ENGINEERING EXCELLENCE– THE RIGHT VIDEO WALL CHOICE, MADE EASY

Two recent, important technology advances need to be considered before you buy your next video wall: the revolution in smaller bezel size, and In Plane Switching (IPS) imaging

Presented by: LG Life's Good

a partner of SCN Systems Contractor News, Digital Signage magazine

Introduction

The LCD-based video wall– that is a multiple-screen wall made up of multiple LCD digital displays– has emerged as the clear choice for digital signage, public display, and any corporate or educational setting where a large size, bright, small depth, high resolution display area is needed. Recent advances in video wall technology now make available affordable video-wall solutions where in previous years a large, expensive, bulky video projection system or a super-expensive direct-view LED was used (the "Jumbotron" or large LED).

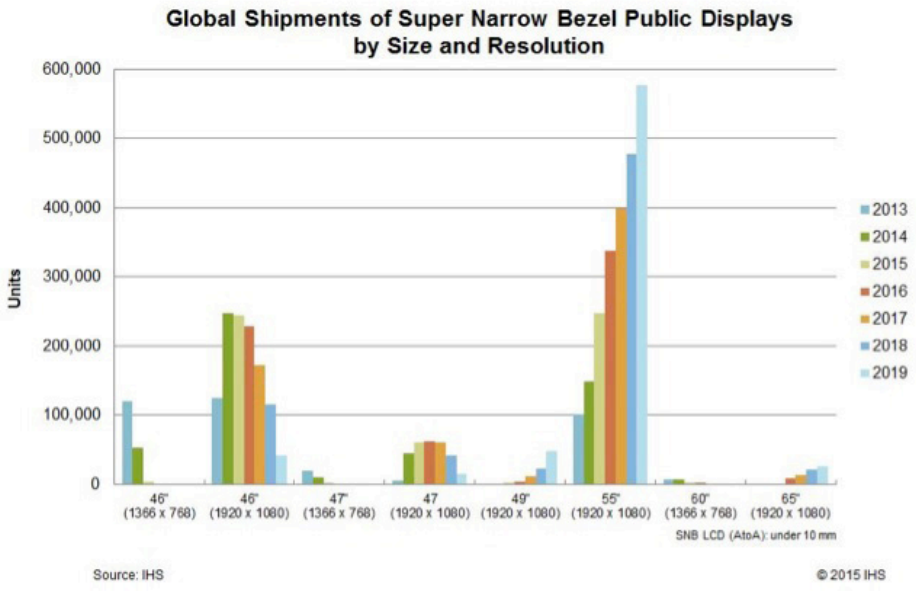
But with so many suppliers of digital displays, how can you be sure you're choosing the right supplier of video wall technology? The answer can be found by looking to industry leadership in the two technology features that are at the forefront of the best new-generation video walls: super-narrow bezels, and In-Plane Switching (IPS) imaging. Only by choosing video walls with the latest features in those two key areas will you ensure that you're spec'ing the best, most cost-effective solution with the best TCO (total cost of ownership) return– and a solution that is future-proofed against obsolescence.

Future-Proofing Your Project

With the most sophisticated video walls, it's all about design and engineering. The days of two- or three-feet deep video walls are over. Today, thin LCD displays mean thinner, more elegant video wall configurations. But probably the most dramatic advance in video wall technology– made possible only recently– can be seen in new-generation video walls with narrow, s and now "super-narrow" bezels. The term "bezel" refers to the black "border" or line between each individual screen in a video wall. In previous years, that bezel size was larger, so the content on the video wall appeared in an obvious "grid" of images. In that older technology, the grid was always visible and distracting. But LCD video wall bezel sizes have come down, in offerings from the top manufacturers, with some bezels now less than 2mm. It is now possible to create a more seamless field or true "wall" of video without distracting "borders" (large bezels) between each LCD/LED display within a video wall. Customers can now create a high impact, near seamless video wall with LCD/LED-based digital displays technology. See figure 1.

What the above graphic makes clear, is that LCD digital displays with SNB (super narrow bezel) are increasingly being seen as the best choice for creating very large, dynamic digital screens as opposed to using fewer giant flat screens (84" screens for example) or using video projection, or super-expensive direct-view LED. So the logic of choosing the video wall supplier that is a leader in SNB is even more clear: only the industry leaders in providing the smallest bezels– and therefore the most seamless, tileable, elegant solutions will withstand the test of the market and provide continuing ROI for your project. In addition to super-thin bezels, the other area of major engineering breakthroughs for video wall technology involve an enhanced process for providing the most true color, best brightness,most consistent contrast ratio, and excellent viewing angle– all the elements that distinguish the image quality leaders from the mass-market display manufacturers that don't offer

Figure 1



The continued improvements with super narrow bezel (SNB) LCD displays and even bezels less than 2mm have led to significant adoption of LCD video wall technology in recent years. IHS recently reported these smaller bezel LCD displays are taking over the commercial video wall market.

the latest pro AV features. The heart of this new display technology is In Plane Switching (IPS), a breakthrough display panel technology helps ensure accurate color saturation and excellent contrast, even at wide-angle viewing.

The latest IPS advancements are the result of engineering breakthroughs that allow more efficient transmission of the light source through the panel. So with the best designs, backlights don't need to be as powerful and energy-consuming to drive the displays. The best IPS panels deliver ss super imaging performance while using less power than traditional LCD panels. This saves energy costs, generates less heat, and adheres to new requirements for greener technology solutions.

IPS technology accomplishes this by improving the efficiency of light transmittance of the LED backlights (the light source of the display panel)– so that they don't need to be as powerful to drive the displays. Because the major advantage of IPS is that it passes the light only in its "ON" position and blocks the light it in the "OFF" position when no electrical signal is applied. That is how an IPS panel delivers great performance while reducing power consumption, for greater corporate responsibility and cost savings.

Complex engineering, but it's easy to remember the term IPS. And keep in mind that the most important advantage of IPS imaging improvements– in addition to energy-saving features– is the ability to preserve high contrast and color values under different viewing angles– resulting in a much better viewing angle for your video wall. In fact, the viewing angle has been improved so dramatically that the design of larger video walls is now possible. The physics is clear: increased viewing angle means that if a viewer is standing close to a large video wall, say a 6x8 panel video wall, then the nature of the design means that the panels at the edges of the wall will be "off-angle". But IPS allows those "off-angle" views to be views at good contrast ratio and color saturation for the content. The bottom line: better content viewing for video walls small or large.

LG's In Plane Switching (IPS) panel technology helps ensure accurate color saturation and contrast at wide-angle viewing. (Compare the contrast andsaturation of the LG panel on the left with a standard panel on the right.)

LG Electronics USA is at the forefront of display applications and technologies for Video Walls. For full descriptions of all of LG's offerings, click here.

LG Electronics offers the industry's only Full HD Video Wall display with the world's slimmest bezel to bezel design – 1.8 millimeters. The LG VH7B Direct Backlit LED Display is re-defining the video wall category with its unprecedented thin bezel, and features distinct new innovations that address the largest issues video wall customers face today. And LG is the proven leader for In Plane Switching (IPS) panel technology, that helps ensure accurate color saturation and contrast, even at wide-angle viewing.