

# N-VIT

## High Speed Onboard Camera

Ultra-Compact - Robust -  
a workhorse you can depend on



### Superior image quality

1920 x 1080 with  
1000 fps for crisp clear  
images



### One inch Lenses

Compact 1" lenses for full  
image coverage. Reduce  
weight and size of lens



### Built-in G-Sensor for Triggering

Built in G-Sensor fully  
programmable via software.  
Serves as primary trigger or  
backup trigger.



### Rescue Flash

Immediate storage of  
recorded image data in  
non-volatile memory to  
prevent data loss in case  
of power failure.

## N-VIT - the rugged, ultra-compact high-speed camera

- **Hi-G-rated for up to 200g, Full HD @ 1000 fps, ready to be used in the most severe environments. Setup that works.**
- **Engineered for rigorous environments like car crash tests, this robust camera delivers exceptional image quality. Equipped with a built-in G-sensor, it ensures autonomous or backup triggering of your recordings.**

The N-VIT is ideal for applications requiring a compact, portable, high-resolution and robust camera. Its highly light-sensitive sensor meets the demands of even the most challenging scenarios. The newest-generation sensor is fully covered by 1" lenses, substantially reducing the size and weight of the required optics. Designed and certified to withstand g-forces exceeding 150g/10 ms across all axes and spikes of up to 200g, the N-VIT stands out for its reliability.

A built-in **rescue flash** immediately stores the recording in non-volatile memory, reducing the risk of data loss in the event of a power failure. To complete the package, the comprehensive Imaging Studio software enables effortless operation from a PC, laptop, or tablet, providing exceptional convenience and control.



## AOS Technologies AG

Taefernstrasse 20 | CH-5405 Baden-Daettwil

Tel. +41 (0)56 483 34 88

@AOSHIGHSPEEDCAM

info@aostechnologies.com

www.aostechnologies.com

# N-VIT | Key Specifications

## Typical frame rates vs resolution

|      |      |          |
|------|------|----------|
| 1920 | 1400 | 846 fps  |
| 1920 | 1080 | 1096 fps |
| 1920 | 800  | 1476 fps |
| 1920 | 720  | 1639 fps |
| 1920 | 512  | 2297 fps |
| 1920 | 256  | 4540 fps |
| 1920 | 230  | 5000 fps |

Maximum speed 130'000 fps, within limitations of sensor

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

## Recording time

|                       |       |       |
|-----------------------|-------|-------|
| 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 mm x 9.24 mm)                                     |
| Light Sensitivity | ISO 10'000 monochrome, ISO 6000 (color) without gain        |
| Dynamic Range     | 12 Bit sensor, 10 Bit readout                               |
| Shutter Type      | Global, independent of frame rate                           |
| Exposure time     | Free adjustable from 2 µsec to 1 / framing rate by software |
| LensMount         | C-Mount or optional Canon RF-Mount                          |

### Software and camera operation

The N-VIT comes equipped with Imaging Studio V4, a modern and intuitive operating software designed for maximum versatility. This software can be installed on any number of computers, allowing users to edit recorded sequences without needing the camera, convert recordings into various formats, and perform detailed analyses.

|                           |                                                                                                                                                          |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Live Video                | Live video out via Ethernet, optional via HDMI or HD-SDI                                                                                                 |
| Buffer Type               | Circular buffer, parametrized by software                                                                                                                |
| 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 by G-sensor) |
| G-Sensor                  | Built in g-sensor serves as main or backup trigger, stamps every frame with g-level, parametrized by software                                            |
| Auto Exposure             | Auto exposure for automatic brightness control                                                                                                           |
| Auto Download             | Auto download to PC or CFast card (CFast card optional)                                                                                                  |
| Auto Exposure             | Auto exposure function                                                                                                                                   |
| Auto Store Function       | Auto download function to PC for 24/7 recording                                                                                                          |
| Rescue Flash              | Imminent save of video data after trigger to non-volatile flash memory                                                                                   |
| Export Formats            | Export in all popular movie and single image formats supported                                                                                           |
| Point & Click Measurement | AOS Imaging Studio v4 includes an easy point & click measurement for on-the-spot analysis of sequences                                                   |
| Languages                 | English, French, German, Spanish, Portuguese, Korean, Chinese, Czech                                                                                     |

## Data interface

|                    |                                                                            |
|--------------------|----------------------------------------------------------------------------|
| Data interface     | Gigabit Ethernet RJ45 lockable                                             |
| Discrete I/O       | Solid 14 pin push-pull connector, compatible with all AOS camera series    |
| 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        | Sync in/out on camera                                                      |
| Strobe             | Strobe out for synchronization of LED illumination                         |
| IRIG-B             | IRIG-B 122 input for frame synchronisation and time stamping               |
| Power Requirements | 10...36V/25...30 Watts depending on options                                |
| Analog inputs      | Two analog inputs for recording external signals synchronized to recording |
| IEEE1588           | PTP protocol ready                                                         |

## Options and add-on

|                            |                                                                                                                                                                |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Camera Memory              | 8 GB or 16 GB                                                                                                                                                  |
| Battery                    | Optionally, a built-in battery provides up to 12 minutes of operation, sufficient to transfer 16GB of data to flash memory when external power is unavailable. |
| Video Out                  | Optional HDMI or HD-SDI video out on camera                                                                                                                    |
| Non-volatile Memory        | Optional removable CFast card interface with auto download functionality                                                                                       |
| ChillBox                   | For standalone operation without mounting on a heat sink surface, a ChillBox with a fan is included as part of the delivery.                                   |
| C-F-Mount Adapter          | For F-Mount lenses, with dial for F-stop                                                                                                                       |
| C- Canon RF-Mount Adapter  | Canon RF Mount, includes control of lenses by software                                                                                                         |
| Single Connector Interface | Single push-pull interface according German «Arbeitskreis»                                                                                                     |

## Physical specifications

|                             |                                                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------|
| Size & Weight (basic model) | width: 75 mm / height: 75 mm / length: 75mm / 0.82 kg<br>width: 2.95" / height: 2.95" / length: 2.95" / 1.80 lb |
| Operating Temperature       | -10 ... + 45 °C / +14 ... +113 °F                                                                               |
| Storage Temperature         | -40 ... +70 °C / -40 ... +158 °F                                                                                |
| Shock Resistance            | 150g / 11msec all axis, spikes up to 200g according EN60068-2-27:2009                                           |
| 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    | N-VIT                                                                                                                                                                                                                                                              | N-VIT with battery | N-VIT with CFast/HDMI output |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------|
| Battery Time       | No backup battery                                                                                                                                                                                                                                                  | 10 min             | 15 min                       |
| Size               | 75 x 75 x 75 mm                                                                                                                                                                                                                                                    | 75 x 75 x 97 mm    | 75 x 75 x 124 mm             |
| What is in the Box | <ul style="list-style-type: none"><li>• Camera model as ordered</li><li>• ChillBox with cable</li><li>• SW via download link / on USB key</li><li>• Ethernet cable 5m / 15ft</li><li>• Power-Trigger adapter</li><li>• PowerSupply 100-240VAC / 24V, 65W</li></ul> |                    |                              |



Please check technical camera manual for detailed information

## Your local AOS partner:

Canadian Distributor:  
High Speed Imaging Inc.  
12-255 Dundas St E, Suite 331, Waterdown ON L8B 0E5  
Phone: (905) 649-5445 E-mail: [info@hsi.ca](mailto:info@hsi.ca)  
Web: [www.hsi.ca](http://www.hsi.ca)



Specifications are subject to change without prior notice – v06.2026