

V4L2_PIX_FMT_M420 ('M420')

Format with $\hat{A}^{1/2}$ horizontal and vertical chroma resolution, also known as YUV 4:2:0. Hybrid plane line-interleaved layout.

Description

M420 is a YUV format with $\hat{A}^{1/2}$ horizontal and vertical chroma subsampling (YUV 4:2:0). Pixels are organized as interleaved luma and chroma planes. Two lines of luma data are followed by one line of chroma data.

The luma plane has one byte per pixel. The chroma plane contains interleaved CbCr pixels subsampled by $\hat{A}^{1/2}$ in the horizontal and vertical directions. Each CbCr pair belongs to four pixels. For example, Cb₀/Cr₀ belongs to Y'₀₀, Y'₀₁, Y'₁₀, Y'₁₁.

All line lengths are identical: if the Y lines include pad bytes so do the CbCr lines.

Byte Order. Each cell is one byte.

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-m420.rst, line 33)

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```
.. flat-table::
   :header-rows: 0
   :stub-columns: 0

   * - start + 0:
     - Y'\ :sub:`00`
     - Y'\ :sub:`01`
     - Y'\ :sub:`02`
     - Y'\ :sub:`03`
   * - start + 4:
     - Y'\ :sub:`10`
     - Y'\ :sub:`11`
     - Y'\ :sub:`12`
     - Y'\ :sub:`13`
   * - start + 8:
     - Cb\ :sub:`00`
     - Cr\ :sub:`00`
     - Cb\ :sub:`01`
     - Cr\ :sub:`01`
   * - start + 16:
     - Y'\ :sub:`20`
     - Y'\ :sub:`21`
     - Y'\ :sub:`22`
     - Y'\ :sub:`23`
   * - start + 20:
     - Y'\ :sub:`30`
     - Y'\ :sub:`31`
     - Y'\ :sub:`32`
     - Y'\ :sub:`33`
   * - start + 24:
     - Cb\ :sub:`10`
     - Cr\ :sub:`10`
     - Cb\ :sub:`11`
     - Cr\ :sub:`11`
```

Color Sample Location: Chroma samples are `.ref: interstitially sited<yuv-chroma-centered>` horizontally and vertically.

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-m420.rst, line 69); [backlink](#)

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