

## Apple Studio Display

The iMac Pro does have Alpine Ridge. Scroll to the first NHI in the parsed ioreg output and look at the [database](#). Scroll up to the upstream bridge which is 8086:1578 and the downstream is 8086:1579.

The EDID for the display says it support RGB and 4:2:2 but says nothing about 4:2:0. I suppose between the HBR2 RGB 8bpc max (720 MHz) and the HBR2 4:2:2 8bpc max (1080 MHz) to see add a 4:2:2 mode.

It says it supports modes with refresh rates from 24 to 75Hz but then says it supports refresh wrong since you are using 6.1K30Hz.

The EDID has the resolution of the XDR (6016x3384) and the 5K but they are only at 60Hz. For 30Hz HDMI timing.

I can't tell if the display supports HBR3 or not. 02201h says HBR which is wrong since you are limited to HBR2 from an Intel Mac that supports HBR3 to check this (maybe the Alpine Ridge is affecting this) limited to HBR2 since that's all that's required to support 6K60. But the user manual says it supports HBR3 then you could get RGB 10bpc at 30Hz instead of the 8bpc that you are getting now at 30Hz. 8bpc.

IOFBTimingRange of the GPU says it can support up to 1080MHz which is the limit of HBR3 8bpc. I don't know about Alpine Ridge. 1080MHz is also the limit for HBR2 4:2:2 8bpc but IOFBTimingRange says it supports 4:4:4, and 4:2:0. IOFBTimingRange says the GPU doesn't support DSC as expected.

The DPCD shows the display supports DSC. EDID would mention DSC only for HDMI 2.1 inputs. It would be interesting. HDMI might include 4:2:0 modes.

## Dell U3224KB:

The iMac Pro does have Alpine Ridge. Scroll to the first NHI in the parsed ioreg output and lookup 8086:15d2. Scroll up to the upstream bridge which is 8086:1578 and the downstream is 8086:15d2.

The EDID for the display says it support RGB and 4:2:2 but says nothing about 4:2:0. I suppose you could between the HBR2 RGB 8bpc max (720 MHz) and the HBR2 4:2:2 8bpc max (1080 MHz) to see if macOS is add a 4:2:2 mode.

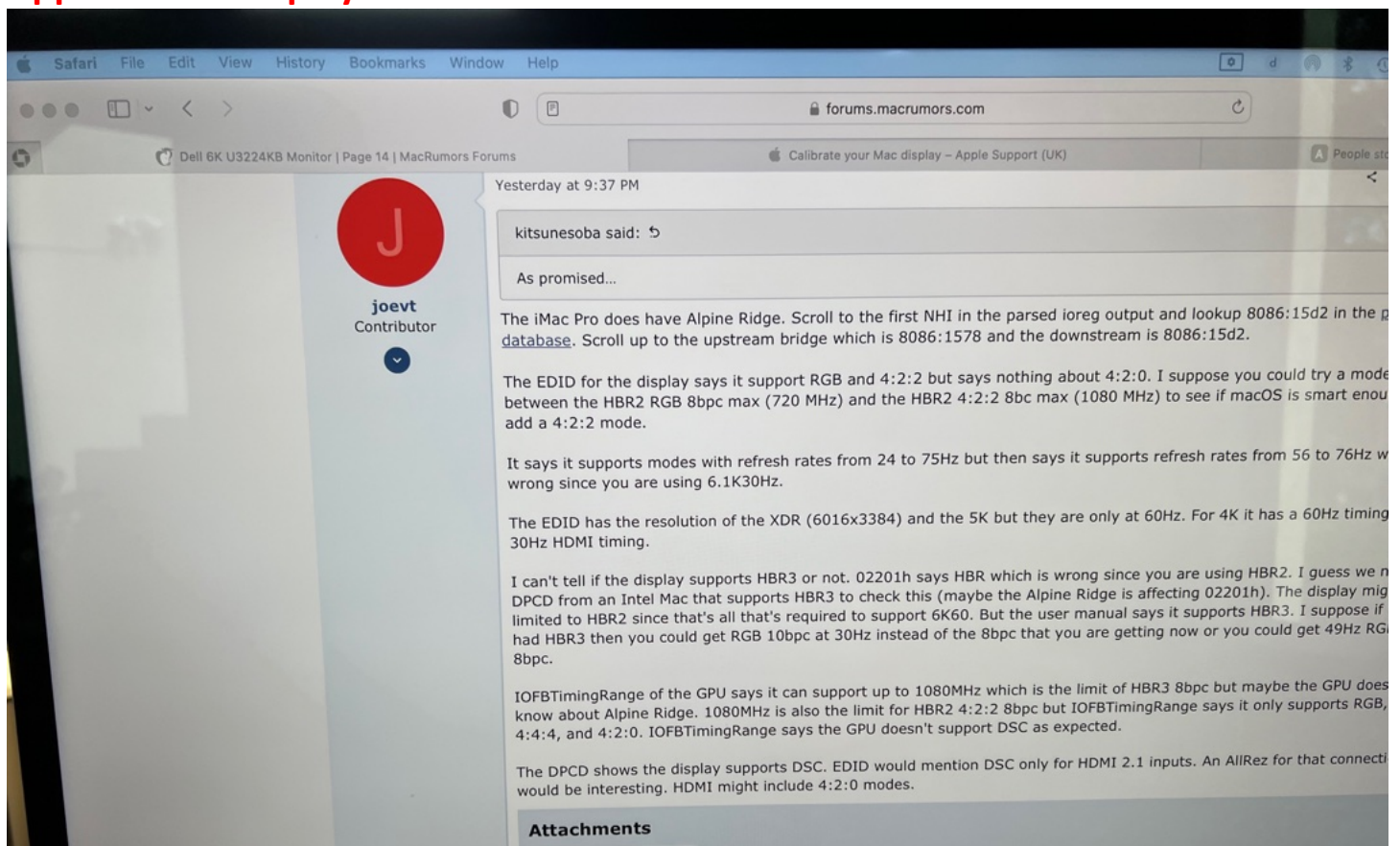
It says it supports modes with refresh rates from 24 to 75Hz but then says it supports refresh rates from 51 wrong since you are using 6.1K30Hz.

The EDID has the resolution of the XDR (6016x3384) and the 5K but they are only at 60Hz. For 4K it has a 60Hz HDMI timing.

I can't tell if the display supports HBR3 or not. 02201h says HBR which is wrong since you are using HBR2. I have an Intel Mac that supports HBR3 to check this (maybe the Alpine Ridge is affecting 02201h). The spec is limited to HBR2 since that's all that's required to support 6K60. But the user manual says it supports HBR3. I have HBR3 then you could get RGB 10bpc at 30Hz instead of the 8bpc that you are getting now or you could go 8bpc.

IOFBTimingRange of the GPU says it can support up to 1080MHz which is the limit of HBR3 8bpc but maybe the know about Alpine Ridge. 1080MHz is also the limit for HBR2 4:2:2 8bpc but IOFBTimingRange says it can support up to 1080MHz which is the limit of HBR3 8bpc but maybe the know about Alpine Ridge.

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## Dell U3224KB:

