N-EM High-speed camera Proven technology for the harsh environment





Superior image quality

1920 x 1080 Full HD resolution at up to 1000 fps for crisp clear images.



Non volatile 64GB flash memory

Imminent backup of recording data to flash memory. Never lose image data.



Interfaces

Removable CFast Flash Disk and HD-SDI output on camera.



Environmental

N-EM is tested in accordance with MIL810 and MIL461 standards

N-EM – the ultimate rugged, high resolution airborne camera.

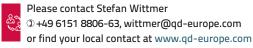
• Small, light sensitive sensor ideal for recording under low light conditions in tight spaces.

The N-EM is particularly well suited for all applications where a compact, portable, high resolution camera may be used under the toughest environmental conditions. The highly light-sensitive sensor provides Full HD 1920 x 1080 pixels, with framing speeds of up to 1000 fps. These features are embedded in a compact and rugged design that suits even the most ambitious application. The N-EM is designed and officially tested in accordance with MIL 810 and MIL 461 standards. Offering a wide range of signals for external control and feedback on camera status during operation, the N-EM is a genuine all-in-one camera.

Fast download of your image sequence is achieved via Gigabit Ethernet or CFast removable cards. The N-EM also supports IRIG-B input for synchronization and time stamping as well as an HD-SDI video output.









N-EM Key Specifications

Typical frame rates vs resolution

1920	1400	840 fps
1920	1080	1000 fps
1920	588	2000 fps
1920	390	3000 fps
1920	290	4000 fps
1920	230	5000 fps

Recording time

Lens Mount

Memory Size	8 GB	16 GB
1920 x1080 @ 1000 fps	4 sec	8 sec

Optical/Sensor specifications

Image Sensor CMOS sensor **Pixel Size** 6.6 microns **Sensor Format** 1" 12.67 x 9.24 mm

Light Sensitivity ISO 10'000 (monochrome), ISO 5000 (color) without gain

Dynamic Range Mono 10 Bit / Color 30 Bit **Shutter Type** Global, independent of frame rate

Exposure Time Free adjustable from 2 µsec to 1 / framing rate by software

C-Mount or optional EF / F-Mount

Software and camera operation

Live Video Live video out and playback via Ethernet and HD-SDI **Buffer Type** Circular buffer, customizable size **Number of Buffers** Up to 100 buffers, individually configurable by software **Trigger Modes** Pre-post recording, adjustable in steps of 1 frame, rising-falling edge, delayed trigger, trigger debouncing, shock trigger (high-G trigger)

Battery Rechargeable battery for up to 10 mins operation and/or memory backup

Auto Exposure Auto exposure for automatic brightness control

Auto Download Auto download to PC or CFast card

Export in all popular movie and single image formats supported **Export Formats** AOS Imaging Studio v4 for parametrization, recording, editing and **Control software**

exporting/converting of recordings included

Data interface

Data Gigabit Ethernet RJ45 lockable 1/0 Solid 14 pin LEMO connector, compatible with all AOS camera series HD-SDI High Definition Serial Digital Interface in accordance with SMPTE 292M

I/O Tolerance TTL compatible I/O, up to 24V tolerant

Trigger In Input for start stop recording, falling edge, switch closure **Armed Out** Armed out to indicate camera status ready for recording **Triggered Out** Indicates that trigger is received and camera finishes recording

Remote On For remote switch on of camera

Sync In/Out Syncin/out on camera

Strobe Strobe out for synchronization of LED illumination

IRIG-B 122 Input for frame synchronisation and time stamping

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Power Requirements 10...36V/30 Watts

Please check technical camera manual for detailed information

Options and add-on

Camera Memory	8 GB or 16 GB	
Non-volatile Memory	Removable CFast interface with auto download functionality	
C-F-Mount Adapter	-Mount Adapter For F-Mount lenses, with dial for F-stop	
C-EF-Mount Adapter	For EF-Mount lenses, remote control of Focus and aperture	

Certifications (pending)

Œ	In compliance with relevant standards
EMC Tests	In compliance with MIL-STD-461E
Environmental Tests	In compliance with MIL-STD-810
Ambient Air Condition	Meth. 501.4, Proc. I, Tab. 501.411
Severe Cold	Meth. 502.4, Proc. I, Tab. 502.411
Temp. Shock	Meth. 503.4, Proc. I, Tab. 503.411
Low Altitude	Meth. 500.4, Proc. II
Vibration	Meth. 514.5, Proc. I, Cat. 12, Fig. 514-5C8
Mech. Shock	Meth. 516.5, Proc. I, Tab. 516.5-1
Humidity	Meth. 507.4, Fig. 507.4-1 modied (2 cycles)

Physical specifications

Size & Weight	width: 2.95" / height: 2.95" / length: 4.84" / 2.76 lb	
Operating Temperature	-51 + 49 °C / -60 +120 °F	
Storage Temperature	-51 +70 °C / -60 +158 °F	
Shock Resistance	150 g / 10 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	1/4" LINC thread, hottom / M6 mounting threads on 4 sides	

Size & Weight width: 75 mm / height: 75 mm / length: 123 mm / 1.25kg





