

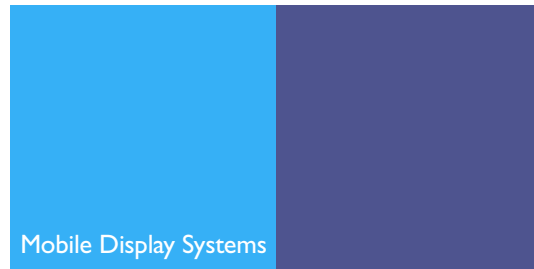
RGBW with Smart Image Processing

The increasing availability of advanced multimedia functions means that mobile displays have to deliver higher image performance without impacting power consumption or overall cost.

Philips uses an innovative approach that combines advanced pixel design with smart image processing to improve display performance. This cost-effective approach, designed for high-quality color displays, delivers better color performance and lowers power consumption.



RGBW pixel design and advanced mapping algorithms for mobile displays



Principle of the technology

The RGBW architecture adds a white sub-pixel to the standard RGB format. This changes the spatial layout of the display, reducing the number of sub-pixels and, as a result, lowering overall cost. The use of fewer but larger sub-pixels also increases the average aperture ratio per pixel, because there is less "dead space" between pixels. This makes the display more efficient, reducing power consumption and increasing brightness.

Philips uses a smart image processing algorithm to re-map image data onto the RGBW pixel layout, creating a display that delivers better front-of-screen performance than conventional RGBW displays.

Advantages

- Advanced pixel design supported by smart image processing
- Improved color performance
- Better power consumption
- Simpler, more cost-effective implementation

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