

V4L2 poll()

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\linux-master [Documentation] [userspace-api] [media] [v4l] func-poll.rst, line 2)

Unknown directive type "c.namespace".

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

Name

v4l2-poll - Wait for some event on a file descriptor

Synopsis

```
#include <sys/poll.h>
```

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Unknown directive type "c.function".

```
.. c:function:: int poll( struct pollfd *ufds, unsigned int nfds, int timeout )
```

Arguments

Description

With the `c:func:poll()` function applications can suspend execution until the driver has captured data or is ready to accept data for output.

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When streaming I/O has been negotiated this function waits until a buffer has been filled by the capture device and can be dequeued with the `ref:VIDIOC_QBUF <VIDIOC_QBUF>` ioctl. For output devices this function waits until the device is ready to accept a new buffer to be queued up with the `ref:VIDIOC_QBUF <VIDIOC_QBUF>` ioctl for display. When buffers are already in the outgoing queue of the driver (capture) or the incoming queue isn't full (display) the function returns immediately.

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On success `c:func:poll()` returns the number of file descriptors that have been selected (that is, file descriptors for which the `revents` field of the respective `struct pollfd` structure is non-zero). Capture devices set the `POLLIN` and `POLLRDNORM` flags in the `revents` field, output devices the `POLLOUT` and `POLLWRNORM` flags. When the function timed out it returns a value of zero, on failure it returns -1 and the `errno` variable is set appropriately. When the application did not call `ref:VIDIOC_STREAMON <VIDIOC_STREAMON>` the `c:func:poll()` function succeeds, but sets the `POLLERR` flag in the `revents` field. When the application has called `ref:VIDIOC_STREAMON <VIDIOC_STREAMON>` for a capture device but hasn't yet called

`ref`VIDIOC_QBUF <VIDIOC_QBUF>`, the :func:`poll()` function succeeds and sets the POLLERR flag in the revents field. For output devices this same situation will cause :func:`poll()` to succeed as well, but it sets the POLLOUT and POLLWRNORM flags in the revents field.`

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If an event occurred (see `ref`VIDIOC_DQEVENT``) then `POLLPRI` will be set in the `revents` field and `:func:`poll()`` will return.

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When use of the `:func:`read()`` function has been negotiated and the driver does not capture yet, the `:func:`poll()`` function starts capturing. When that fails it returns a `POLLERR` as above. Otherwise it waits until data has been captured and can be read. When the driver captures continuously (as opposed to, for example, still images) the function may return immediately.

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When use of the `:c:func:`write()`` function has been negotiated and the driver does not stream yet, the `:c:func:`poll()`` function starts streaming. When that fails it returns a `POLLERR` as above. Otherwise it waits until the driver is ready for a non-blocking `:c:func:`write()`` call.

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If the caller is only interested in events (just `POLLPRI` is set in the `events` field), then `:c:func:`poll()`` will *not* start streaming if the driver does not stream yet. This makes it possible to just poll for events and not for buffers.

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All drivers implementing the `:c:func:`read()`` or `:c:func:`write()`` function or streaming I/O must also support the `:c:func:`poll()`` function.

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For more details see the `:c:func:`poll()`` manual page.

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Return Value

On success, `c:func:poll()` returns the number structures which have non-zero `revents` fields, or zero if the call timed out. On error -1 is returned, and the `errno` variable is set appropriately:

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EBADF

One or more of the `ufds` members specify an invalid file descriptor.

EBUSY

The driver does not support multiple read or write streams and the device is already in use.

EFAULT

`ufds` references an inaccessible memory area.

EINTR

The call was interrupted by a signal.

EINVAL

The `nfds` value exceeds the `RLIMIT_NOFILE` value. Use `getrlimit()` to obtain this value.