ioctl VIDIOC_CROPCAP

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 2)

Unknown directive type "c:namespace".

```
.. c:namespace:: V4L
```

Name

VIDIOC_CROPCAP - Information about the video cropping and scaling abilities

Synopsis

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 18)

Unknown directive type "c:macro".

```
.. c:macro:: VIDIOC_CROPCAP
```

```
int ioctl(int fd, VIDIOC_CROPCAP, struct v4l2_cropcap *argp)
```

Arguments

`fd`

File descriptor returned by :c:func:`open()`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 26); *backlink*

Unknown interpreted text role "c:func".

`argp`

Pointer to struct :c:type:`v4l2_cropcap`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 29); *backlink*

Unknown interpreted text role "c:type".

Description

Applications use this function to query the cropping limits, the pixel aspect of images and to calculate scale factors. They set the `type` field of a v4l2_cropcap structure to the respective buffer (stream) type and call the :ref:`VIDIOC_CROPCAP` ioctl with a pointer to this structure. Drivers fill the rest of the structure. The results are constant except when switching the video standard. Remember this switch can occur implicit when switching the video input or output.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 34); *backlink*

Unknown interpreted text role "ref".

This ioctl must be implemented for video capture or output devices that support cropping and/or scaling and/or have non-square pixels, and for overlay devices.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 46)

Unknown directive type "c:type".

```
.. c:type:: v4l2_cropcap
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 48)

Unknown directive type "tabularcolumns".

```
.. tabularcolumns:: |p{4.4cm}|p{4.4cm}|p{8.5cm}|
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 50)

Unknown directive type "flat-table".

```
.. flat-table:: struct v4l2_cropcap
    :header-rows:  0
    :stub-columns: 0
    :widths:       1 1 2

    * - __u32
      - ``type``
      - Type of the data stream, set by the application. Only these types
        are valid here: ``V4L2_BUF_TYPE_VIDEO_CAPTURE``, ``V4L2_BUF_TYPE_VIDEO_CAPTURE_MPLANE``,
        ``V4L2_BUF_TYPE_VIDEO_OUTPUT``, ``V4L2_BUF_TYPE_VIDEO_OUTPUT_MPLANE`` and
        ``V4L2_BUF_TYPE_VIDEO_OVERLAY``. See :c:type:`v4l2_buf_type` and the note below.
    * - struct :ref:`v4l2_rect <v4l2-rect-crop>`
      - ``bounds``
      - Defines the window within capturing or output is possible, this
        may exclude for example the horizontal and vertical blanking
        areas. The cropping rectangle cannot exceed these limits. Width
        and height are defined in pixels, the driver writer is free to
        choose origin and units of the coordinate system in the analog
        domain.
    * - struct :ref:`v4l2_rect <v4l2-rect-crop>`
      - ``defrect``
      - Default cropping rectangle, it shall cover the "whole picture".
        Assuming pixel aspect 1/1 this could be for example a 640 Ã— 480
        rectangle for NTSC, a 768 Ã— 576 rectangle for PAL and SECAM
        centered over the active picture area. The same co-ordinate system
        as for ``bounds`` is used.
    * - struct :c:type:`v4l2_fract`
      - ``pixelaspect``
      - This is the pixel aspect (y / x) when no scaling is applied, the
        ratio of the actual sampling frequency and the frequency required
        to get square pixels.

        When cropping coordinates refer to square pixels, the driver sets
        ``pixelaspect`` to 1/1. Other common values are 54/59 for PAL and
        SECAM, 11/10 for NTSC sampled according to [:ref:`itu601`].
```

Note

Unfortunately in the case of multiplanar buffer types (`V4L2_BUF_TYPE_VIDEO_CAPTURE_MPLANE` and `V4L2_BUF_TYPE_VIDEO_OUTPUT_MPLANE`) this API was messed up with regards to how the :c:type:`v4l2_cropcap` `type` field should be filled in. Some drivers only accepted the `_MPLANE` buffer type while other drivers only accepted a non-multiplanar buffer type (i.e. without the `_MPLANE` at the end).

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 87); *backlink*

Unknown interpreted text role "c:type".

Starting with kernel 4.13 both variations are allowed.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 99)

Unknown directive type "tabularcolumns".

```
.. tabularcolumns:: |p{4.4cm}|p{4.4cm}|p{8.5cm}|
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 101)

Unknown directive type "flat-table".

```
.. flat-table:: struct v4l2_rect
    :header-rows:  0
    :stub-columns: 0
    :widths:       1 1 2

    * - __s32
      - ``left``
      - Horizontal offset of the top, left corner of the rectangle, in
        pixels.
    * - __s32
      - ``top``
      - Vertical offset of the top, left corner of the rectangle, in
        pixels.
    * - __u32
      - ``width``
      - Width of the rectangle, in pixels.
    * - __u32
      - ``height``
      - Height of the rectangle, in pixels.
```

Return Value

On success 0 is returned, on error -1 and the `errno` variable is set appropriately. The generic error codes are described at the :ref:`Generic Error Codes <gen-errors>` chapter.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]vidioc-cropcap.rst, line 124); *backlink*

Unknown interpreted text role "ref".

EINVAL

The struct :c:type:`v4l2_cropcap` `type` is invalid.

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Unknown interpreted text role "c:type".

ENODATA

Cropping is not supported for this input or output.