

# WHY SAMSUNG LED DISPLAYS ARE A **GREAT FIT** FOR THE RETAIL MARKET

Innovative features of Samsung LED displays that produce eye-catching content are sure to draw in even the most casual passerby making it a great fit for the retail market.



*Samsung has taken its LED technology to the next level with features such as Dynamic Peaking Technology, Color Management and Scene Adaptive HDR Technology, each of which can pay dividends in the competitive retail market.*

**TODAY'S RETAIL CUSTOMERS** are sophisticated media consumers. They expect high-quality, visually engaging content and digital signage that's on par. In order to make your business stand out in a crowded market, it is necessary to provide the best experience for prospective customers—and that includes technology.

Business owners no longer feel satisfied with what they have," says Eric Lee, director of Samsung Electronics' LED signage product planning group.

So those business owners are beginning to evaluate the benefits of newer, more powerful digital signage solutions, particularly those offered by LED displays.

"LED technology has significantly improved—and is no longer behind conventional LCD signage in terms of picture quality and the capability to display 4K and HDR content," Lee says.

In fact, improvements in the tech-

nology coupled with the advantages of a bezel-less design and ultra-high brightness make Samsung LED displays a standout choice that surpasses conventional LCD displays. Research by IHS Markit shows LED signage sales

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escalating sharply with the retail market asserting itself as the largest LED signage destination, reflecting nearly a third of the retail market share.

Retailers recognize that powerful digital signage helps them tap into customers' emotions which affect consumer purchasing behavior. As such, retailers invest in LED signage to:

- Improve customer experience
- Amplify branding
- Differentiate from competitors

LED digital signage helps move these objectives along by enhancing consumer attraction with visual appeal and digital engagement often via mobile connectivity.

Samsung in particular has taken its LED line to the next level with the addition of three unique features that make the displays a great fit for the retail market.

## **Dynamic Peaking Technology**

Dynamic Peaking technology increases the brightness of the entire content on the display.

"For content with a full white background, [it] makes the content highly visible and vivid despite the high brightness of the ambient light," Lee says. "It sends the power consumption from the dark [part] to the bright part. For content with low gray scale level, peak brightness increases sharply."

By choosing a display with Dynamic Peaking technology, you can ensure that your digital signage produces the best possible viewing experience and delivers eye-catching content at any time, despite lighting challenges that may be beyond your control.

### **Color Management in Samsung LED displays**

Color Management enables the display to depict a wide array of brilliant colors with greater precision. This feature has become particularly important as content has evolved. With Color Management, the user can select color values that best display content according to environmental needs. While some LED displays still struggle to show colors in their intended form, the Samsung LED displays line has solved that issue.

"Samsung's LED Color Management leverages specialized algorithms to maintain consistent R/G/B gradation and showcase colors with greater precision, even at low grayscale levels," Lee says.

In addition, Samsung's Color Management feature offers users the flexibility to reset and change the colors in the preset mode.

This is especially useful for retailers when it comes to properly displaying the color of logos and other brand images.

### **Scene Adaptive HDR Technology**

Scene Adaptive HDR enables displays to produce optimal contrast, especially for content in darker colors. To understand how this technology works, it is important to have an understanding of HDR.

HDR stands for High Dynamic Range. Digital signage with HDR technology is able to display content with better contrast, greater brightness and a wider

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range of colors. This technology is commonly found in TVs, and it's what makes colors look more natural and true to the way the human eyes would see them.

"HDR has become a must-have technology for digital signage, which includes LED displays," Lee says.

Digital signage with HDR technology is able to display content with better contrast, greater brightness and a wider range of colors.

Samsung has taken HDR a step further by introducing Scene Adaptive HDR technology to Samsung LED displays. Scene Adaptive HDR consists of two sub-technologies: Inverse Tone Mapping and Dazzling Minimization.

"Inverse Tone Mapping algorithms analyze and optimize gradation and brightness levels within individual

contrast level of the images, especially the dark scenes. As a result, the dark scenes may fail to show details in the original images. Inverse Tone Mapping algorithms can refine the contrast while maintaining the peak brightness and make the dark scenes highly visible.

This matters because even though the content may not feature standard HDR, Samsung's LED Signage with Inverse Tone Mapping allows users to display non-HDR content at a comparable level to standard HDR quality. In the retail market, this ensures that promotional content will be displayed vividly and in high contrast.

The second technology involved in Scene Adaptive HDR is Dazzling Minimization. This feature helps maximize customers' engagement time with the content. This is because the content is delivered at the most comfortable level to human eyes.

"When installed in an indoor environment, LED signage automatically adjusts the brightness of the screen and content to the optimized level the human eye feels most comfortable with," Lee explains.

The technology works by maintaining the peak brightness of the brightest part of the content while reducing the total brightness of the rest of the scene, especially the darker areas. This reduces dazzling while still producing high dynamic contrast. Images on screen appear sharper while dazzling is minimized.

Overall, the Samsung LED displays introduce powerful features that allow retail brands to vividly showcase promotional content regardless of environmental factors. These features help businesses to draw in more customers while maximizing their engagement with in-store advertisements. ■

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content scenes by analyzing specifications of displays and the distribution of power to different parts of the input content," says Lee.

It works like this: Due to the brightness settings of the original content, when displaying videos with the original low brightness on conventional LED displays, the high brightness of LED signage tends to make the entire content brighter, and therefore, reduce the