This section contains information and statistics relating to the industry in which the Group operates. The information and statistics in this section have been extracted from Independent Third Party publications. The Group, the Sponsor and the Underwriters believe that the sources of the information and statistics are appropriate sources for such information and statistics and have taken reasonable care in extracting and reproducing such information. While the Group and the Sponsor and the Underwriters have exercised reasonable care in extracting and reproducing such information and statistics, the Group cannot ensure the accuracy of such information and statistics and such information and statistics may not be consistent with other information. The Group, the Sponsor and the Underwriters have no reason to believe that such information and statistics are false or misleading or that any fact has been omitted that would render such information and statistics false or misleading. The information and statistics have not been independently verified by the Group, the Sponsor, the Underwriters and other parties involved in the Offering or their respective directors and advisers and no representation is given as to the accuracy of such information and statistics. You should not place undue reliance on any of such information and statistics contained in this section.

PERSONAL COMPUTERS ADD-IN VIDEO GRAPHICS CARDS

SOURCES OF INFORMATION

Report commissioned from Synovate

The Directors commissioned Synovate, an independent global market research company, to conduct an analysis of, and to report on, the global market landscape and competitive analysis for video graphics cards. The report commissioned has been prepared by Synovate independently. The Group paid approximately HK$318,000 to Synovate for the report commissioned and we consider that such fee reflects market rates.

The Synovate Report the Directors commissioned includes information on (i) the overview of the video graphics cards industry in the global market; (ii) analysis of video graphics cards in the global market; and (iii) competitive analysis for video graphics cards in the global market, which have been quoted in this prospectus.

The independent research undertaken by Synovate involves primary research, client consultation and desk research. Primary research and client consultation involve interviews with key stakeholders and industry experts, including associations, analysts of computer products and manufacturers of video graphics cards.

The intelligence gathered by Synovate has been analysed, assessed and validated using their in-house analysis models and techniques.

The forecasts in the Synovate Report are based on the following general bases and assumptions:

- The global supply of add-in video graphics cards is assumed to be stable and without shortage over the forecast period;

- It is assumed that there is no external shock such as natural disasters or the wide outbreak of diseases to affect the global demand and supply of video graphics processors add-in video graphics cards during the forecast period;

- The forecast US dollar value is based on the US dollar value in 2010, with inflation factor input to the forecasting model; and

- The exchange rate used in the entire report is at US$1 to HK$7.7707.

The Directors and the Sponsor are satisfied that they have no reason to believe that such information and statistics are false or misleading. The Directors have included certain information from the Synovate Report in this prospectus because they believe such information facilitates the understanding of the add-in video graphics cards market for potential investors. No other information disclosed in this prospectus is extracted from reports commissioned by the Directors.

INTRODUCTION

The display system of a PC is an important component of the interface between an individual user and the functionality of a PC. It is usually through the display system that the user discerns the immediate results of user input. A display system typically consists of a display medium (e.g. a monitor screen) and a graphics controller (e.g. as implemented on an add-in video graphics card). The performance of the overall display system depends to a large extent on the quality of each component.

The two basic PC platforms are desktop and mobile (or notebook), and they typically use two classes of graphics controllers, namely, discrete graphics controllers and integrated graphics controllers. Graphics controllers are present in every PC shipped and can take the forms of discrete graphics processing units ("GPU"), integrated graphics processors ("IGP") and embedded processor graphics/heterogeneous processor graphics/integrated processor graphics ("EPG/HPG/IPG") or GPU embedded CPUs. Discrete GPUs are predominantly mounted on add-in video graphics cards and have their own

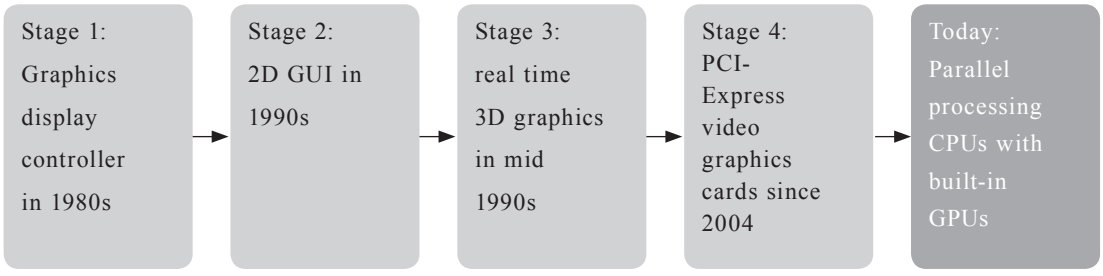
dedicated memory. Add-in video graphics cards are for installation in bus slots on a PC motherboard. IGPs combine the graphics controller with the memory manager (the so called "north bridge") and utilise the PC's system memory. EPG/HPG/IPG are the new generation of microprocessors that have the graphics controllers integrated into the same die as the CPU cores. (For the purpose of this industry overview, EPG/HPG/IPG are also considered as integrated graphics controllers.)

