

ioctl VIDIOC_G_CROP, VIDIOC_S_CROP

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-g-crop.rst, line 2)

Unknown directive type "c.namespace".

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

Name

VIDIOC_G_CROP - VIDIOC_S_CROP - Get or set the current cropping rectangle

Synopsis

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Unknown directive type "c.macro".

```
.. c:macro:: VIDIOC_G_CROP
```

```
int ioctl(int fd, VIDIOC_G_CROP, struct v4l2_crop *argp)
```

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Unknown directive type "c.macro".

```
.. c:macro:: VIDIOC_S_CROP
```

```
int ioctl(int fd, VIDIOC_S_CROP, const struct v4l2_crop *argp)
```

Arguments

fd

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

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Unknown interpreted text role "c.func".

argp

Pointer to struct `:type:`v4l2_crop``.

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Unknown interpreted text role "c.type".

Description

To query the cropping rectangle size and position applications set the `type` field of a struct `:type:`v4l2_crop`` structure to the respective buffer (stream) type and call the `ref`VIDIOC_G_CROP`<VIDIOC_G_CROP>` ioctl with a pointer to this structure. The driver fills the rest of the structure or returns the `EINVAL` error code if cropping is not supported.

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Unknown interpreted text role "c:type".

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Unknown interpreted text role "ref".

To change the cropping rectangle applications initialize the `type` and struct `:c:type:'v4l2_rect'` substructure named `c` of a `v4l2_crop` structure and call the `:ref:'VIDIOC_S_CROP <VIDIOC_G_CROP>'` ioctl with a pointer to this structure.

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Unknown interpreted text role "c:type".

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Unknown interpreted text role "ref".

The driver first adjusts the requested dimensions against hardware limits, i. e. the bounds given by the capture/output window, and it rounds to the closest possible values of horizontal and vertical offset, width and height. In particular the driver must round the vertical offset of the cropping rectangle to frame lines modulo two, such that the field order cannot be confused.

Second the driver adjusts the image size (the opposite rectangle of the scaling process, source or target depending on the data direction) to the closest size possible while maintaining the current horizontal and vertical scaling factor.

Finally the driver programs the hardware with the actual cropping and image parameters. `:ref:'VIDIOC_S_CROP <VIDIOC_G_CROP>'` is a write-only ioctl, it does not return the actual parameters. To query them applications must call `:ref:'VIDIOC_G_CROP <VIDIOC_G_CROP>'` and `:ref:'VIDIOC_G_FMT'`. When the parameters are unsuitable the application may modify the cropping or image parameters and repeat the cycle until satisfactory parameters have been negotiated.

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Unknown interpreted text role "ref".

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Unknown interpreted text role "ref".

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Unknown interpreted text role "ref".

When cropping is not supported then no parameters are changed and `:ref:'VIDIOC_S_CROP <VIDIOC_G_CROP>'` returns the `EINVAL` error code.

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Unknown interpreted text role "ref".

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Unknown directive type "c:type".

```
.. c:type:: v4l2_crop
```

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Unknown directive type "tabularcolumns".

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

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Unknown directive type "flat-table".

```
.. flat-table:: struct v4l2_crop
   :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 c:type:v4l2_rect
     - c
       - Cropping rectangle. The same co-ordinate system as for struct
         c:type:v4l2_cropcap bounds is used.
```

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_crop` 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).

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Unknown interpreted text role "c:type".

Starting with kernel 4.13 both variations are allowed.

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.

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Unknown interpreted text role "ref".

ENODATA

Cropping is not supported for this input or output.