ioctl VIDIOC_ENCODER_CMD, VIDIOC_TRY_ENCODER_CMD

> **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-encoder-cmd.rst, line 2`)**
>
> Unknown directive type "c:namespace".
>
> ```
>    .. c:namespace:: V4L
> ```

Name

VIDIOC_ENCODER_CMD - VIDIOC_TRY_ENCODER_CMD - Execute an encoder command

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-encoder-cmd.rst, line 18`)**
>
> Unknown directive type "c:macro".
>
> ```
>    .. c:macro:: VIDIOC_ENCODER_CMD
> ```

```
int ioctl(int fd, VIDIOC_ENCODER_CMD, struct v4l2_encoder_cmd *argp)
```

> **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-encoder-cmd.rst, line 22`)**
>
> Unknown directive type "c:macro".
>
> ```
>    .. c:macro:: VIDIOC_TRY_ENCODER_CMD
> ```

```
int ioctl(int fd, VIDIOC_TRY_ENCODER_CMD, struct v4l2_encoder_cmd *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-encoder-cmd.rst, line 30`); *backlink***
> >
> > Unknown interpreted text role "c:func".

`argp`

> Pointer to struct :c:type:`v4l2_encoder_cmd`.
>
> > **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-encoder-cmd.rst, line 33`); *backlink***
> >
> > Unknown interpreted text role "c:type".

Description

These ioctls control an audio/video (usually MPEG-) encoder. `VIDIOC_ENCODER_CMD` sends a command to the encoder,

`VIDIOC_TRY_ENCODER_CMD` can be used to try a command without actually executing it.

To send a command applications must initialize all fields of a struct :c:type:`v4l2_encoder_cmd` and call `VIDIOC_ENCODER_CMD` or `VIDIOC_TRY_ENCODER_CMD` with a pointer to this structure.

> **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-encoder-cmd.rst`, line 43); *backlink***
>
> Unknown interpreted text role "c:type".

The `cmd` field must contain the command code. Some commands use the `flags` field for additional information.

After a STOP command, :c:func:`read()` calls will read the remaining data buffered by the driver. When the buffer is empty, :c:func:`read()` will return zero and the next :c:func:`read()` call will restart the encoder.

> **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-encoder-cmd.rst`, line 51); *backlink***
>
> Unknown interpreted text role "c:func".

> **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-encoder-cmd.rst`, line 51); *backlink***
>
> Unknown interpreted text role "c:func".

> **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-encoder-cmd.rst`, line 51); *backlink***
>
> Unknown interpreted text role "c:func".

A :c:func:`read()` or :ref:`VIDIOC_STREAMON <VIDIOC_STREAMON>` call sends an implicit START command to the encoder if it has not been started yet. Applies to both queues of mem2mem encoders.

> **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-encoder-cmd.rst`, line 56); *backlink***
>
> Unknown interpreted text role "c:func".

> **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-encoder-cmd.rst`, line 56); *backlink***
>
> Unknown interpreted text role "ref".

A :c:func:`close()` or :ref:`VIDIOC_STREAMOFF <VIDIOC_STREAMON>` call of a streaming file descriptor sends an implicit immediate STOP to the encoder, and all buffered data is discarded. Applies to both queues of mem2mem encoders.

> **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-encoder-cmd.rst`, line 60); *backlink***
>
> Unknown interpreted text role "c:func".

> **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-encoder-cmd.rst`, line 60); *backlink***
>
> Unknown interpreted text role "ref".

These ioctls are optional, not all drivers may support them. They were introduced in Linux 2.6.21. They are, however, mandatory for stateful mem2mem encoders (as further documented in :ref:`encoder`).

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-encoder-cmd.rst`, line 65); *backlink*

Unknown interpreted text role "ref".

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-encoder-cmd.rst`, line 69)

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-encoder-cmd.rst`, line 71)

Unknown directive type "c:type".

```
.. c:type:: v4l2_encoder_cmd
```

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-encoder-cmd.rst`, line 73)

Unknown directive type "flat-table".

```
.. flat-table:: struct v4l2_encoder_cmd
    :header-rows:  0
    :stub-columns: 0
    :widths:       1 1 2

    * - __u32
      - ``cmd``
      - The encoder command, see :ref:`encoder-cmds`.
    * - __u32
      - ``flags``
      - Flags to go with the command, see :ref:`encoder-flags`. If no
        flags are defined for this command, drivers and applications must
        set this field to zero.
    * - __u32
      - ``data``\ [8]
      - Reserved for future extensions. Drivers and applications must set
        the array to zero.
```

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-encoder-cmd.rst`, line 92)

Unknown directive type "tabularcolumns".

```
.. tabularcolumns:: |p{6.6cm}|p{2.2cm}|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-encoder-cmd.rst`, line 96)

Unknown directive type "flat-table".

```
.. flat-table:: Encoder Commands
    :header-rows:  0
    :stub-columns: 0
    :widths:       3 1 4

    * - ``V4L2_ENC_CMD_START``
      - 0
      - Start the encoder. When the encoder is already running or paused,
        this command does nothing. No flags are defined for this command.
```

```
                For a device implementing the :ref:`encoder`, once the drain sequence
                is initiated with the ``V4L2_ENC_CMD_STOP`` command, it must be driven
                to completion before this command can be invoked.  Any attempt to
                invoke the command while the drain sequence is in progress will trigger
                an ``EBUSY`` error code. See :ref:`encoder` for more details.
    * - ``V4L2_ENC_CMD_STOP``
      - 1
      - Stop the encoder. When the ``V4L2_ENC_CMD_STOP_AT_GOP_END`` flag
        is set, encoding will continue until the end of the current *Group
        Of Pictures*, otherwise encoding will stop immediately. When the
        encoder is already stopped, this command does nothing.

        For a device implementing the :ref:`encoder`, the command will initiate
        the drain sequence as documented in :ref:`encoder`. No flags or other
        arguments are accepted in this case. Any attempt to invoke the command
        again before the sequence completes will trigger an ``EBUSY`` error
        code.
    * - ``V4L2_ENC_CMD_PAUSE``
      - 2
      - Pause the encoder. When the encoder has not been started yet, the
        driver will return an ``EPERM`` error code. When the encoder is
        already paused, this command does nothing. No flags are defined
        for this command.
    * - ``V4L2_ENC_CMD_RESUME``
      - 3
      - Resume encoding after a PAUSE command. When the encoder has not
        been started yet, the driver will return an ``EPERM`` error code. When
        the encoder is already running, this command does nothing. No
        flags are defined for this command.
```

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-encoder-cmd.rst, line 136`)

Unknown directive type "tabularcolumns".

```
.. tabularcolumns:: |p{6.6cm}|p{2.2cm}|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-encoder-cmd.rst, line 140`)

Unknown directive type "flat-table".

```
.. flat-table:: Encoder Command Flags
    :header-rows:  0
    :stub-columns: 0
    :widths:       3 1 4

    * - ``V4L2_ENC_CMD_STOP_AT_GOP_END``
      - 0x0001
      - Stop encoding at the end of the current *Group Of Pictures*,
        rather than immediately.

        Does not apply to :ref:`encoder`.
```

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-encoder-cmd.rst, line 155`); *backlink*

Unknown interpreted text role "ref".

EBUSY

  A drain sequence of a device implementing the :ref:`encoder` is still in progress. It is not allowed to issue another encoder command until it completes.

EINVAL

> The `cmd` field is invalid.

EPERM

> The application sent a PAUSE or RESUME command when the encoder was not running.

EINVAL

> The `cmd` field is invalid.

EPERM

> The application sent a PAUSE or RESUME command when the encoder was not running.