The evolution of video graphics cards

PC video graphics technology evolved from simple graphics display controllers in the 1980's to supporting 2-D Graphical User Interface ("GUI") in the early 1990's, to real time 3-D graphics in the mid-1990's. In 2004, add-in video graphics cards with PCI-Express interface was introduced to cope with the demand for sophisticated 3-D graphics. By 2009, PCI-Express video graphics cards dominated the market.

Today, parallel processing GPUs and GPU-embedded CPUs have been introduced to cope with online applications, which required fast and high bandwidth data transfer, PCI-Express add-in video graphics cards with multiple and parallel processing capability GPUs have been developed since 2009. NVIDIA developed the high bandwidth data transfer PCI-Express interface with its proprietary technology under the trademark of "SLI™", enabling multiple add-in video graphics cards of the same GPU to operate together. AMD developed a multi-GPU system on PCI-Express interface under the trademark of "CrossfireX™".

New desktop PCs have GPU-embedded CPUs. These enabled the reduction of the size of the PC base-units and saved physical space for other peripherals. However, as a limitation of the technology, this kind of GPU-embedded CPUs only have graphics capability commensurate with add-in video graphics cards in the "mainstream" and "performance" segments.



Sources: Synovate interviews and analysis

The technology and market segments of video graphics cards

The technology of an add-in video graphics card is viewed from its performance in terms of processing power, memory capacity and speed. The add-in video graphics card processing power has been developed to have the capability of multiple or parallel processing of image signals. The speed of a processing unit is measured by clock rate or clock frequency. The maximum clock rate has reached 6GHz by mid-2011.

The memory capacity is up to 8G and the memory clock rate is up to 3.8GHz by mid-2011. The memory capacity and speed together with the processing unit determines whether a video graphics card can function and perform to the highest effectiveness.

Proprietary technology of the trademarks "SLI™" of NVIDIA and "CrossfireX™" of AMD (originally "Crossfire" of ATI) are the leading specifications in the market, which NVIDIA's GeForce GTX590 and AMD's Radeon HD6990, respectively, have the best performance in the market.

The combinations of different processing powers of the GPUs and memory capacity enabled add-in video graphics cards with different features to be categorised into five segments in general: (i) workstation, (ii) enthusiast, (iii) performance, (iv) mainstream, and (v) value & server. Each category targets at different usage and application market segments, such as for professional usage in animation and imaging, entertainment and gaming, or only for office documentation work.

Depending on the usage and areas of applications, the video graphics cards are segmented by features, shown as below:

Workstation: The add-in video graphics cards of the workstation segment are mainly geared for professional use and workstation-caliber applications, such as animation graphics and imaging processing. The specification and functions can vary greatly, but depending on the usage of computer workstations, the retail price of these add-in video graphics cards can range from approximately US$200 to over US$1,000 per unit, with an average retail price of US$415 per unit.

Enthusiast: The add-in video graphics cards of the enthusiast segment are mainly offered to visual enthusiasts or hobbyists who pursue the highest possible performance of the add-in video graphics cards and have the ability to tweak the add-in video graphics cards to exceed the published specifications (i.e. overclocking). The demand in the enthusiast segment is relatively low at approximately 3 million units per annum. However, these cards are usually at the expensive end of the price spectrum in the market, retailed at over US$230 per unit.

Performance: Compared to the enthusiast segment, the add-in video graphics cards of the performance segment have a wider area of usage and applications, but are less powerful. They are equipped with newer and high-performance GPUs and are usually used for entertainment or high-end professional purposes. The average unit retail price of these cards is usually ranged from US$130 to US$230 in the market.

Mainstream: The add-in video graphics cards of the mainstream segment are equipped with basic and solid capabilities satisfying general needs for multimedia usage such as internet browsing, gaming, and office applications. Compared to those of the performance segment, they are mainly utilised from scaled down versions of the high-end chipsets or enthusiast parts or previous generation parts. The average unit retail price of these cards is usually less than US$130.

Value & server: The add-in video graphics cards of the value & server segment are usually the add-in video graphics cards utilising the inventory of GPUs and at the end of their product life cycles. Therefore, they are mainly the previous generation of the mainstream segment cards. They are mostly catered for daily usage and internet browsing.

