Image Formats

The V4L2 API was primarily designed for devices exchanging image data with applications. The struct :c:type:`v4l2_pix_format` and struct :c:type:`v4l2_pix_format_mplane` structures define the format and layout of an image in memory. The former is used with the single-planar API, while the latter is used with the multi-planar version (see :ref:`planar-apis`). Image formats are negotiated with the :ref:`VIDIOC_S_FMT <VIDIOC_G_FMT>` ioctl. (The explanations here focus on video capturing and output, for overlay frame buffer formats see also :ref:`VIDIOC_G_FBUF <VIDIOC_G_FBUF>`.)

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]pixfmt.rst, line 8); *backlink*

Unknown interpreted text role "c:type".

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]pixfmt.rst, line 8); *backlink*

Unknown interpreted text role "c:type".

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\v4l\[linux-master][Documentation][userspace-api][media][v4l]pixfmt.rst, line 8); *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]pixfmt.rst, line 8); *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]pixfmt.rst, line 8); *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]pixfmt.rst, line 19)

Unknown directive type "toctree".

```
.. toctree::
    :maxdepth: 1

    pixfmt-v4l2
    pixfmt-v4l2-mplane
    pixfmt-intro
    pixfmt-indexed
    pixfmt-rgb
    pixfmt-bayer
    yuv-formats
    hsv-formats
    depth-formats
    pixfmt-compressed
    sdr-formats
    tch-formats
    meta-formats
    pixfmt-reserved
    colorspaces
    colorspaces-defs
    colorspaces-details
```