

ioctl VIDIOC_ENUM_FREQ_BANDS

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-enum-freq-bands.rst`, line 2)

Unknown directive type "c:namespace".

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

Name

VIDIOC_ENUM_FREQ_BANDS - Enumerate supported frequency bands

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-enum-freq-bands.rst`, line 18)

Unknown directive type "c:macro".

```
.. c:macro:: VIDIOC_ENUM_FREQ_BANDS
```

```
int ioctl(int fd, VIDIOC_ENUM_FREQ_BANDS, struct v4l2_frequency_band *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_frequency_band`.

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Unknown interpreted text role "c:type".

Description

Enumerates the frequency bands that a tuner or modulator supports. To do this applications initialize the `tuner`, `type` and `index` fields, and zero out the `reserved` array of a struct `c:type:v4l2_frequency_band` and call the `ref:VIDIOC_ENUM_FREQ_BANDS` `ioctl` with a pointer to this structure.

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Unknown interpreted text role "c:type".

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master\Documentation\userspace-api\media\v4l\ (linux-master) (Documentation) (userspace-api) (media) (v4l)vidioc-enum-freq-bands.rst, line 34); [backlink](#)

Unknown interpreted text role "ref".

This ioctl is supported if the V4L2_TUNER_CAP_FREQ_BANDS capability of the corresponding tuner/modulator is set.

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Unknown directive type "tabularcolumns".

```
.. tabularcolumns:: |p{2.9cm}|p{2.9cm}|p{5.8cm}|p{2.9cm}|p{2.4cm}|
```

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Unknown directive type "c:type".

```
.. c:type:: v4l2_frequency_band
```

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Unknown directive type "flat-table".

```
.. flat-table:: struct v4l2_frequency_band
   :header-rows: 0
   :stub-columns: 0
   :widths:      1 1 2 1 1

   * - u32
     - ``tuner``
     - The tuner or modulator index number. This is the same value as in
       the struct :c:type:`v4l2_input` ``tuner`` field and
       the struct :c:type:`v4l2_tuner` ``index`` field, or
       the struct :c:type:`v4l2_output` ``modulator`` field
       and the struct :c:type:`v4l2_modulator` ``index``
       field.
   * - u32
     - ``type``
     - The tuner type. This is the same value as in the struct
       :c:type:`v4l2_tuner` ``type`` field. The type must be
       set to ``V4L2_TUNER_RADIO`` for ``/dev/radioX`` device nodes, and
       to ``V4L2_TUNER_ANALOG_TV`` for all others. Set this field to
       ``V4L2_TUNER_RADIO`` for modulators (currently only radio
       modulators are supported). See :c:type:`v4l2_tuner_type`
   * - u32
     - ``index``
     - Identifies the frequency band, set by the application.
   * - u32
     - ``capability``
     - :cspan:`2` The tuner/modulator capability flags for this
       frequency band, see :ref:`tuner-capability`. The
       ``V4L2_TUNER_CAP_LOW`` or ``V4L2_TUNER_CAP_1HZ`` capability must
       be the same for all frequency bands of the selected
       tuner/modulator. So either all bands have that capability set, or
       none of them have that capability.
   * - u32
     - ``rangelow``
     - :cspan:`2` The lowest tunable frequency in units of 62.5 kHz, or
       if the ``capability`` flag ``V4L2_TUNER_CAP_LOW`` is set, in units
       of 62.5 Hz, for this frequency band. A 1 Hz unit is used when the
       ``capability`` flag ``V4L2_TUNER_CAP_1HZ`` is set.
   * - u32
     - ``rangehigh``
     - :cspan:`2` The highest tunable frequency in units of 62.5 kHz,
       or if the ``capability`` flag ``V4L2_TUNER_CAP_LOW`` is set, in
       units of 62.5 Hz, for this frequency band. A 1 Hz unit is used
       when the ``capability`` flag ``V4L2_TUNER_CAP_1HZ`` is set.
   * - u32
     - ``modulation``
```

```

- :cspan:`2` The supported modulation systems of this frequency
band. See :ref:`band-modulation`.

.. note::

    Currently only one modulation system per frequency band
    is supported. More work will need to be done if multiple
    modulation systems are possible. Contact the linux-media
    mailing list
    (`https://linuxtv.org/lists.php` <https://linuxtv.org/lists.php>`)
    if you need such functionality.
* - u32
- ``reserved`` [9]
- Reserved for future extensions.

Applications and drivers must set the array to zero.

```

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Unknown directive type "tabularcolumns".

```
.. tabularcolumns:: |p{6.6cm}|p{2.2cm}|p{8.5cm}|
```

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Unknown directive type "flat-table".

```

.. flat-table:: Band Modulation Systems
   :header-rows: 0
   :stub-columns: 0
   :widths:      3 1 4

* - ``V4L2_BAND_MODULATION_VSB``
  - 0x02
  - Vestigial Sideband modulation, used for analog TV.
* - ``V4L2_BAND_MODULATION_FM``
  - 0x04
  - Frequency Modulation, commonly used for analog radio.
* - ``V4L2_BAND_MODULATION_AM``
  - 0x08
  - Amplitude Modulation, commonly used for analog radio.

```

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".

EINVAL

The tuner or index is out of bounds or the type field is wrong.