INDUSTRY CHARACTERISTICS

Market size of graphics controllers

Graphics controllers are the leading indicator of the PC market. The desktop platform includes servers as well as PCs with "one-size-fits-all" motherboards that have both an IGP and an add-in video graphics card. The mobile platform includes mobile PCs (e.g. notebooks and netbooks). Mobile graphics controllers are distinguished from desktop graphics controllers by power management capabilities and smaller package sizes and often run at lower voltages and frequencies than desktop versions. In addition, graphics controllers are also used in other systems that use the PC architecture such as the so called industrial PCs and embedded PCs (e.g. servers, POS systems, and recreational, scientific, industrial and medical systems). NVIDIA and AMD are the two key technology providers of discrete desktop GPUs to global manufacturers of add-in video graphics cards. According to the Synovate Report, add-in video graphics cards based on NVIDIA GPUs and AMD GPUs shared approximately 59.1% and 40.5%, respectively, out of the total of approximately 34.95 million shipment units in the first half of the year 2011. They together dominated the GPUs market at approximately 99.6% of the total market. After the acquisition of ATI by AMD in 2006, the market share of AMD GPU based add-in video graphics cards has increased from approximately 33% in the fourth quarter of 2007 to approximately 51% in second quarter of 2010, and then to approximately 40.6% in the second quarter of 2011, gaining approximately 8% over the ensuing years. Most of the NVIDIA GPU based and AMD GPU based add-in video graphics cards are produced by manufacturers located in Taiwan and China.

The graphics market ships more graphics controllers than the PC market ships PCs. This is due to a number of factors. Desktop and notebook PCs may be equipped with both integrated as well as discrete graphic controllers at the same time. Desktop PCs may be installed with multiple add-in video graphics cards. After market add-in video graphics cards are also purchased for system upgrades.

According to the Synovate Report, the GPU to PC ratio has grown from approximately 1.15 GPUs (integrated and discrete) in 2001 to approximately 1.6 GPUs (integrated, discrete and embedded) in 2011, per PC shipped. This trend is expected to continue especially as GPUs are used for more high-performance computing ("HPC") applications, commonly known as general purpose GPU ("GP-GPU"). This is where the CPU of a PC and a GP-GPU are used together in a heterogeneous computing model by running the sequential part of an application on the CPU and computationally-intensive part on the GP-GPU. High-end video graphics cards can be used for such application.

In addition, the EMS sector also accounted for part of the consumption of graphics controllers for industrial graphics. Graphics controllers are installed in industrial systems where video graphics displays are required. Such systems include POS system terminals, industrial controls, scientific instruments, military systems and recreational systems (e.g. slots machines). The Group manufactures base units for POS Systems and ATM Systems for its customer.

Because of the drop in the demand for desktop computers and the increase in the demand for portable computers (notebooks/netbooks, handhelds and tablets), the video graphics cards for desktop PCs have lost part of the ground and manufacturers have shifted their production capacity to meet the latest market trends.

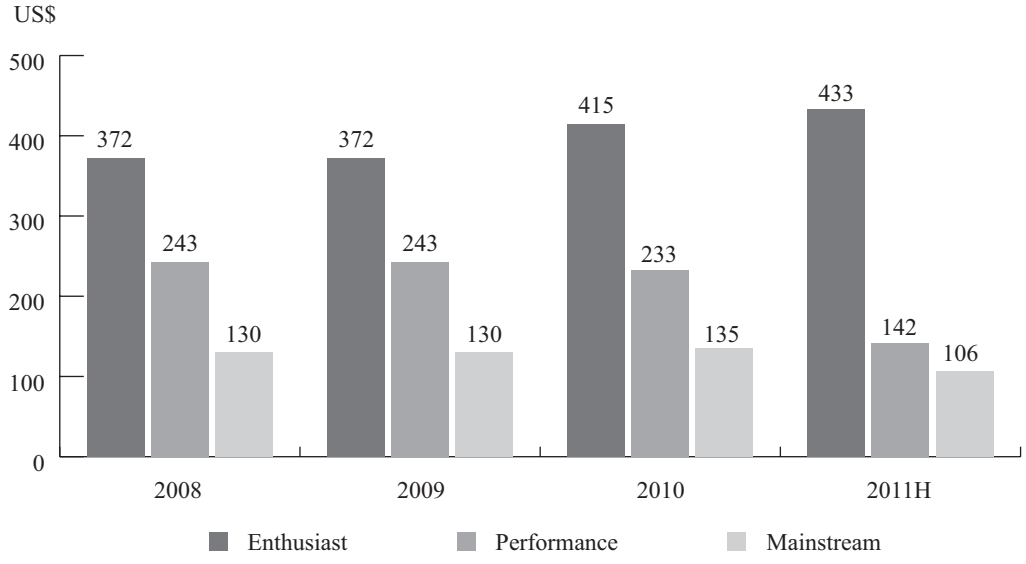
The shipment amount of desktop PCs declined by approximately 3.0%, from approximately 150.4 million units in 2008 to approximately 145.9 million units in 2010. The shipment amount of portable computers increased significantly by approximately 43.3%, from approximately 140.4 million units in 2008 to approximately 201.2 million units in 2010.

