

Luma-Only Formats

This family of formats only store the luma component of a Y'CbCr image. They are often referred to as greyscale formats.

Note

- In all the tables that follow, bit 7 is the most significant bit in a byte.
- Formats are described with the minimum number of pixels needed to create a byte-aligned repeating pattern.
... indicates repetition of the pattern.
- $Y'_x[9:2]$ denotes bits 9 to 2 of the Y' value for pixel at column x .
- 0 denotes padding bits set to 0.

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-yuv-luma.rst, line 26)

Unknown directive type "tabularcolumns".

```
.. tabularcolumns:: |p{3.6cm}|p{3.0cm}|p{1.3cm}|p{2.6cm}|p{1.3cm}|p{1.3cm}|p{1.3cm}|
```

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-yuv-luma.rst, line 28)

Unknown directive type "flat-table".

```
.. flat-table:: Luma-Only Image Formats
   :header-rows: 1
   :stub-columns: 0

   * - Identifier
     - Code
     - Byte 0
     - Byte 1
     - Byte 2
     - Byte 3
     - Byte 4

   * .. _V4L2-PIX-FMT-GREY:

     - ``V4L2_PIX_FMT_GREY``
     - 'GREY'

     -  $Y'\backslash :sub:0\backslash [7:0]$ 
     - ...
     - ...
     - ...
     - ...

   * .. _V4L2-PIX-FMT-Y10:

     - ``V4L2_PIX_FMT_Y10``
     - 'Y10'

     -  $Y'\backslash :sub:0\backslash [7:0]$ 
     -  $000000\backslash Y'\backslash :sub:0\backslash [9:8]$ 
     - ...
     - ...
     - ...

   * .. _V4L2-PIX-FMT-Y10BPack:

     - ``V4L2_PIX_FMT_Y10BPack``
     - 'Y10B'

     -  $Y'\backslash :sub:0\backslash [9:2]$ 
     -  $Y'\backslash :sub:0\backslash [1:0]$   $Y'\backslash :sub:1\backslash [9:4]$ 
     -  $Y'\backslash :sub:1\backslash [3:0]$   $Y'\backslash :sub:2\backslash [9:6]$ 
     -  $Y'\backslash :sub:2\backslash [5:0]$   $Y'\backslash :sub:3\backslash [9:8]$ 
     -  $Y'\backslash :sub:3\backslash [7:0]$ 

   * .. _V4L2-PIX-FMT-Y10P:
```

```

- ``V4L2_PIX_FMT_Y10P``
- 'Y10P'

- Y'\ :sub:`0`\ [9:2]
- Y'\ :sub:`1`\ [9:2]
- Y'\ :sub:`2`\ [9:2]
- Y'\ :sub:`3`\ [9:2]
- Y'\ :sub:`3`\ [1:0] Y'\ :sub:`2`\ [1:0] Y'\ :sub:`1`\ [1:0] Y'\ :sub:`0`\ [1:0]

* .. _V4L2-PIX-FMT-Y12:

- ``V4L2_PIX_FMT_Y12``
- 'Y12 '

- Y'\ :sub:`0`\ [7:0]
- `0000` Y'\ :sub:`0`\ [11:8]
- ...
- ...
- ...

* .. _V4L2-PIX-FMT-Y14:

- ``V4L2_PIX_FMT_Y14``
- 'Y14 '

- Y'\ :sub:`0`\ [7:0]
- `00` Y'\ :sub:`0`\ [13:8]
- ...
- ...
- ...

* .. _V4L2-PIX-FMT-Y16:

- ``V4L2_PIX_FMT_Y16``
- 'Y16 '

- Y'\ :sub:`0`\ [7:0]
- Y'\ :sub:`0`\ [15:8]
- ...
- ...
- ...

* .. _V4L2-PIX-FMT-Y16-BE:

- ``V4L2_PIX_FMT_Y16_BE``
- 'Y16 ' | (1U << 31)

- Y'\ :sub:`0`\ [15:8]
- Y'\ :sub:`0`\ [7:0]
- ...
- ...
- ...

```

Note

For the Y16 and Y16_BE formats, the actual sampling precision may be lower than 16 bits. For example, 10 bits per pixel uses values in the range 0 to 1023.