IFA 2017: The Latest Display Trends and Innovations from Berlin

With 1,823 exhibitors and 245,000 visitors—IFA is where companies showcase their best. IFA 2017 presented the most innovative consumer electronics technology from industry leaders, startups, and universities. In the world of TVs and monitors we saw exciting product developments, rapidly improving technological specifications, and smart home integrations that had the technophile in us very excited.

Fun fact: We tracked our steps using FitBit and in our quest to see the best of display technology we walked over 45,000 steps the 3 days!

In this blog, we bring to you the very best of display trends from IFA 2017--our favorite new tech and the products driving them.

In the past, one would see an exclusive focus on technology but this time a lot of attention was paid to design and connectivity. We identified three display-related themes at the IFA:

- Image quality
- Design flexibility
- Digital lifestyles

Check out the Samsung Display’s booth at IFA 2017!

Here are the highlights:

IFA theme #1: image quality

This year one of the key consumer trends was bringing cinema quality viewing experiences into home. GfK projects that 29% of all televisions sold in the first six months of the year were Ultra HD (UHD). By the end of 2017 that figure is expected to reach 33%--that is one in three televisions sold!

Quantum dot displays (QD)

Quantum Dots are not new to TVs but this year at IFA they made quite a splash. TV makers showcased a wide selection of sizes and specs, which makes us believe that the next few years could well belong to the QD TVs. The quantum dot displays showcased were nothing short of impressive—with their color depth, wide color gamut, and high brightness.

The QLED UHD TVs achieved 100% color volume and emphasized subtle visual details at varying levels of brightness while maintaining precision and integrity for one billion different colors. When combined with optimized contrast and distortion-free picture quality they enhanced the experience and even displayed previously undetected content features.
Samsung led the QLED line-up with its Q9 and Q8 line of products. TCL was another notable QLED TV maker. Tomson Li, TCL Corporation’s CEO and Chairman, promoted the QLED’s as a central theme in their mission to create inspiring moments for consumers. TCL’s XESS Line and the “Private Theatre” XESS X6 boasted Quantum Dot powered screens that have 1.07 billion colors with a lifespan twice longer than that of OLED TVs. Quantum dot image quality was every bit as good and even better than the OLED, especially when viewed in ambient light. Quantum dots TVs’ unit shipments are expected to reach 18.7 million units in 2018 alone!

**High Dynamic Range (HDR)**

In pursuit of enhancing the viewing experience, TV makers demonstrated their new products with High Dynamic Range (HDR). Visitors could experience how HDR provides greater depth, brightness and color accuracy—whiter whites, blacker blacks, and a wider color gamut—than the Standard Dynamic Range (SDR) displays.

HDR 10 has been adopted as the industry standard for tone mapping. To further improve performance though, Samsung introduced the HDR 10+ technology at IFA. The new HDR 10+ improves on the Dolby HDR 10. Whereas Dolby HDR 10 sets the basic image parameters only once at the beginning of the movie, HDR 10+ employs dynamic tone mapping to maximize each scene. Market analysis firm ABI Research predicts strong sales growth of 41% CAGR for HDR sets into 2022. Given the consumer reaction during the show, we second the ABI prediction of HDR sets sales growth.
OLED TVs

OLED technology also continued its market adoption amongst the major TV makers. It should be noted that what TV makers market as OLED is actually White OLED technology. Though positioned as a high-end consumer electronics product with beautiful design, White OLED is still relegated to a tiny sales volume. At IFA 2017, OLED TV makers showcased several models, particularly highlighting the wallpaper-like screens characterized by extra-large size and thin profile.

A few notable ones were Loewe, Sony, and Skyworth. One of the disappointing factors that we noticed was that OLED claim of darkest blacks was watered down when viewed in anything other than a pitch-dark room. Even normal amount of ambient light affected the viewing experience on the OLED due to the low brightness of the screen.
Resolution: UHD, 4K, and 8K

This year, UHD became the most decisive factor for television purchases for the very first time, according to gfu (the size of the TV came in second). UHD and 4K TVs were promoted across most of the IFA booths. As more UHD content becomes available, TV makers are betting on the consumers to upgrade to UHD in the near future. Samsung Display (SDC) showcased its 98” true 8K panel that sports true RGB pixels—unlike some other display makers that introduce a white pixel to reach the 8K pixel density. TV makers showcasing 8K products also included Vestel and Sharp.

Speaking with industry analysts, the consensus was that 8K is still a few years away from mass adoption. The lack of 8K content is a hindrance, but with Japan announcing 8K television broadcast before the 2020 Olympic Games, some are betting on this to influence other content makers and boost consumer demand.

IFA theme #2: design flexibility

Displays continue to get thinner and sleeker—with a range of frameless and paper-thin screens debuting at IFA.