The Group, Gigabyte Technology Co. Ltd., Micro-Star International Co. Ltd., Palit Microsystem Ltd., XFX (Division of Pine Technology Holdings Ltd.), ASUSTek Computer Inc. are the major video graphics cards manufacturers worldwide, with sales and distribution of sales products to the distributors and retailers.

The price of video graphics cards for desktops PCs is dependent on the demand of desktops PCs for the current quarter and following quarter, the availability of raw materials and GPUs, production priority on demand, inventory level, market competition, and the demand of consumers. The price usually affects the enthusiast segment first, which would in turn affect the price of the workstation segment and lower segments including the performance and mainstream segments.

The average unit price of add-in video graphics cards in the performance segment and mainstream segment for desktops decreased by approximately 16.4% and 6.6% of CAGR respectively from 2008 to 2011; while cards in the enthusiast segment increased by approximately 5.2% across the same period.

The following chart shows the price trend of enthusiast, performance and mainstream segments from 2008 to the first half of 2011. The Synovate Report forecasts a divergent profile where the price of the enthusiast segment will rise while that of the performance and mainstream segments will fall.

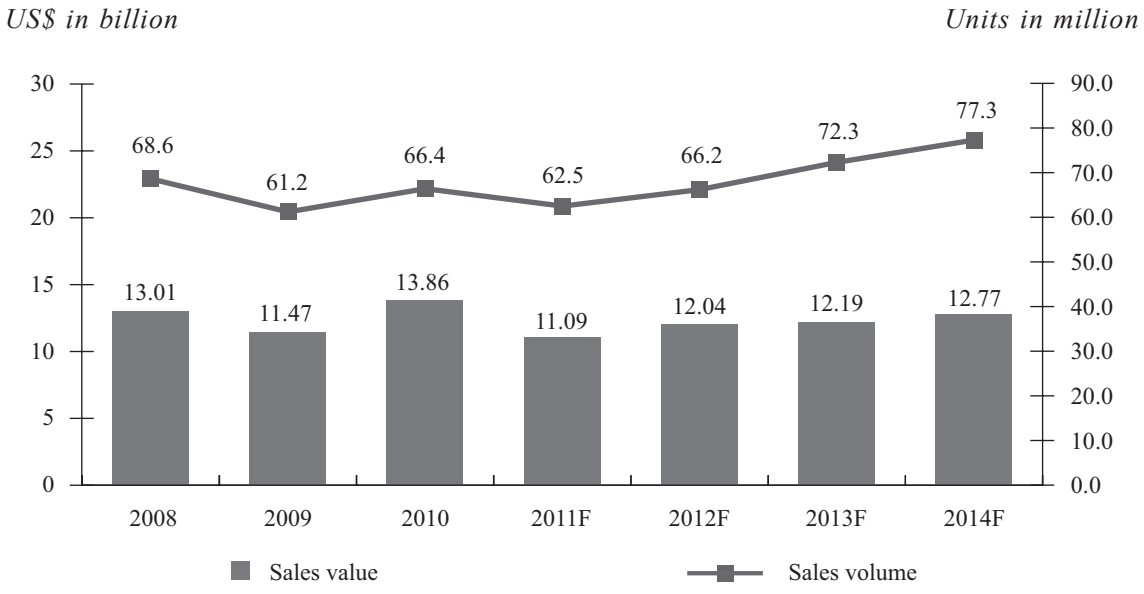


Sources: Synovate interviews and analysis

Global add-in video graphics cards market

The following chart illustrates a demand side view of the global market sales value and volume for add-in video graphics cards for the periods specified. The sales volume of a period may consist of inventory carried forward from a previous period and production from the current period.

Global Market Sales Value and Volume for Add-in Video Graphics Cards from 2008 to 2014



Sources: Synovate interviews and analysis

The global sales volume for add-in video graphics cards declined by approximately 1.6% of CAGR, from approximately 68.6 million units in 2008 to approximately 66.4 million units in 2010. It was expected to decrease by approximately 5.9% to approximately 62.5 million units in 2011, which is higher than during the global recession in 2009.

The decline in sales volume was due to the decrease in the demand of desktops PCs by approximately 3.0% from 2008 to 2010, which was affected by the significant increase in the demand for portable computers by approximately 43.3% during the same period. The global recession in 2009 pulled back demand in the market, especially in the replacement or do-it-yourself consumption market for the enthusiasts and performance segments. The recovery of sales was mainly in the mainstream segment after the 2009 global recession.

It is expected that the global sales value and volume for add-in video graphics cards will increase at a CAGR of approximately 4.8% and 7.3%, respectively from 2011 to 2014. It is due to (i) gamers' demand in Asia and Eastern Europe continue to require higher performance of video graphics cards, and (ii) rapid urbanisation and increase in the wealth of people, in Asia, Eastern Europe, Brazil, Russia, India and China. Fast growth in desktop PC sales is expected in these regions.

