

Samsung Introduces Advanced Mobile and Digital Information Displays

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Samsung Electronics, the world's largest provider of thin-film transistor, liquid crystal display (TFT-LCD) panels, will introduce a 3.5" LCD with embedded touch screen, and the first-ever 7" LCD driven by a single chip, at the 2006 Society for Information Display International Symposium and Exhibition(SID) in San Francisco, California.

3.5" LCD Panel

The new 3.5" LCD, referred to as the 3.5" hTSP (hybrid Touch Screen

Panel), features qVGA resolution and a built-in touch screen. Normally, an LCD panel with touch screen must have a separate printed circuit board (PCB) attached to the top of the LCD panel that contains sensor circuitry. Now, Samsung has eliminated this requirement by including all sensor circuitry within the panel. As a result, mobile devices designed with the new 3.5" display can be thinner and lighter, while maintaining a bright, high contrast image.

Adding to production cost efficiencies, the company produced the touch screen circuitry inside the new panel using the same thin-film transistor (TFT) processing that it uses today in mass production at existing LCD facilities.

The new LCD panel can be applied to a wide range of portable applications that require a touch screen, such as navigation terminals for vehicles, and personal media players (PMPs). Future applications will include smart phones, PDA phones, ultra-mobile PCs and other multimedia mobile products.

7" LCD with single chip

Samsung also is showcasing the industry's first 7 inch single-chip LCD display at SID 2006. The new display, completed in May, boasts a high (WVGA) resolution of 800x480 pixels.

The display uses Samsung's proprietary amorphous silicon gate technology, which allows the gate IC function to be built directly onto the glass panel. The time controller function also is built into the driver IC, reducing the circuitry footprint and the number of parts by about one-third. This allows engineers to design finished mobile products that are simpler in how they function and thinner in shape.

The embedded digital LCD chip also simplifies the task of circuit design

in the finished product. Seven inches is now the most common size LCD screen used for digital multimedia broadcasting handsets, PMPs and car navigation systems.

Source: Samsung

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