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 colum *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'\ :sub:`0`\ [7:0]
      - ...
      - ...
      - ...
      - ...

    * .. _V4L2-PIX-FMT-Y10:

      - ``V4L2_PIX_FMT_Y10``
      - 'Y10 '

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

    * .. _V4L2-PIX-FMT-Y10BPACK:

      - ``V4L2_PIX_FMT_Y10BPACK``
      - 'Y10B'

      - Y'\ :sub:`0`\ [9:2]
      - Y'\ :sub:`0`\ [1:0] Y'\ :sub:`1`\ [9:4]
      - Y'\ :sub:`1`\ [3:0] Y'\ :sub:`2`\ [9:6]
      - Y'\ :sub:`2`\ [5:0] Y'\ :sub:`3`\ [9:8]
      - Y'\ :sub:`3`\ [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.