# ioctl VIDIOC_DBG_G_CHIP_INFO

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-dbg-g-chip-info.rst, line 2)

Unknown directive type "c:namespace".

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

## Name

VIDIOC_DBG_G_CHIP_INFO - Identify the chips on a TV card

## Synopsis

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Unknown directive type "c:macro".

```
.. c:macro:: VIDIOC_DBG_G_CHIP_INFO
```

```
int ioctl(int fd, VIDIOC_DBG_G_CHIP_INFO, struct v4l2_dbg_chip_info *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_dbg_chip_info`.

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Unknown interpreted text role "c:type".

## Description

**Note**

This is an :ref:`experimental` interface and may change in the future.

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Unknown interpreted text role "ref".

For driver debugging purposes this ioctl allows test applications to query the driver about the chips present on the TV card. Regular applications must not use it. When you found a chip specific bug, please contact the linux-media mailing list (https://linuxtv.org/lists.php) so it can be fixed.

Additionally the Linux kernel must be compiled with the CONFIG_VIDEO_ADV_DEBUG option to enable this ioctl.

To query the driver applications must initialize the match.type and match.addr or match.name fields of a struct :c:type:`v4l2_dbg_chip_info` and call :ref:`VIDIOC_DBG_G_CHIP_INFO` with a pointer to this structure. On success the driver stores information about the selected chip in the name and flags fields.

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Unknown interpreted text role "c:type".

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Unknown interpreted text role "ref".

When match.type is V4L2_CHIP_MATCH_BRIDGE, match.addr selects the nth bridge 'chip' on the TV card. You can enumerate all chips by starting at zero and incrementing match.addr by one until :ref:`VIDIOC_DBG_G_CHIP_INFO` fails with an EINVAL error code. The number zero always selects the bridge chip itself, e. g. the chip connected to the PCI or USB bus. Non-zero numbers identify specific parts of the bridge chip such as an AC97 register block.

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Unknown interpreted text role "ref".

When match.type is V4L2_CHIP_MATCH_SUBDEV, match.addr selects the nth sub-device. This allows you to enumerate over all sub-devices.

On success, the name field will contain a chip name and the flags field will contain V4L2_CHIP_FL_READABLE if the driver supports reading registers from the device or V4L2_CHIP_FL_WRITABLE if the driver supports writing registers to the device.

We recommended the v4l2-dbg utility over calling this ioctl directly. It is available from the LinuxTV v4l-dvb repository; see https://linuxtv.org/repo/ for access instructions.

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Unknown directive type "tabularcolumns".

```
.. tabularcolumns:: |p{3.5cm}|p{3.5cm}|p{3.5cm}|p{6.6cm}|
```

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Unknown directive type "flat-table".

```
.. flat-table:: struct v4l2_dbg_match
    :header-rows:  0
    :stub-columns: 0
    :widths:       1 1 2

    * - __u32
      - ``type``
      - See :ref:`name-chip-match-types` for a list of possible types.
    * - union {
      - (anonymous)
    * - __u32
      - ``addr``
      - Match a chip by this number, interpreted according to the ``type``
        field.
    * - char
```

```
      - ``name[32]``
      - Match a chip by this name, interpreted according to the ``type``
        field. Currently unused.
    * - }
      -
```

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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 "c:type".

```
.. c:type:: v4l2_dbg_chip_info
```

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Unknown directive type "flat-table".

```
.. flat-table:: struct v4l2_dbg_chip_info
    :header-rows:  0
    :stub-columns: 0
    :widths:       1 1 2

    * - struct v4l2_dbg_match
      - ``match``
      - How to match the chip, see :ref:`name-v4l2-dbg-match`.
    * - char
      - ``name[32]``
      - The name of the chip.
    * - __u32
      - ``flags``
      - Set by the driver. If ``V4L2_CHIP_FL_READABLE`` is set, then the
        driver supports reading registers from the device. If
        ``V4L2_CHIP_FL_WRITABLE`` is set, then it supports writing
        registers.
    * - __u32
      - ``reserved[8]``
      - Reserved fields, both application and driver must set these to 0.
```

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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:: Chip Match Types
    :header-rows:  0
    :stub-columns: 0
    :widths:       3 1 4
```

```
* - ``V4L2_CHIP_MATCH_BRIDGE``
  - 0
  - Match the nth chip on the card, zero for the bridge chip. Does not
    match sub-devices.
* - ``V4L2_CHIP_MATCH_SUBDEV``
  - 4
  - Match the nth sub-device.
```

## 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 `match_type` is invalid or no device could be matched.