

From: Richard Kahn <[REDACTED]>

To: "jeffrey E." <jeevacation@gmail.com>

Subject: James - Boss asked about large retina external monitors

Date: Mon, 20 Jul 2015 17:29:48 +0000

please advise if we should wait for next macbook pro which james hopes will have thunderbolt 3 or purchase a new external monitor now
if now please advise if you have a preference

[REDACTED]
[atclk=5K%2f4K_4K&ci=6559&Ns=p_OVER_ALL_RATE%7c1&N=3878805754+4294949059+3842765824+4024287381+4109119978+4294949005&origSearch=4k%20monitors](#)

Richard Kahn

[REDACTED]

Begin forwarded message:

From: james ce | personal genius <[REDACTED]>

Subject: Boss asked about large retina external monitors

Date: July 20, 2015 at 1:08:39 PM EDT

To: Richard Kahn <[REDACTED]>

The appt with the boss went quickly this morning; I adjusted the FlashBlock settings in Firefox so YouTube worked correctly, we dug out the hidden edit controls in Photos.app (the iPhoto replacement) and we spoke about the overdue AppleTV refresh — I showed him that he could pair the iOS Remote.app on his phone to control the AppleTV (he complained about the horrid AppleTV remote).

He also asked about connecting his MacBook Pro to a large, retina quality external display. I mistakenly told him that native 4K resolution wasn't supported in the current version of the mini-displayport in the Macs. According to [this Apple TechNote](#) his current machine ****will**** support 4K (3840x2160) displays at 60 Mhz. (The slightly larger 4096x2160 displays are supported at 60Hz in the newest MacBook Pro with the upgraded video card.)

To go higher than 4096x2160 resolution ****WILL**** require the next version of Thunderbolt 3.0 / DisplayPort 1.3 adapter.

Upshot: we could get an external display for his laptop, but we can't go too large without the image quality suffering. His Retina MacBook Pro's built-in display has a PPI (pixel per inch) density of 220; the previous,

non-retina MacBook Pro had a PPI of 129.

With a max output of 3840x2160, once we go above ~30", the display will be noticeably not-retina, and over 34" it will have lower resolution than a non-retina MacBook Pro.

Here's how the PPI for 4K displays breakdown by size:

110" = 40 PPI
84" = 53 PPI
75" = 59 PPI
65" = 68 PPI
55" = 80 PPI
46" = 96 PPI
40" = 110 PPI
32" = 138 PPI
30" = 147 PPI
27" = 163 PPI
23" = 192 PPI

I expect the new MacBook Pros released this fall to include Thunderbolt 3 / DisplayPort 1.3 and support higher resolution displays. (It wouldn't surprise me for Apple to release a 27" 5K display shortly after.)

■ recommend waiting for the new MacBook Pro, but if the boss would like to get an external monitor now, B&H has a selection of suitable options here ■



James Ce
your Personal Genius

