

# OpenCVVideoStream protocol handler

The OpenCVVideoStream protocol handler allows reading and receiving video data. It offers a lot less functionality than the FFmpeg handler, but it can access DirectShow cameras. It uses the OpenCV Java port of [JavaCV](#) and is available in the [video feature](#).

## Options

See [FFmpegVideoStream protocol handler](#). Offers access to DirectShow cameras using the **streamurl** option with "camera://<x>", where <x> is the number of the attached camera (for example "camera://0" for the first available camera on the system).

## Schema

The output of the handler provides the following attributes as a schema. Attributes can be in arbitrary order and will be identified by the type.

| Name           | Type           | Description  |
|----------------|----------------|--|
| image          | IMAGEJCV       | The current frame of the video stream  |
| starttimestamp | STARTTIMESTAMP | The start time stamp of the frame. Depends on the timestampmode option, will be omitted when set to 'none' |
| endtimestamp   | ENDTIMESTAMP   | The end time stamp of the frame. Depends on the timestampmode option, will be omitted when set to 'none'   |

## Example

This example shows how to grab a video from a webcam and display it in a window:

### PQL

```
VideoStream Protocol Handler

video = ACCESS({source='Video',
                wrapper='GenericPull',
                transport='none',
                protocol='OpenCVVideoStream',
                datahandler='Tuple',
                options=[
                    ['streamUrl', 'camera://0'],
                    ['timeStampMode', 'none']
                ],
                schema= [
                    ['image', 'IMAGEJCV']
                ]})

/// or shorter, as a source operator:
video = OPENCVVIDEO({source='Video', options=[['streamUrl', 'camera://0'], ['timeStampMode', 'none']]})

output = UDO({class='ShowImageJCV', init='0', Video}, video)
```