

# ioctl VIDIOC\_SUBDEV\_G\_SELECTION, VIDIOC\_SUBDEV\_S\_SELECTION

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Unknown directive type "c:namespace".

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

## Name

VIDIOC\_SUBDEV\_G\_SELECTION - VIDIOC\_SUBDEV\_S\_SELECTION - Get or set selection rectangles on a subdev pad

## Synopsis

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Unknown directive type "c:macro".

```
.. c:macro:: VIDIOC_SUBDEV_G_SELECTION
```

```
int ioctl(int fd, VIDIOC_SUBDEV_G_SELECTION, struct v4l2_subdev_selection *argp)
```

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Unknown directive type "c:macro".

```
.. c:macro:: VIDIOC_SUBDEV_S_SELECTION
```

```
int ioctl(int fd, VIDIOC_SUBDEV_S_SELECTION, struct v4l2_subdev_selection *argp)
```

## Arguments

fd

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

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[backlink](#)

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argp

Pointer to struct `c:type:v4l2_subdev_selection`.

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[backlink](#)

Unknown interpreted text role "c:type".

## Description

The selections are used to configure various image processing functionality performed by the subdevs which affect the image size. This currently includes cropping, scaling and composition.

The selection API replaces `ref` the old subdev crop API `<VIDIOC_SUBDEV_G_CROP>`. All the function of the crop API, and more, are supported by the selections API.

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See `ref` subdev for more information on how each selection target affects the image processing pipeline inside the subdevice.

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If the subdev device node has been registered in read-only mode, calls to `VIDIOC_SUBDEV_S_SELECTION` are only valid if the `which` field is set to `V4L2_SUBDEV_FORMAT_TRY`, otherwise an error is returned and the `errno` variable is set to `-EPERM`.

## Types of selection targets

There are two types of selection targets: actual and bounds. The actual targets are the targets which configure the hardware. The `BOUNDS` target will return a rectangle that contain all possible actual rectangles.

## Discovering supported features

To discover which targets are supported, the user can perform `VIDIOC_SUBDEV_G_SELECTION` on them. Any unsupported target will return `EINVAL`.

Selection targets and flags are documented in `ref` v4l2-selections-common.

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Unknown directive type "c.type".

```
.. c:type:: v4l2_subdev_selection
```

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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_subdev_selection
  :header-rows: 0
  :stub-columns: 0
  :widths:      1 1 2

  * - __u32
```

- ``which``
- Active or try selection, from enum  
:ref:`v4l2\_subdev\_format\_whence` <v4l2-subdev-format-whence>`.
- \* - `__u32`  
- ``pad``
- Pad number as reported by the media framework.
- \* - `__u32`  
- ``target``
- Target selection rectangle. See :ref:`v4l2-selections-common`.
- \* - `__u32`  
- ``flags``
- Flags. See :ref:`v4l2-selection-flags`.
- \* - struct :c:type:`v4l2\_rect`  
- ``r``
- Selection rectangle, in pixels.
- \* - `__u32`  
- ``reserved``\ [8]
- Reserved for future extensions. Applications and drivers must set the array to zero.

## 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".

### EBUSY

The selection rectangle can't be changed because the pad is currently busy. This can be caused, for instance, by an active video stream on the pad. The `ioctl` must not be retried without performing another action to fix the problem first. Only returned by `VIDIOC_SUBDEV_S_SELECTION`

### EINVAL

The struct :c:type:`v4l2\_subdev\_selection` pad references a non-existing pad, the `which` field references a non-existing format, or the selection target is not supported on the given subdev pad.

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### EPERM

The `VIDIOC_SUBDEV_S_SELECTION` `ioctl` has been called on a read-only subdevice and the `which` field is set to `V4L2_SUBDEV_FORMAT_ACTIVE`.