What is Tandem OLED on the new iPad Pro M4?

Interestingly, the iPad Pro 2024 has the highly anticipated OLED display which Apple calls 'Tandem OLED'. Since this term is not very common, many people may wonder what it is and how it makes the new iPad Pro special.

Apple launched the new iPad Pro M4 at its 'Let Loose' event on May 7. For the past 6 years, the iPad Pro line has boasted Apple's leading display technology, starting with the ProMotion LED display and last Let's stop at the mini-LED panel. Interestingly, the iPad Pro 2024 has the highly anticipated OLED display which Apple calls 'Tandem OLED'. Since this term is not very common, many people may wonder what it is and how it makes the new iPad Pro special. Join TipsMake to find the answer through the following article!

What is Tandem OLED?

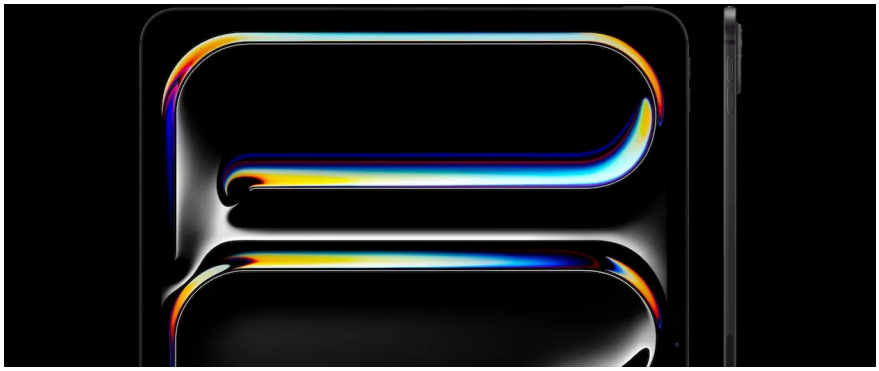
Before discussing Tandem OLED, let's briefly understand OLED screens. The term 'OLED' stands for Organic Light Emitting Diodes, which consist of organic electroluminescent films, which emit light when an electric current passes through them. In an OLED display, each pixel has its own light source, and each pixel can be turned off individually for deep, perfect blacks.

Tandem OLED panels have multiple OLED screens stacked on top of each other. This is what Apple did with the Ultra Retina XDR OLED display on the iPad Pro 2024. Apple says the Ultra XDR Retina Display uses two OLED panels, combining light from both to enhance the overall brightness of the screen .

This setup ensures all the benefits of the OLED panel are taken advantage of without sacrificing brightness. In fact, this helps increase overall brightness for SDR and HDR content. Additionally, it delivers perfect blacks, better contrast, and other benefits.

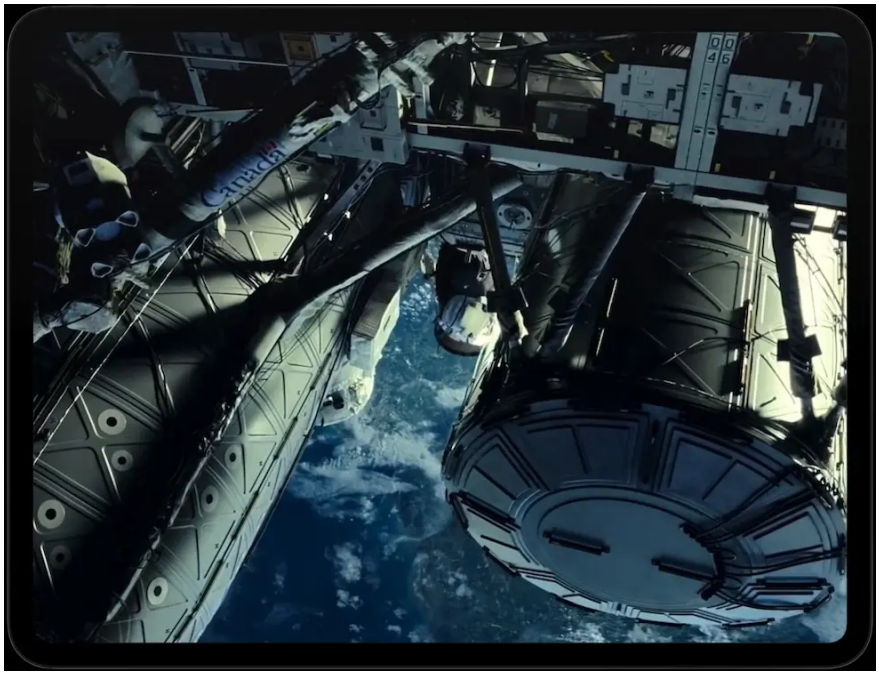
Benefits of Tandem OLED on the new iPad Pro M4

