



**Global and China Display Driver IC Industry
Report, 2013**

Sep. 2013

STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

REPORT OBJECTIVES

- ◆ To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- ◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- ◆ To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- ◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- ◆ To help company to succeed in a competitive market, and

METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications. Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

INFORMATION SOURCES

The primary information sources include Company Reports, and National Bureau of Statistics of China etc.

Abstract

The report includes the following aspects:

1. Display driver IC market
2. Flat panel display market
3. Ten display driver IC vendors
4. Eleven small and medium-sized display and driver IC vendors

The current decline in the ASP of driver IC is attributed to many factors, including:

The display driver IC integration density continues to rise
Driver IC is made by 12-inch fabs with the 90-nanometer process at high output efficiency
Many vendors are willing to adopt RAM-Less driver IC in order to save costs.

In 2013, the display driver IC market will see the highest growth rate of 14.4% in the past five years and value USD7,111 million. The growth rate is expected to be 8.0% in 2014. The substantial growth is mainly boosted by mobile phones, whether smart phones or ordinary phones, whose screen resolution is soaring, which makes the high-end driver IC shipment surge.

Compared 1,040 models of mobile phones launched in 2012 with 759 models unveiled from January 1, 2013 to September 15, 2013, the share of FHD jumped the most quickly from 0.7% in 2012 to 17% in 2013. The ones with the pixel matrix of above 400ppi only accounted for 0.5% in 2012, but up to 12% in 2013. The proportion of the ones with over 300ppi ascended from 12% in 2012 to 28% in 2013.

Due to serious homogeneity, the competition among mobile phones is mainly reflected in screen, casing and camera pixel, especially screen. The formerly extraordinary screen looks inferior now. Even if the development of high-end smart phones slows down, the display is upgrading amazingly. Currently, LGD has developed a prototype of WQXGA (2560×1440) cell phone screen. Japan JDI also has the ability to develop WQXGA panels.

5.5-inch WQXGA corresponds to 534PPI, and 6-inch one to 489PPI. The mobile phones with WQXGA screen will be available at the end of 2013. Qualcomm and Mediatek have developed corresponding 8-thread MIPI interface which supports a transfer rate up to 9.6Gbps and a frame rate of 60Hz. In this case, 3D effects will be achieved without the help of any other device. In 2014, a number of flagship mobile phones will use WQXGA panels with the expected shipment of 130 million units.

WQXGA driver IC can be made using 8" 0.11 μm or 12" 90 nm process, but RAM should be used as little as possible, if not, the 12-inch 55nm process is required for reducing size and power consumption. However, TSMC and UMC can gain 55 nm easily. Renesas, Novatek and Samsung are developing WQXGA driver IC which will be launched in Q3.

Another change in mobile phone display lies in the wide application of LTPS technology. More than 99% of 300ppi (or above) panels adopt LTPS technology. The LTPS utilization will reach 38% in 2014 and 52% in 2015. But LTPS needs huge investment, so Taiwanese vendors who ever suffered losses for many years do not prefer LTPS. INNOLUX and AUO are more interested in IGZO.

Japanese and Korean companies are increasing LTPS capacity. Apple's largest mobile phone display supplier and the global largest LTPS vendor Japan JDI put the world's largest LTPS production line into operation in June. LGD also started one six-generation LTPS production line in August to follow JDI. Sharp kept an eye on both IGZO and LTPS, but did not expand its LTPS capacity.

Most high-end smart phones tend to use IN-CELL touch screen, while OGS is confined to the lower end. In the future, OGS may withdraw from the market as IN-CELL capacity is improved. Apple's iPhone5S still sticks to IN-CELL, and Huawei, Xiaomi and other Chinese vendors of high-end models also prefer IN-CELL touch screen, which means Display Driver IC and Touch Controllers will be combined just like Apple's iPhone5S.

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Revenue of Major Global Display Driver IC Vendors, 2010-2013 (USD mln)

	2010	2011	2012	2013E
Renesas	857	642	608	750
Novatek	957	1035	1044	1228
Himax	591	553	634	708
Ilitek	184	308	356	340
Raydium	261	270	356	416
Orise Tech	176	141	138	330
Silicon Works	215	275	324	302
Sitronix	169	155	175	209
Magnachip	308	340	303	330
Rohm	310	190	169	178
Samsung	970	1079	1141	1380
Sharp	235	114	160	230
Toshiba	282	258	208	169
Panasonic	391	154	120	130

Source: ResearchInChina Global and China Display Driver IC Industry Report, 2013

1 Introduction to Driver IC

- 1.1 TFT-LCD Driver IC
- 1.2 Driver IC Packaging
- 1.3 Display Driver IC Market
- 1.4 Display Driver IC Industry

2 Flat Panel Display Market

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