

GigE Vision cameras

GigE Vision cameras are hereinafter referred to as GigE cameras.

When do I need a GigE camera?

GigE cameras are high-performance industrial cameras. They can have a higher frame rate and resolution than the other supported cameras. The images are sent unprocessed to the computer using a standard network cable (UTP). With a high frame rate and resolution this results in a very high transfer of data. You can connect a GigE camera directly to an Ethernet card on your computer. In this way you can obtain very high quality videos. An important advantage of GigE cameras is the possibility to have long cables between the camera and the computer.

Network requirements

To use MediaRecorder with GigE cameras, the following network requirements apply:

- An Intel Pro/1000 CT or Intel Pro/1000 PT (1 Gb) network adapter needs to be installed in the computer.

https://en.wikipedia.org/wiki/Category_5_cable

- The cables must be suitable for Gigabit Ethernet. The minimum cable quality is CAT5e.
- We recommend to use a dedicated network.

Install and setup

If you bought a complete solution from Noldus IT, the network adapter is present in the computer, the GigE cameras are set up and the MediaRecorder settings are made. If you bought your cameras and MediaRecorder separately, you must do the installation and setup yourself.

See [Set up GigE cameras](#)

Power over Ethernet

GigE cameras can be connected to a PoE injector. This is a device that passes power along with data (in this case, video data from the camera) on twisted-pair Ethernet cabling. Cameras may also be powered using a 2 or 4-port Network Interface Card (NIC). This way no separate power supply is needed.

Supported GigE camera

- Basler GigE camera acA1300-60gm mono. Color space: Y800.
- Basler GigE camera acA1920-40gc color. Color space: RGB32.

Tested setups with EthoVision XT

The table below shows the maximum supported (1) resolution, (2) frame rate (fps), (3) number of devices and (4) recording time (hours). Tests were done on a Dell T3640 PC

	Device	Resolution	Frame rate (fps)	No of devices	Recording time (hrs)
	Basler acA1300-60gm	640 x 480 800 x 600 1024 x 768 1280 x 1024	60	1	0.5
	Basler acA1300-60gm	1284 x 1025	25 60	1	8
	Basler acA1300-60gm	960 x 640	30 60	4	24
	Basler acA1300-60gm	1280 x 1040	40	4	24
	Basler acA1300-60gm*	1280 x 960	60	4	1
	Basler acA1920-40gc	1920 x 1200	25	1	18

* Tested with output quality setting “EthoVision” and “DanioVision”.

IMPORTANT The file size of a 8, 18 and 24 hours recording is very large (at least 12 GB).

When four devices were tested, separate videos were made.

Cable length

In theory, a cable length of 150m is possible. However, the maximum length tested in-house with satisfactory results was 25 m.

Revision #10

Created 29 November 2023 17:22:25

Updated 20 December 2023 22:07:55