1. Perfect black color



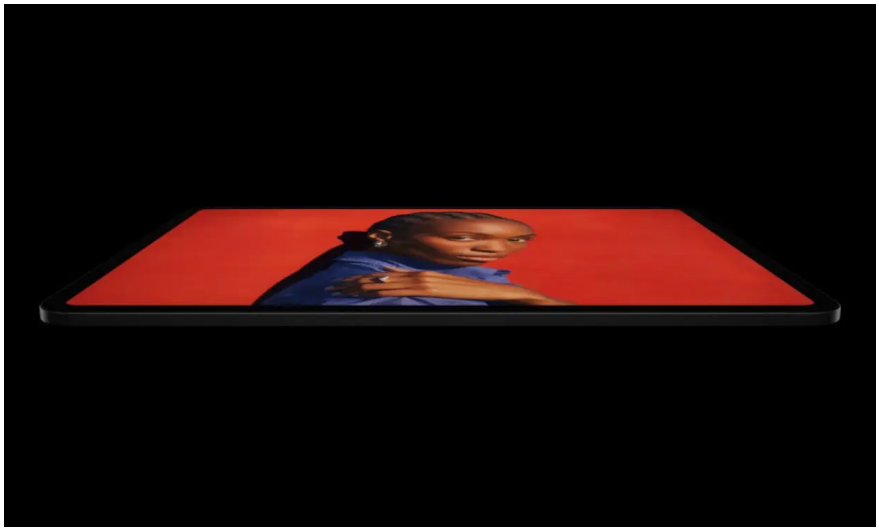
One of the most outstanding features of OLED panels is the ability to display deep and perfect blacks. OLED screens can completely turn off individual pixels. This will allow the iPad Pro OLED to display perfect black when needed and appropriate. Well, this is something that LCD and mini-LED screens cannot do. With Tandem structure, the new iPad Pro will deliver the most realistic black levels without experiencing any glare or glare problems that OLED often has.

2. Better contrast ratio



Another interesting feature of OLED screens is their high contrast ratio. Again, thanks to individual translucent pixels, iPad Pro OLED is able to deliver better contrast than the mini-LED displays found on previous models. Now, higher contrast ratios mean users will experience more vibrant colors, improved readability, and better image quality on the latest iPad Pro.

3. Higher brightness level

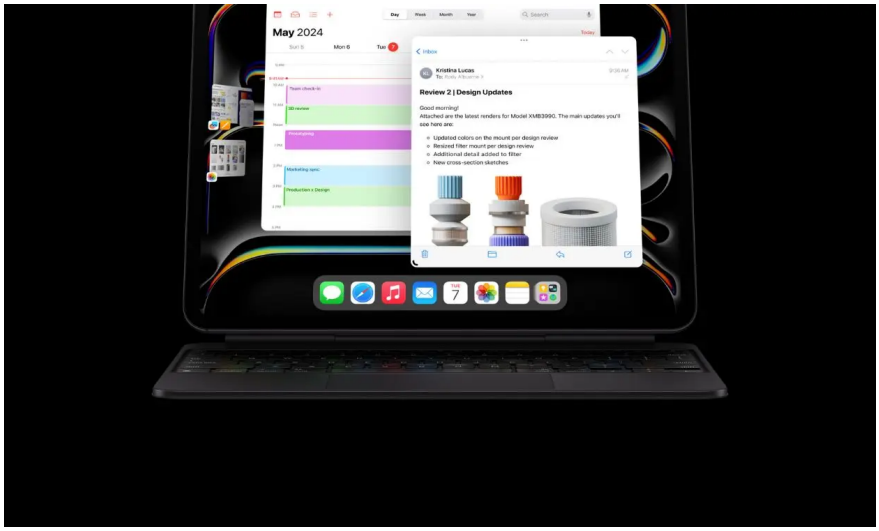


As discussed above, the dual stacking technology in Tandem OLED panels has two layers of organic light-emitting diodes stacked on top of each other. The display combines light from both diodes to deliver impressive full-screen brightness. Compared to the previous iPad Pro (2022) that supported 600 nits brightness, the new iPad Pro supports an incredible full-screen brightness: 1000 nits for SDR and HDR content. Additionally, the maximum brightness for HDR is 1600 nits. Currently, there is no other device in its class capable of delivering this impressively high dynamic range.

4. Improve movement performance

With Tandem OLED display, M4 iPad Pro can deliver better motion performance. Compared to LCD screens, OLED offers smooth and seamless transitions between frames. As a result, OLED displays respond faster to moving content and manage motion blur better. This makes a huge difference when watching fast-paced action movies or playing high-speed games. With improved motion performance and a powerful M4 chip on board, the new iPad Pro also makes a good display for gaming.

5. Better viewing angles



Compared to LCD and mini-LED screens, OLED screens offer better and more comfortable viewing angles. This won't make much of a difference when watching movies or scrolling content on the latest iPad Pro OLED, but when you watch with your siblings or friends, they'll have a better viewing angle. There won't be any major changes in contrast, color or overall image quality.

That's all about Tandem OLED on the new iPad Pro. While OLEDs offer a number of benefits over existing display technologies, they are also susceptible to burn-in. Hopefully Apple has found a way to mitigate this problem with some advanced techniques. After all, the company cannot take any risks with its flagship, high-end tablet line. Don't forget, the two stacked OLED screens promise a longer lifespan. So no need to worry too much.