Technical Introduction



AdobeRGB displays with professional-grade color spaces and 12-bit color engines by ViewSonic

You need a monitor that can show your work's true colors.

Today there is a growing demand for monitors that can match the sophisticated color spaces of cameras, graphic cards, software, color engines and printing equipment, and at the same time allow for real-time color proofing throughout the creative process. Professional users everywhere need a monitor that accurately processes, renders and displays images, while improving efficiency and improving color quality control.

ViewSonic, a 25-year display expert, is launching the VP2772, an AdobeRGB professional display that covers 99% of the AdobeRGB wide color gamut and boasts a powerful 12-bit color engine with a 14-bit look-up table (LUT). This means that it can faithfully process 68 million colors to precisely resemble original HD images, together with ultra-smooth color gradation. The result is faithfully displayed high-definition 12-bit media content without any loss of quality.

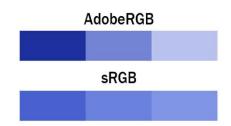
ViewSonic's rich-color technology yields 99% AdobeRGB color space

With the capability to accurately display 99% of the rich, true colors of the AdobeRGB color gamut, what you see is what you get with the VP2772. ViewSonic's rich-color technology lets you display your content on desktops, exhibitions and studios with all the colors they were intended to have. This means your original high-resolution images are depicted exactly as they were saved – in the format in which they were saved.

The VP2772 not only displays 99% of the AdobeRGB color space, but 100% of the sRGB color space and virtually 100% of the entire CMYK color space. This feature makes this display suitable for CAD/CAM drawing, graphic design work, desktop publishing, media creation and more.

The Difference between AdobeRGB and sRGB

Standard RGB, or sRGB, is the industry color management standard for the Internet, video games and applications, as well as the majority of mobile and digital devices. Furthermore, most traditional computer monitors can only display about 97% of the sRGB color space, and only 76% of the AdobeRGB color space. But this is set to change as AdobeRGB display technology becomes more available.

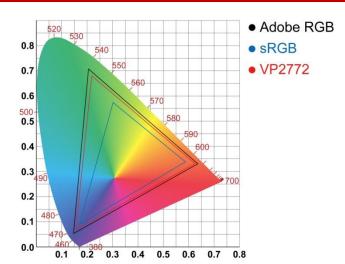


How does the AdobeRGB wide color space benefit you?

It's all about the colors. The AdobeRGB color standard is the super-wide color gamut that photographers, designers, engineers and other creative professionals rely on to manage a broader range of colors at every stage of their work flow. These professionals know that colors can be compromised at each stage of the production process as files are moved from cameras and scanners to printers or other digital equipment. All these devices need to be set to the AdobeRGB color space – and your monitor is no exception.

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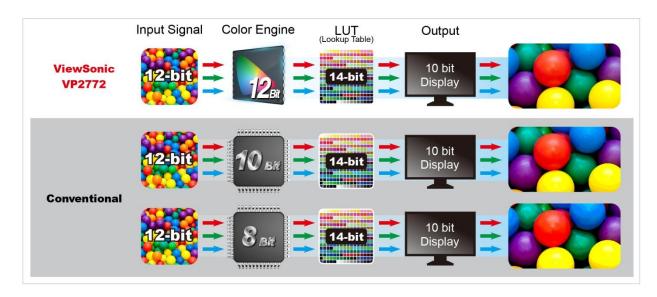


If you're creating images specifically for print, the advantages of the AdobeRGB color space are even clearer. This wider-than-sRGB color space offers a much greater range of color for the images you take. As you can see from the color reproduction area comparison graph of the left figure, AdobeRGB has greater range in some parts of the color reproduction area, such as from blue to green. And the AdobeRGB color gamut almost completely covers the CMYK color gamut specifications for print work.

A 12-bit color engine that accurately processes 68 billion colors

Up until now, the true color potential of HD content was never displayed to its full potential because monitors could only display 8-bit or 10-bit color. Now, ViewSonic's 10-bit color displays offer a 12-bit color engine and 14 bit LUT to handle 12-bit content from HDMI input sources. These 12-bit sources are processed and then smoothly color graded using 4,096 grayscales per RGB channel on a 14-bit LUT before being displayed on the screen.

Most conventional displays only have an 8-bit color engine. Composed of two parts — a 12-bit color engine and a 14-bit LUT — the 12-bit color engine can process 12-bit media sources before they are precisely color graded by the 14-bit LUT. Conversely, the color engine can process 8-bit or 10-bit input sources and expand their color range, thus simulating richer colors that are displayed on the screen, as illustrated in Figure 2.



Less color proofing and more peace of mind for design professionals

Because professional users need to rely on accurate and consistent color and image output in real time, and at all stages of production, the monitor is the most important piece of equipment for handling color processing. The VP2772 display's QHD IPS panel technology is now the display type of choice for

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professionals in the graphic design, video editing, engineering, medical diagnostic and financial trading industries.

Users like these require a display with advanced color reproduction capability that ensures color precision and consistency, coupled with the ability to see exactly how the final product will look like. ViewSonic's wide-gamut color and advanced color engine technologies enable you to faithfully restore nature's richest, most vibrant colors and display them on-screen. The VP2772 is the display you need to show your best images in the best way.

ViewSonic product offering: VP2772

The VP2772 is the perfect display for graphic designers, CAD/CAM users and other creative professionals.



- Resolution: QHD, 2560 x 1440
- Color Depth: 10 bits, 1.07 Billion Colors
- Color Range: 99% AdobeRGB
- Viewing Angle: 178°/ 178°
- Color Accuracy: Delta $E \leq 3$
- Color Engine: 12 bit
- LUT (look up table): 14 bit
- Input: HDMI 1.4, DisplayPort 1.2 x 1, Mini DisplayPort
 - 1.2 x 1, USB 3.0 x 4
- Output: DisplayPort 1.2 x 1