Radio Interface

This interface is intended for AM and FM (analog) radio receivers and transmitters.

Conventionally V4L2 radio devices are accessed through character device special files named `/dev/radio` and `/dev/radio0` to `/dev/radio63` with major number 81 and minor numbers 64 to 127.

Querying Capabilities

Devices supporting the radio interface set the `V4L2_CAP_RADIO` and `V4L2_CAP_TUNER` or `V4L2_CAP_MODULATOR` flag in the `capabilities` field of struct :c:type:`v4l2_capability` returned by the :ref:`VIDIOC_QUERYCAP` ioctl. Other combinations of capability flags are reserved for future extensions.

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Supplemental Functions

Radio devices can support :ref:`controls <control>`, and must support the :ref:`tuner or modulator <tuner>` ioctls.

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They do not support the video input or output, audio input or output, video standard, cropping and scaling, compression and streaming parameter, or overlay ioctls. All other ioctls and I/O methods are reserved for future extensions.

Programming

Radio devices may have a couple audio controls (as discussed in :ref:`control`) such as a volume control, possibly custom controls. Further all radio devices have one tuner or modulator (these are discussed in :ref:`tuner`) with index number zero to select the radio frequency and to determine if a monaural or FM stereo program is received/emitted. Drivers switch automatically between AM and FM depending on the selected frequency. The :ref:`VIDIOC_G_TUNER <VIDIOC_G_TUNER>` or :ref:`VIDIOC_G_MODULATOR <VIDIOC_G_MODULATOR>` ioctl reports the supported frequency range.

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