

Samsung Develops High-rez LCD Mobile Display that Automatically Adjusts Brightness

March 27 2007



Samsung Electronics announced today that it has developed a 2.1” LCD panel for high-end mobile devices that will provide qVGA resolution and comes equipped with sensors designed to adjust brightness to optimize ambient lighting. Screen brightness is automatically adjusted to enhance readability under any lighting condition.

Designed for use in high-end mobile phones, PDAs and portable media players, the new panel also has a temperature compensation sensor embedded in its LCD driver IC that maintains a steady operational mode

regardless of any temperature change in the surrounding environment.

The Samsung panel consumes 20-30 percent less electric power than other displays with the same size and resolution.

To enable extremely slim mobile designs, the new LCD mobile display makes use of a proprietary technology called Adaptive Brightness Control (ABC) that is designed with an ultra-slim black matrix embedded within the display's structure that measures no more than a single millimeter. The ABC is part of a unique, cost-saving architecture that consists of tiny, highly responsive circuit sensors built into the display panel, which eliminates the need for photo-sensors and complex signal processing circuits.

The signal processing function within the display driver IC converts ambient light measurements from the sensors into pulse-width modulation signals.

Those PWM signals then automatically signal the LED controller in the LCD backlight unit to adjust the screen brightness to provide optimal readability as outside lighting conditions change.

Samsung's LCD Business is planning to produce the new 2.1" qVGA LCD with ABC capability in the second half of this year.

Source: Samsung Electronics

Citation: Samsung Develops High-rez LCD Mobile Display that Automatically Adjusts Brightness (2007, March 27) retrieved 17 April 2024 from <https://phys.org/news/2007-03-samsung-high-rez-lcd-mobile-automatically.html>

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