

Global and China Mobile Phone & Tablet PC
Processor Industry Report, 2010-2011

May 2011





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This report

- ◆ Analyzes the global mobile phone market and global &China tablet PC market.
- Focuses on status quo and future of mobile phone and tablet PC processor.
- Highlights the operation of mobile phone and mobile phone processor manufacturers.

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Market share data of top vendors of semiconductor related components

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Abstract

Mobile phone processor mainly covers baseband processor and application processor, while tablet PC processor mostly refers to GPU. The mobile phone processors are undergoing great changes and the original pattern will witness sharp fluctuations.

TI ranked the first in mobile phone baseband industry for consecutive years in 2G era by virtue of the cooperation with Nokia. However, the great success in 2G era has resulted in the comparatively late startup of TI in 3G era and TI has been surpassed by Qualcomm. TI holds the view that it is the analog and DSP instead of mobile phone baseband that compose the core businesses. Mobile phone baseband sector features huge and continuous investment, usually several hundred millions of US dollars per annum; the life cycle of analog device could be more than 30 years, and the input-output ratio is far higher than that of mobile phone baseband sector. As early as 2009, TI announced to end the mobile phone baseband business in 2012.

Nokia, the sole mobile phone manufacturer participating in mobile phone baseband design, has found the new partner-Renesas. In July 2010, Nokia transferred its baseband design team to Renesas for US\$200 million, which indicated that a majority of Nokia basebands in 4G era would be supplied by Renesas.

Renesas boasts excellent RF technology and multimedia processing technology. In February 2011, Renesas launched SP2531, the 4G triple-mode baseband processor, and the application processor based MP5225. As a matter of fact, MP5225 is the combination of SP2531 and SH-Mobile APE5R. Renesas has claimed to be the global No.1 vendor in mobile phone baseband in 2015, which might come true if Nokia remains in the first position worldwide in 2015.

In August 2010, Intel purchased the Wireless Division of Infineon for US\$1.4 billion so as to obtain the 4G baseband and RF technology; together with the GPU centering on ATOM, Intel can make the core processors of smart phones and hence compete with Qualcomm. Engaged in GPU sector for years, Intel enjoys outstanding experience and technologies and it is the biggest shareholder of Imagination Technologies.

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The GPU IP core of Imagination Technologies is PowerVR series which are employed in any generation iPhones and iPads. Moreover, the OMAPs after 3 series of TI, APE5R of Renesas, and NGP of Sony all use PowerVR as GPU IP core.

On May 9, 2011, NVIDIA declared to acquire Icera, the developer of baseband chips, for US\$367 million. In the future, NVIDIA will share the similar development strategy with Intel to integrate the baseband chips in Tegra processor, enhance the competitiveness in smart phone market, and help the mobile phone/tablet PC manufacturers to reduce R&D difficulties and manufacturing cost.

Broadcom will be the dark horse in 2011. The mainstream high-end mobile models like E7, X7, C6, C7, and N8 of Nokia released at the end of 2010 have adopted Broadcom's BCM2727 as GPU, yet no one had showed interest in the application processors of Broadcom before. Nokia has abandoned the OMAP series application processors of TI simply in that OMAP is priced approximately US\$16-24, almost a double of that of BCM2727.

Besides the application processor, the baseband of Broadcom has won the good graces of Nokia and Samsung. Nokia's X2-01/02/03, C3-00, 2710C, and 7020 have applied BCM21251, and Samsung's GT-S series models have adopted Broadcom baseband. The revenue from mobile phone sector of Broadcom in 2011 will be several folds of that in 2010. Broadcom is the only company that wins the lawsuit against Qualcomm, the adoption of its products therefore means the minimum patent controversy.

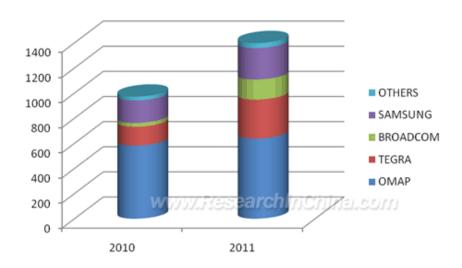
OMAP of TI is positioned as top-grade product with very high price. Nevertheless, merely Motorola vigorously supports the OMAP series, Apple and Samsung possess their own application processors and they do not use OMAP, while LG adopts small quantities of OMAP and it prefers TEGRA of NVIDIA.

MTK, Spreadtrum, and MStar keep involved in the fierce competition of 2G market which is shrinking. The sales volume of mobile phones in the emerging markets of India, North Africa, the Middle East, and South America is inferior to that in 2010, and Shenzhen takes severe measures against illegal mobile phones.

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As for tablet PC field, thanks to the incomparable brand charisma and supply chain integration capability, the dominating Apple has put its rivals in constant complaints.

Revenue of Major Application Processor Manufacturers Worldwide, 2010-2011



Source: ResearchInChina Remark: excluding Apple whose application processors are not for sale



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