

ioctl VIDIOC_SUBDEV_ENUM_FRAME_SIZE

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-subdev-enum-frame-size.rst, line 2)

Unknown directive type "c.namespace".

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

Name

VIDIOC_SUBDEV_ENUM_FRAME_SIZE - Enumerate media bus frame sizes

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-subdev-enum-frame-size.rst, line 18)

Unknown directive type "c.macro".

```
.. c:macro:: VIDIOC_SUBDEV_ENUM_FRAME_SIZE
```

```
int ioctl(int fd, VIDIOC_SUBDEV_ENUM_FRAME_SIZE, struct v4l2_subdev_frame_size_enum * argp)
```

Arguments

fd

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

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Unknown interpreted text role "c.func".

argp

Pointer to struct `c:type:v4l2_subdev_frame_size_enum`.

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Unknown interpreted text role "c.type".

Description

This ioctl allows applications to enumerate all frame sizes supported by a sub-device on the given pad for the given media bus format. Supported formats can be retrieved with the `ref:VIDIOC_SUBDEV_ENUM_MBUS_CODE` ioctl.

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To enumerate frame sizes applications initialize the `pad`, `which`, `code` and `index` fields of the struct `c:type:v4l2_subdev_mbus_code_enum` and call the `ref:VIDIOC_SUBDEV_ENUM_FRAME_SIZE` ioctl with a pointer to the

structure. Drivers fill the minimum and maximum frame sizes or return an EINVAL error code if one of the input parameters is invalid.

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Sub-devices that only support discrete frame sizes (such as most sensors) will return one or more frame sizes with identical minimum and maximum values.

Not all possible sizes in given [minimum, maximum] ranges need to be supported. For instance, a scaler that uses a fixed-point scaling ratio might not be able to produce every frame size between the minimum and maximum values. Applications must use the `ref:VIDIOC_SUBDEV_S_FMT<VIDIOC_SUBDEV_G_FMT>` ioctl to try the sub-device for an exact supported frame size.

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Available frame sizes may depend on the current 'try' formats at other pads of the sub-device, as well as on the current active links and the current values of V4L2 controls. See `ref:VIDIOC_SUBDEV_G_FMT` for more information about try formats.

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Unknown directive type "c:type".

```
.. c:type:: v4l2_subdev_frame_size_enum
```

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-subdev-enum-frame-size.rst, line 66)

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

   * - u32
     - ``index``
     - Number of the format in the enumeration, set by the application.
   * - u32
     - ``pad``
```

- Pad number as reported by the media controller API.
- * - `u32`
- ```code```
- The media bus format code, as defined in `:ref:`v4l2-mbus-format``.
- * - `u32`
- ```min_width```
- Minimum frame width, in pixels.
- * - `u32`
- ```max_width```
- Maximum frame width, in pixels.
- * - `u32`
- ```min_height```
- Minimum frame height, in pixels.
- * - `u32`
- ```max_height```
- Maximum frame height, in pixels.
- * - `u32`
- ```which```
- Frame sizes to be enumerated, from enum `:ref:`v4l2_subdev_format_whence` <v4l2-subdev-format-whence>`.
- * - `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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EINVAL

The struct `:c:type:`v4l2_subdev_frame_size_enum`` `pad` references a non-existing pad, the `code` is invalid for the given pad or the `index` field is out of bounds.

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