The add-in video graphics cards market will show growth in demand in the enthusiast and workstation segments. These two segments will not be significantly affected by the increasing demand for GPU-embedded CPUs. However, GPU-embedded CPUs will affect the market demands in the performance and mainstream segments, especially the sales in mature markets globally.

Global Market Segmentation for Video Graphics Cards from 2008 to 2014

	Workstation		Enthusiast		Performance		Mainstream		Value & Server		Total	
Year	Value (US$ billion)	Share (%)	Value (US$ billion)	Share (%)	Value (US$ billion)	Share (%)	Value (US$ billion)	Share (%)	Value (US$ billion)	Share (%)	Value (US$ billion)	Share (%)
2008	2.72	20.9	1.11	8.5	3.06	23.5	5.56	42.9	0.55	4.2	13.00	100.0
2009	2.14	18.7	1.01	8.8	2.77	24.1	5.17	45.1	0.38	3.3	11.47	100.0
2010	3.51	25.3	1.19	8.6	2.80	20.2	6.14	44.3	0.22	1.6	13.86	100.0
2011F	3.56	32.1	1.16	10.5	1.59	14.3	4.78	43.1	0.00	0.0	11.09	100.0
2012F	4.21	35.0	1.32	11.0	1.78	14.8	4.73	39.2	0.00	0.0	12.04	100.0
2013F	4.67	38.3	1.51	12.4	1.97	16.2	4.04	33.1	0.00	0.0	12.19	100.0
2014F	5.15	40.3	1.73	13.5	2.20	17.2	3.69	29.0	0.00	0.0	12.77	100.0
CAGR (%)	11.2		7.7		-5.4		-6.6		-36.8**		-0.3	

Notes: **The CAGR for value & server only counts from 2008 to 2010.

Sources: Synovate interviews and analysis

The global market sales value of add-in video graphics cards for workstation and enthusiast segments have been increasing, while those of the performance and mainstream segments have been decreasing. The percentage sales value of the workstation segment to the total sales value of add-in video graphics cards has increased from approximately 20.9% in 2008 to approximately 32.1% in 2011, and is expected to increase to approximately 38.3% in 2013. Add-in video graphics cards in the workstation segment have the fastest market sales value growth among the five segments, with a CAGR of approximately 11.2% over the period from 2008 to 2014.

As the adoption and usage of workstation-level desktop PC has been increasing, both the new and upgrade or replacement market of add-in video graphics cards have been increased accordingly. This segment is expected to become active in demand for upgrade or replacement because it is far more economical to purchase a new add-in video graphics card than to invest in a new workstation.

Similar situation happens to the enthusiast segment, which has the second fastest market sales value growth among the five segments, with a CAGR of approximately 7.7% over the period from 2008 to 2014. As the enthusiast segment has usually the most advanced technology or the highest performance in the market, their market sales value per unit has been maintained as the sales volume increases.

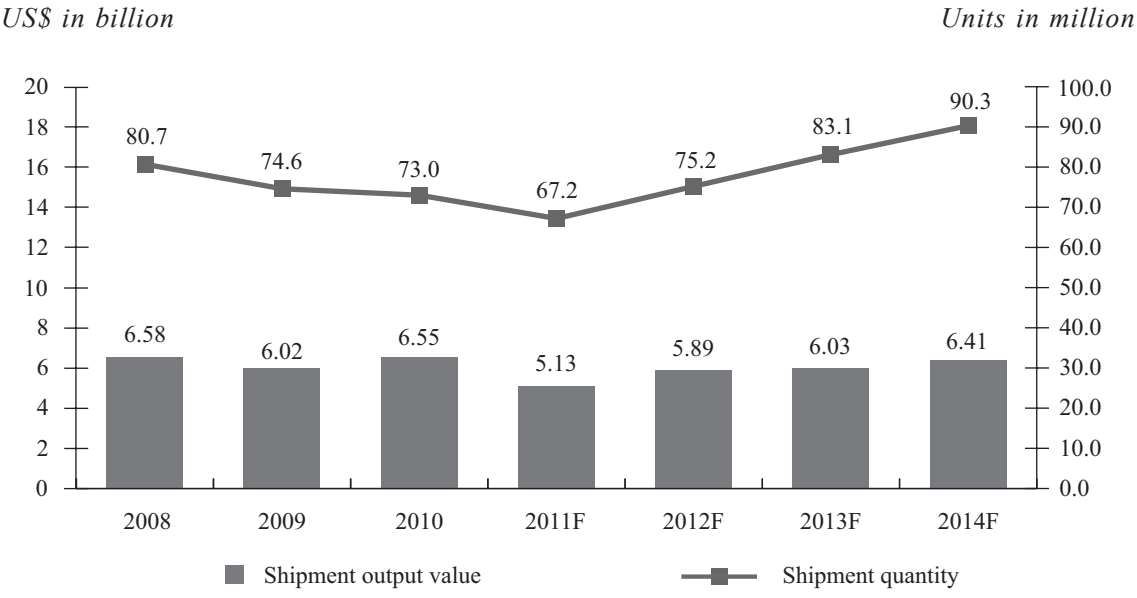
Synovate projects the global market sales value of the video graphics cards in the workstation and enthusiast segments together have been growing rapidly from the combined share of approximately 29.4% in 2008 to approximately 53.8% of the total market in 2014. Synovate noted that the said segments of video graphics cards are highly influenced by the worldwide economy and the demand for desktop computers. The market sales value for the workstation segment dropped by approximately 21.3% from 2008 to 2009 during the recession period and recovered significantly by approximately 64% in 2010. The enthusiast segment declined by approximately 9% and recovered by 18% during the same periods.

