



## MediaRecorder 6.5

### Technical specifications

MediaRecorder is Noldus' recording tool for FaceReader™ and The Observer® XT. It allows you to record from USB and IP cameras as well as screen capture devices.

#### VIDEO FORMATS

Video recordings contain a lot of idle information, making uncompressed video streams extremely inefficient and difficult to handle. Therefore, MediaRecorder uses the modern common video compression standards of MPEG 4 H.264.

#### MPEG-4, H.264 - IP camera

- *Video encoding*  
MPEG-4 Part 10
- *Audio encoding*  
AAC Audio
- *Container*  
MP4
- *Approximate file size*  
At least 0.5 GB/hr

These files can be used in The Observer XT 15 and higher and FaceReader 8 and higher.

Please note that H.264 is a video compression format. Although often used in combination with High Definition resolution videos, it is not a synonym for HD.

#### HOW TO CHOOSE YOUR CAMERA

"Which camera is best suited for my project?" may depend on a lot of factors and, therefore, Noldus has tested several different camera types. As there is a wide variety of cameras available on the market today, we could not test all possible cameras. Noldus tested popular

camera types, an overview of which can be found on the table on the next page. These cameras are indicated by their connection type: USB and IP.

To record media files from video inputs for later use in The Observer XT or FaceReader.

Suitable camera:

- 1-2 Logitech Brio webcams
- 1-4 IP cameras (Axis P5525, Axis M1065), or successors

To make a screen capture and record an image of the test subject. Suitable combination of devices:

- Axis P5525 / M1065 IP camera + Epiphan Nano Broadcaster
- Logitech Brio Webcam + DVI2USB 3.0

#### COMBINING CAMERAS AND DEVICES

Noldus does not recommend recording from mixed source types. However, there are a few exceptions and special set-ups which are listed below. Other combinations are not recommended, at least not without extensive testing on synchronicity.

#### Stationary Usability Lab

Our Stationary Usability Lab contains an Epiphan Nano Broadcaster for screen capture and 1 or more Axis P5525 IP cameras connected to a Dell Precision 3660 desktop.

- *Manufacturer*  
Epiphan Nano Broadcaster  
Axis P5525 IP camera
- *Resolution / frame rate per second*  
DVI: 1920x1080 / 30 fps  
Axis: 1980x1080 / 30 fps

| Camera / Device                     | Pro's                               | Con's  |
|-------------------------------------|-------------------------------------|--|
| USB Webcam                          | Digital camera                      | For multiple camera use, a separate USB hardware card is advised for each camera                           |
|                                     | Low price                           | No preview available on the camera   |
|                                     | Ease of use                         | Short recording distance (5-10 m)  |
| IP                                  | Digital camera                      | MediaRecorder currently supports Axis IP cameras<br>Test with Panasonic cameras resulted in lower results. |
|                                     | Can record from a remote location   | Network traffic may have a negative influence on synchronicity   |
|                                     | Record from 8 cameras               |  |
| Screen capture software and devices | Full HD recording possible          |  |
|                                     | Suitable for portable usability lab |  |

### Stationary Usability Lab (continued)

- *Number of devices*  
4, i.e. 1 screen capture + 3 cameras
- *Max. recording duration*  
3h
- *Remarks*  
Separate microphone over line-in or over RTSP

### Portable Usability Lab

Our Portable Usability Lab is a set-up of an Epiphan DVI2USB 3.0, a screen capture device, and 1 Logitech Brio USB camera connected to a Dell Precision 3570 laptop.

- *Manufacturer*  
Epiphan DVI2USB 3.0  
Logitech Brio Webcam
- *Resolution / frame rate per second*  
1920x1080 / 30 fps  
1920x1080 / 30 fps
- *Number of devices*  
2-4
- *Max. recording duration*  
1h
- *Remarks*  
Microphone via USB webcam or separate microphone over Line-in or over RTSP



### Portable Observation Lab

Our Portable Observation Lab is a set-up of two Logitech Brio webcams connected to a Dell Precision 3570 laptop.

- *Manufacturer*  
Logitech Brio Webcam
- *Resolution / frame rate per second*  
1920x1080 / 30 fps
- *Number of devices*  
2-4
- *Max. recording duration*  
1h
- *Remarks*  
Microphone via USB webcam or separate microphone over line-in or over RTSP

### USING THE RIGHT COMPUTER

The MediaRecorder is thoroughly tested on a Dell Precision™ 3660 workstation and a Dell Precision™ 3570 laptop. In the various tables in the section above, we mention how many cameras of the different types can be used simultaneously. These numbers are based on the workstation and laptop that we used for testing and on the cameras that we supply. These numbers depend on the processor speed of your computer, on the Graphical Processor Unit (GPU also called video card), on the type of camera you use, and on the camera settings. Also programs running in the background influence the speed of your computer and may affect the number of cameras that can be used simultaneously in sync. For example, virus scanners are well known for delaying the computer performance and thus causing a recording to be out of sync with another recording or with the audio. It is possible to buy a consumer-range computer with a high processor speed and more than 4 Gb of memory, but in order to remain competitive regarding price, manufacturers often economize on the underlying system architecture. That means those computers are suitable for home use, but not for running professional scientific software. It is advisable to select a computer which is

intended for professional use or labelled by the manufacturer as a workstation. If you use an older workstation, it should have 2.6 GHz processor speed and at least 4 GB of memory (8 GB is recommended) as well as a separate video card supporting Direct3D acceleration.

MediaRecorder is tested on Windows 11, 64 bit.

## **MEDIA RECORDER WITH THE OBSERVER XT**

### **External commands**

In The Observer XT, you can control MediaRecorder by using the program Noldus N-Linx command. Setup is very easy and the exact procedure and commands can be found in the MediaRecorder manual.

### **Automatic linking**

Using N-Linx to communicate between The Observer XT and MediaRecorder the recorded videos are automatically transferred to The Observer XT.

Please visit our website for more information and contact details.

**[www.noldus.com](http://www.noldus.com)**

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