



System requirements EthoVision 19

For optimal performance and functionality of EthoVision, an up-to-date professional workstation is strongly recommended. EthoVision 19 is tested on Windows 11 Pro 64 bit, version 25H2 on a Desktop Dell Pro Max Tower T2. Laptop compatibility testing is pending. For this system we guarantee compatibility.

Recommended Computer Requirements

- Processor (CPU) – 14th Gen Intel Core i7-14700, 20 cores, 2.1-5.4 GHz
- Internal memory (RAM) – 32 GB for desktop PCs and 16 GB for laptop PCs
- Graphics card (GPU) – NVIDIA RTX 5070, 12 GB GDDR7
- USB 3.0 ports or an additional Ethernet network interface adapter, depending on the cameras
- Hard disk – 1 TB free space (to store experiments including video files)

Performance will depend on the functionality used. Some processes, such as live acquisition or tracking multiple animals within one arena, will require more from the processor and may influence the working speed.

Requirements: Deep Learning

Deep learning relies on the CUDA computing platform. For this reason, the graphics processing unit (GPU) driver must support CUDA version 13.1. For tracking live or from video files, we tested and guarantee compatibility with:

Desktop Computer (Dell Pro Max Tower T2)

- NVIDIA GeForce RTX 5070, 12 GB GDDR7, driver version 581

Laptop compatibility testing is pending.

When a driver version is not sufficient for supporting CUDA, EthoVision gives the message in the Experiment Settings: "The graphics card driver is not installed or the graphics card does not support CUDA". We recommend downloading and installing the latest driver from the card's manufacturer.

Deep Learning Limitations

- For one subject tracking: Up to four arenas, Live tracking or from video file. No minimal trial duration required. Maximal trial duration tested 72 hours.
- For two-subject tracking: Up to four arenas, only tracking from video file. Tracking of hooded rats not supported. It is recommended to perform trials of at least five minutes. Maximal trial duration tested 1 hour.
- Subject size: The apparent length of the subjects should be at least 10% of the size of arena. We recommend that the apparent length of the subject's body is at least 120 pixels for rats and 50 pixels for mice (nose to tail-base).



Supported cameras

- EthoVision was tested with a selected range of cameras. The maximum number of cameras depends on whether EthoVision is installed on a desktop or laptop computer.
- Cameras must be of the same type; a combination of analog and digital cameras is not supported.
- Mixing video images from different camera types is not supported.
- The drivers for the supported cameras are available on MyNoldus: my.noldus.com.

Type	Brand/Model	Max. Number	Interface board	Frame rate
GigE	Basler acA1300-60gm (mono)	Desktop: 1-16, Laptop: not supported	CT1000 Pro, Adlink PCIe-GIE74, Basler GigE 4 port PoE	60 fps
GigE	Basler acA1920-40gc (color)	Desktop: 4, Laptop: not supported	CT1000 Pro, Adlink PCIe-GIE74	40 fps
USB 3.0	Basler acA1920-155um (mono)	Desktop: 1, Laptop: 1	U3-PCIEXG205-1S, U3X4-PCIEXE111	60 fps
Analog	PhenoTyper	Desktop: 1-16, Laptop: not supported	Piccolo Alert (1-4 cameras)	25/29.97 fps

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