However, these two types of video graphics cards are highly influenced by the worldwide economic situation and the demand for desktop PCs. The market sales value for workstation segment dropped by approximately 21.3% from 2008 to 2009 during the recession period and recovered significantly by approximately 64.0% in 2010. The sales value of the enthusiast segment declined by approximately 9.0% and recovered by approximately 17.8% over the same period.

The global market sales value of the video graphics cards of the performance segment and mainstream segment have been decreasing at a CAGR of approximately 5.4% and 6.6%, respectively from 2008 to 2014. Impact from the economy also exists, and the trend of increase in use of laptop computers and the growing adoption of GPU-embedded CPUs are the key factors affecting the market sales value of the add-in video graphics cards in the performance and mainstream segments. It is expected that the majority of the demand for add-in video graphics cards will be in emerging markets, such as China, India and Eastern Europe.

The chart below illustrates a supply side view of the global shipment output value and quantity for add-in video graphics cards in the periods specified. Shipment in a period may be consumed in the same period or carried forward as inventory.

Global Shipment Output Value and Quantity for Add-in Video Graphics Cards from 2008 to 2014



Sources: Synovate interviews and analysis

The global shipment quantity of add-in video graphics cards declined by approximately 4.9% of CAGR, from approximately 80.7 million units in 2008 to approximately 73.0 million units in 2010. It was expected to decrease further by approximately 7.9% to approximately 67.2 million units in 2011.

The drop of shipment quantity was partially due to the introduction of HPGs and EPGs. The decrease in the demand for desktop PCs and the increase in the demand for portable computers had driven some manufacturers of add-in video graphics cards to manufacture portable computers. As the cost of raw materials for GPUs was increasing and the market value for add-in video graphics cards was decreasing, the manufacturers tended to produce high margin products, namely, products in the enthusiast and workstation segments.

It is expected that the global shipment quantity and output value of add-in video graphics cards will increase at a CAGR of approximately 10.4% and 7.7% from 2011 to 2014. It is due to the demand in the workstation, enthusiast, performance and mainstream segments in Asia and Eastern Europe regions. The manufacturers of add-in video graphics cards have greater bargaining power of product price than the retailers. Synovate expected that the shipment price of the add-in video graphics cards will decrease by approximately 1.9% from 2011 to 2014, which is less than the expected price decrease in the market price of add-in video graphics cards by approximately 2.5% over the same period.

Competition in the global add-in video graphics cards market

The table below sets forth the top six add-in video graphics cards manufacturers in the world in 2010.

Top 6 Manufacturers Selling Video Graphics Cards in Global Market in 2010

Rank	Name of Company	Headquarter Location	Revenue in 2010 *(US$ billion)*	Share of Revenue in 2010 *(%)*	Output Quantity in 2010 *(million units)*	Share of Output Quantity in 2010 *(%)*	Features and coverage
1	Micro-Star International Co. Ltd. ("MSI")	Taiwan	0.57	8.7%	7.9	10.8%	Manufacturing of AMD and NVIDIA based video graphics cards
2	PC Partner Ltd.	Hong Kong	0.56	8.5%	12.4	17.0%	Manufacturing of AMD and NVIDIA based video graphics cards
3	Palit Microsystem Ltd. ("Palit")	Taiwan	0.50	7.6%	13.0	17.8%	Manufacturing of AMD and NVIDIA based video graphics cards
4	ASUSTek Computer Inc. ("ASUS")	Taiwan	0.43	6.6%	6.0	8.2%	Manufacturing of AMD and NVIDIA based video graphics cards
5	Gigabyte Technology Co. Ltd. ("Gigabyte")	Taiwan	0.32	4.9%	3.1	4.2%	Manufacturing of AMD and NVIDIA based video graphics cards
6	XFX (Division of Pine Technology Holdings Ltd.)	US/Hong Kong	0.21	3.2%	2.2	3.0%	Mainly manufacturing of AMD and NVIDIA based video graphics cards
Others			3.96	60.5%	28.4	39.0%	
Total			6.55	100.0%	73.0	100.0%	

