)	95 x 71 x 67 mm (size unchanged)
Flash Card Interface	Flash card interface with card lock and protection cover for up to 64 GB flash card memory	74 x 71 x 90 mm	107 x 71 x 67 mm
Extended Temperature Range	Extended temperature range treatment and test for -40 ℃ / + 55 ℃ (-40 °F / + 130 °F) operation	Size unchanged	Size unchanged

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 7/8, 32/64 Bit
Parameterization	Set all camera parameters for recording by convenient and easy-to-use software interface
Display	Display up to 4 cameras simultaneously in live mode or compare saved sequences with live view of cameras
Editing	Play back, edit and save sequences after recording with few clicks
OSD (on screen display)	OSD with per-defined information such as camera, resolution fps etc. Free user text input for customer specific comments.
Point & click	Easy point and click measurement and manual tracking features
Export	Export of AOS native files 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

Q-MIZE HD v2 90° with optional flash card interface

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