



Smart Phone and Tablet PC Demand Drives Wide-Viewing Angle Display Technologies, led by IPS and FFS

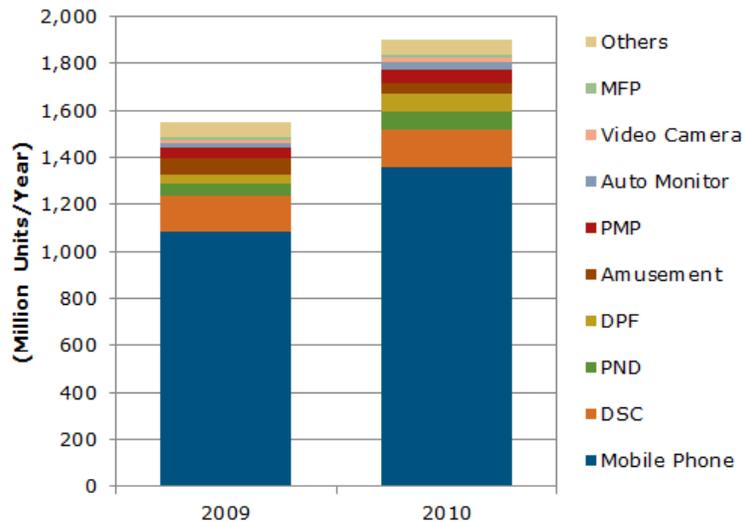
Small/Medium Display Segment Experiencing Healthy Growth Across Several Applications, with New Features Enabled by TFT LCD and AMOLED Technology Developments

SANTA CLARA, Calif., May 12, 2011—With the breadth of applications for small/medium electronic devices, such as mobile phones, digital still cameras, portable and automotive navigation devices, as well as e-book readers and tablet PCs, the industry is currently expecting healthy growth by adding and improving features of the devices.

According to the DisplaySearch *Quarterly Small/Medium Shipment and Forecast Report*, small/medium active matrix flat panel displays, including TFT LCDs, AMOLEDs, and AMEPDs, experienced strong growth for a variety of applications as a result of improved display technologies. 2010 shipments grew 23% Y/Y, to 1.89 billion, due to increased demand in applications such as smart phones, commoditized digital photo frames, as well as navigation devices and multi-functional displays in automotive monitors.

“The ability of smart phones to offer consumers more functionality is putting pressure on display manufacturers to incorporate more advanced features,” noted Hiroshi Hayase, DisplaySearch’s Vice President of Small/Medium Display Research. “As a result, the requirements for small/medium displays are shifting toward higher resolution and contrast, as well as wider-viewing angles, which are needed to enable advanced features for the transition from feature phones to smart phones, and from compact DSCs to high-performance detachable lens DSCs. In the automotive market, the shift is toward multifunctional automotive monitors with navigation capabilities.”

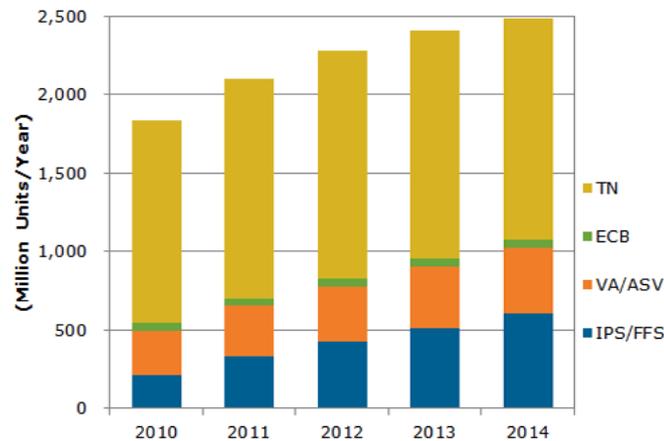
Figure 1. Annual Small/Medium AMFPD Shipments by Application (TFT LCD, AMOLED, and AMEPD)



Source: *Quarterly Small/Medium Shipment and Forecast Report*

To meet the demand in advanced performance applications such as smart phones and tablet PCs, TFT LCD manufacturers are applying wide-viewing angle technology to small/medium displays. In-plane switching (IPS) and fringe field-switching (FFS) technologies are expected to grow as a result. Display shipments with IPS/FFS are forecast to increase from 214 million units in 2010 to 600 million units in 2014.

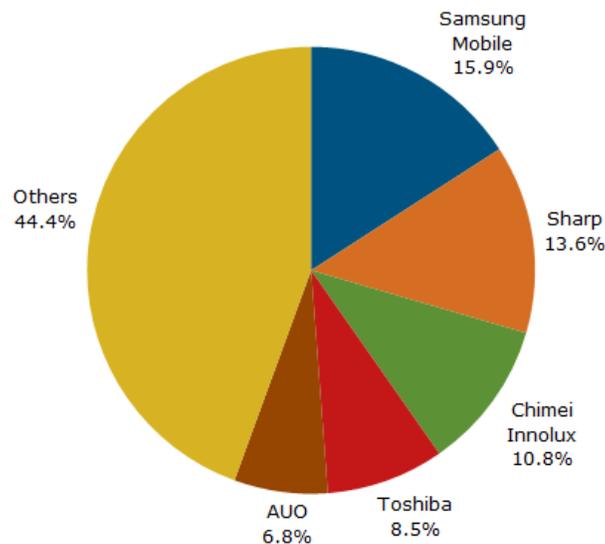
Figure 2. Wide-Viewing Angle Technology Forecast for Small/Medium TFT LCD



Source: *Quarterly Small/Medium Shipment and Forecast Report - Advanced version*

Samsung Mobile Display led in total AMFPD revenue, with a 15.9% share, driven exclusively by increasing AMOLED revenue, with increasingly high-priced AMOLEDs mainly for smart phones. Sharp ranked second, experiencing a significant revenue increase from new 3D gaming device panels, which started to ship in Q4'10. This was in addition to continued automotive and portable media player panel revenue growth, similar to Q3'10. Chimei Innolux, at #3, increased revenues supported by automotive monitor TFT LCD. This was in addition to mobile phone panel shipments for first-tier makers.

Figure 3. 2010 Small/Medium AMFPD Revenues by Manufacturer



Source: *Quarterly Small/Medium Shipment and Forecast Report*

The DisplaySearch *Quarterly Small/Medium Shipment and Forecast Report* covers the entire range of small/medium (≤ 9.0 "") displays shipped worldwide and regionally. Backed by over 40 suppliers of data and our own team of industry analysts, this report analyzes historical shipments and projects forecasts that provide decision makers with the insights they need to support procurement and product plans.

New Advanced Features: The *Quarterly Small/Medium Shipment and Forecast Report* now offers advanced features that allow users to track data by viewing angle and 3D capabilities.

About DisplaySearch

Since 1996, DisplaySearch has been recognized as a leading global market research and consulting firm specializing in the display supply chain, as well as the emerging photovoltaic/solar cell industries. DisplaySearch provides trend information, forecasts and analyses developed by a global team of experienced analysts with extensive industry knowledge. In collaboration with The NPD Group, its parent company, DisplaySearch uniquely offers a true end-to-end view of the display supply chain from materials and components to shipments of electronic devices with displays to sales of major consumer and commercial channels. For more information on DisplaySearch analysts, reports and industry events, visit us at www.displaysearch.com. Read our blog at www.displaysearchblog.com and follow us on Twitter at [@DisplaySearch](https://twitter.com/DisplaySearch).

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