Notes: (1) Currency in 2010: US$1=HK$7.7707; US$1=NT$31.642; (2) Figures above only based on the companies' VGA business; (3) Figures for ASUSTek Computer Inc. do not include the figures of its subsidiary Pegatron Corporation

Sources: Annual reports 2010; Synovate interviews and analysis

The demand for high visual quality and high performance in lower power consumption add-in video graphics cards are the key market drivers. The key drivers are elaborated below.

The demand for high quality video display for desktops

Consumers are using larger dimension and widescreen monitors for PC games, movies, animations, and other visual entertainment. As consumers look for add-in video graphics cards to satisfy their needs for better display quality, it will push the demand for high quality add-in video graphics cards, and hence driving market growth.

The growth of desktop PC use in emerging markets

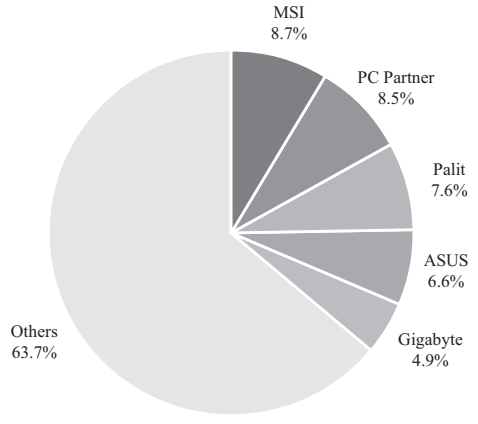
As the urbanisation is increasing in emerging markets such as China and India, the penetration rate of desktop PC usage as well as the internet have been increasing in double digit growth rate. This has increased the demand for add-in video graphics cards especially in the mainstream and performance segments, representing a growth driver.

Energy saving considerations demand faster GPUs embedded add-in video graphics cards with lower power consumption

As technology is advancing, add-in video graphics cards with faster processing speed and larger memory will consume more power. This is against the trend of energy saving and environmental protection principles. Therefore, it is a driver for add-in video graphics cards manufacturers to offer high performance cards with lower power consumption.

There are approximately 20 manufacturers of add-in video graphics cards in the global market, and the top 5 video graphics cards manufacturers shared approximately 36.3% of the total shipment output value, approximately US$6.55 billion in 2010. Total shipment value of top 5 manufacturers in 2010 was approximately US$ 2.38 billion.

The following chart illustrates the market share in terms of shipment value of the top 5 add-in video graphics cards manufacturers.



Sources: Synovate interviews and analysis

The competition among the add-in video graphics cards manufacturers not only focused on the sales capability, but also on the material sourcing capability. Raw materials are controlled by limited number of suppliers, especially the GPUs, which is the heart of an add-in video graphics cards. The supply of GPUs is essentially controlled by NVIDIA and AMD.

Price, sales channel network, and the quality (in terms of performance and reliability) of the add-in video graphics cards are important factors that the manufacturers are competing on in order to increase their competitiveness and penetration in the market. The manufacturers who also target at the replacement or upgrade market are also pursuing brand-building strategies.

Material shortage may lead to an add-in video graphics card manufacturer to be unable to fulfill market demand, which drives their customers away to purchasing other brands or from other manufacturers, thus losing their market share to other manufacturers.

Future opportunities

China, India and other emerging countries are becoming the key markets of both new, replacement and upgrade opportunities for add-in video graphics cards. As consumers in these countries become wealthier, which is beneficial to the growth in personal consumption and business needs, the demand for higher quality add-in video graphics cards for desktop PCs will increase greatly from about 25% in 2011 to about 40% of the total global demand. Desktop PCs will still be their choice of computing hardware.

The three-dimensional ("3-D") visual feature has began to be a major opportunity for the manufacturers to offer high quality add-in video graphics cards.

The discrete add-in video graphics cards demand from professionals such as animation designers, architects and interior designers etc. will also be an important market, which is the opportunity segment for the manufacturers to sustain their business. Synovate expected that the GPU-embedded CPUs still cannot replace the discrete add-in video graphics cards for the high performance required to fulfill the professional demand.

Challenges

While NVIDIA's Quadro maintains leadership in the professional graphics space, AMD and Intel are catching up by introducing new products. Fierce competition among these three players may push down NVIDIA's average professional GPU prices in the future, which may affect the supply of GPUs to add-in video graphics card manufacturers.