Slim TVs and wall mount design

Samsung Display showcased the world’s first glass light guide plate. In the past, light guide plate was made of a polycarbonate (plastic). This innovation of using glass rather than plastic substrate as a light guide significantly reduces the LCD layers, allowing for a super slim profile.
SEC and HiSense showcased their ultra-thin and wall-mounted displays. But the talk of IFA was the beautifully crafted Samsung “Frame” TV. It boasts gapless wall mount and Invisible Connection, making it possible to hang it like an art piece. In addition to the sublime design, the Frame TV comes preloaded with 1,000 paintings from famous artists that you may display when the TV is not in use.

Curved TVs

Since Samsung Display launched the curved TV, we have seen tremendous demand in the consumer markets for it. As consumers demand cinema-like experience at home, the curved screen provides the most immersive experience.
At IFA Samsung Display showcased its line-up of curved gaming monitors with wide aspect ratios (16:9, 21:9, and 32:9). At the Samsung Electronics booth, we saw gamers very excited to see these monitors. The curved monitors have seen a dramatic rise in the sales. According to GfK, a leading consumer insights organization, gaming monitors showed a revenue growth of 114% in the first half of 2017, with consumers particularly interested in large format and curved screens.

S-Curved screens

Samsung Display continued to showcase its edge when it comes to curved displays demonstrating the "S-Curved" 65-inch LCD (also available in 55”, 43” and 32”). This screen bends not only at both left and right, but also at the top and bottom, providing users with a more vivid, immersive viewing experience.

This form factor was a unique offering that has not yet been matched by other manufacturers. Citing the data compiled by the Chinese industry tracker CMM, 33 tech firms around the globe produced 289 different curved TVs as of May of 2017. Trendforce estimates the penetration rate of curved screen models in the global market to grow from 4% in 2016 to 5% in 2017, which amounts to 9 million units shipped this year growing to 11 million in 2018.
Frameless displays

‘Frameless’ displays are screens without a border (front cover), which provides for a seamless flat panel glass and allows for an edge-to-edge display with a minimal bezel.

Frames were a necessity of the legacy TV technology. These frames, also referred to as bezels, provided protection to the screen as glass edges are very fragile. In addition, the bezel area was used to cover circuitry, wiring, glue, and cut surface of the glass. However, with recent advances in LCD panel technology creation of the 4-sided frameless TV became possible.

Samsung Display showcased their 4-sided frameless display in 65 inch and 55 inch categories. Toshiba and Samsung Electronics presented 3-sided frameless TVs that stood out for their beautiful borderless design.
IFA theme #3: digital lifestyle

Owning smart appliances, including TVs, are increasingly a staple of aspirational living for the global middle class. According to a report put together by Siemens, 81% of consumers in Germany, France, the UK, Russia, and China want a connected lifestyle made possible with smart technology, but only 22% are currently able to achieve this. The consumer electronics companies had a plethora of options for these consumers at the IFA show.

Samsung Display IoT Display

Samsung Display exhibited IoT Smart Display in co-operation with Anapass and GCT. This unique proto-type combined sensors, IoT technology, voice recognition, and gesture control to simulate customer use cases. It was further enhanced with a wide range of connectivity options (Bluetooth, Wi-Fi, and NFC) to meet the needs of the retail and smart city segment. It was built on Google’s Android operating system with Anapass and GCT providing the technical and user experience integration support.

A few of the many applications showcased were around retail and consumer interactions: virtual fitting, health check, schedule management, and real-time news.

Amongst the TV makers a clear strategy to make the user interaction easier and more intuitive was prevalent. Some like Loewe leveraged Amazon’s development of the Alexa Skill Kit and Alexa Voice Service to integrate Alexa into the smart TV device. Panasonic showcased their soon to be launched speakers with Google Assist that can be integrated with the TVs. Samsung showcased the “future connected home” with all the household products seamlessly integrated.

At IFA, Amazon’s Fabrice Rousseau showed how they are focused on creating unlimited use cases for Alexa, with the belief that voice control will improve the way people can use technology at a fundamental level. This technology is used by companies like Siemens and Grundig to create smart dishwashers, washing machines, and other appliances that you can talk to.
What will these smart home networks of the future look like? According to consumer research debuted by GfK at the event, smart home appliances will be complemented by smart entertainment systems, with people able to control household music streaming, TVs, ovens, and dishwashers from a central smart hub like Alexa.

A key insight for anyone in the industry is that China is the hungriest market for this new technology. They are the biggest driver of smart TV sales outside of North America—in the first half of the year smart TVs accounted for nearly 9 in 10 of TVs sold in China.

Meanwhile, GfK revealed that for home appliances sales volume in China stands at 4.5bn Euros, more than double the figure for Europe. China’s growing middle classes with increasing incomes and an appetite for consumption underpin this growth, as consumers discover the benefits of built-in appliances like ovens and dishwashers.

IFA 2017 was a fantastic peek into the latest TV and display trends that you will soon see around the world. IFA’s tagline has been “official partner of the future” since 1924—and the products that we saw lived up to it!

Want more? Check out our summary of key trends from IFA 2017 in this video

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