

What is HDR10+ Adaptive technology? How does it affect the display quality of the screen?

If you're looking to buy a new monitor or TV, you've probably seen a technology called 'HDR10+ Adaptive'.

HDR10+ Adaptive is touted as a breakthrough display support solution that delivers an enhanced HDR experience regardless of room lighting conditions. But how does this new technology work and how does it differ from Dolby Vision IQ? Let's find out right here.

Automatically adjust HDR content according to ambient light conditions

HDR, which stands for High Dynamic Range, is a technology designed to make images as similar to the real world as possible. HDR is considered the solution to support optimal display quality in moderate light environments, such as in closed rooms or cinemas. This is because HDR content has a wider color gamut, brighter highlights and darker blacks, along with an optimally balanced contrast ratio.

However, unless you have set up a home cinema room, it is difficult to control the lighting optimally, and the amount of light in the room can also change dynamically, such as when you light on/off, or close/open windows... Ambient light greatly affects the display quality from the screen to the eyes, as well as the viewing experience. For instance, too much ambient light can make it difficult to perceive certain shadow details in a scene.

To mitigate this problem, HDR10+ Technologies, the organization responsible for developing and maintaining HDR10+ technology, launched the HDR10+ Adaptive feature in January 2021. As the name suggests, This feature can help automatically optimize HDR10+ content for the best experience according to the lighting conditions of the room.



It does this using dynamic metadata embedded in HDR10+ content, and real-time ambient light information from a sensor fitted on the TV. When the light in the room changes, the sensor will transmit that information to the processor, HDR10+ Adaptive will immediately be activated and adjust the brightness and contrast of the image accordingly to provide the most optimal experience. for viewers.

HDR10+ Technologies says this feature can help make the most of very dark scenes in very bright lighting conditions – a hugely worthwhile benefit. In addition, HDR10+ Adaptive does not affect creative purposes at all. It also works well with features like Filmmaker Mode, which helps creators best convey their intent on each scene to viewers.

HDR10+ Adaptive and Dolby Vision IQ

HDR10+ isn't the first HDR standard to offer a feature like HDR10+ Adaptive. Dolby announced the Dolby Vision IQ feature in early 2020, which also essentially works by optimizing HDR content according to the lighting conditions of the screen's surroundings.

Most of the benefits that HDR10+ Adaptive and Dolby Vision IQ support are quite similar. But there are still a few minor differences. For example, Dolby Vision IQ can identify HDR content genres and switch to the appropriate preset pack for better picture quality adjustment. In addition, it can also choose the right color temperature based on the scene content. Meanwhile, HDR10+ Adaptive does not include the same functions.



Both HDR10+ Adaptive and Dolby Vision IQ are compatible only with content created specifically for their HDR standards. So, HDR10+ Adaptive only works with HDR10+ content and Dolby Vision IQ will also only work with Dolby Vision content.

How to experience HDR10+ Adaptive?

To experience HDR10+ Adaptive, you'll need a compatible TV and any HDR10+ content. As soon as you start playing HDR10+ content, it automatically kicks in and optimizes picture quality according to ambient light conditions.

While HDR10+ content is not as widely available as Dolby Vision content, its availability is slowly increasing. You can find HDR10+ content on Amazon Prime Video, Paramount+, YouTube, Google Play Movies, iTunes, Blu-ray discs, etc.

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