The increasing supply and demand for GPU-embedded CPUs will affect the sales of manufacturers who focus on producing discrete add-in video graphics cards. It is estimated that approximately 60% to 70% of the desktop PC will have such GPU-embedded CPUs in new shipments in 2012. This trend may firstly affect the demand for add-in video graphics cards of the mainstream and performance segments. Thus, manufacturers, especially those focusing on mid and low end card production, may need to change their business strategies and directions to compete in the market.

As the product cycle of add-in video graphics cards is being reduced from previously approximately 1 year to currently approximately 6 months, the manufacturers or brand owners need to have research and development team of higher capability than before.

The manufacturers are facing difficulty in estimating and forecasting future demands because the market is very dynamic. Preference and demand trends may change abruptly.

Business operating environment

Although there is a tendency that the younger generation consumers would migrate from desktop PCs to mobile computing devices such as smart phones, Internet Media Tablets and the like, there remains a market for desktop PCs and therefore a demand for add-in video graphics cards.

Manufacturers are facing short product cycle of approximately six months. Add-in video graphics cards are based on GPUs mainly supplied by two dominating suppliers, namely, NVIDIA and AMD. There could be little product differentiation. It becomes essential to have strong research, development and engineering capabilities to provide short development lead-time and achieve early launch of new products.

The recent economic development in the US and the European Union is a cause for concern. The historic downgrading of the US's credit rating and the debt problems of some of the European countries have prompted economists to revise downwards of their forecasts of economic growth. According to Synovate, both the GDP growth in the US and the European Union are projected to grow by approximately 1.1% in 2012 compared with the projected growth of approximately 1.5% in 2011. Economic growth in Asia remains relatively more encouraging but still projected to show declines from 9.5% in 2011 to 8.7% in 2012 (China), 7.8% to 7.4% (India) and 5.1% to 2.8% (other Asian countries). While the government of many leading economies are providing liquidity to the market to avoid credit crunch as well as to stimulate economic growth, such measures appeared to have stabilised the financial crisis that occurred in 2008, the ultimate success of the same remains to be seen. There is a certain degree of uncertainty in the overall outlook.

Barriers of entry

There are substantial barriers to entering the add-in video graphics cards manufacturing business in terms of finance, technological know-how and reputation. Significant initial investment and strong financial capability are required to set up and operate a manufacturing business equipped with advanced technology and research and development capabilities. Manufacturing in a fast moving market with short product cycle, strong capital base and cash flow are necessary to support early stage development of a new entrant.

The add-in video graphics cards manufacturing industry is a technology-intensive industry. Strong research and development and engineering talents are necessary to sustain market share in the enthusiast segment by producing quality products yet maintaining short development time-line so as to beat competitors to launching new products.

There are approximately 20 add-in video graphics cards manufacturers in the global market. Maintaining a good reputation on brand recognition, on quality in terms of reliability and performance is a key to sustaining market share in the competitive market. Synovate estimated that it will take 3 to 5 years for a new entrant to build up reputation in the add-in video graphics cards manufacturing market.

TABLET PC MARKET

Introduction

Tablet PCs are small, thin computer device that has many key features of a full-size personal computer. A tablet PC is essentially a small laptop computer without a keyboard, equipped with a touchscreen as an input device. Internet Media Tablet is a type of tablet PC.

The use of tablet PCs has become increasingly popular world-wide. Tablet PCs may combine the functions of laptop computers and smart phones and support different usages, such as for business or for leisure. The adoption of tablet PCs has started in different industries, such as professional services, media and graphics, etc. They enable users to immediately access and exchange data and information, as well as communicate from anywhere, at any time.

Market size of tablet PC

Synovate estimated that the sales volume of tablet PCs was approximately 53.5 million units in 2010, with a sales value of approximately US$20 billion. Among all the different brands of tablet PCs, including Apple, Samsung, Acer, Asus, etc., Apple's iPad had approximately a 66% share of the total market, in terms of sales volume across in 2010. It is expected that the sales volume and value of tablet PCs will increase by approximately 21% and 15% to reach approximately 65 million units and approximately US$23 billion, respectively in 2011.

North American and Western European markets combined shared approximately 70% of the total sales value of tablet PCs in 2010. The Japanese market shared about 8%, while the rest of the world shared about 22% of the total sales value of tablet PCs in 2010. Sales in markets such as China, India, Central and Eastern Europe, Asia Pacific and the Middle East are expected to increase as tablet PCs are becoming more widely supported by mobile telecommunications operators and suppliers.

Demand outlook

Enterprises have shown their interest and needs in adopting tablet PCs, as it is a convenient portable tool to use when they are selling, showing graphics and documents, and communicating in real time sense. In terms of business usage, tablet PC is replacing part of the function of laptop computers.

It is expected that the demand for tablet PCs will maintain the current growing trend as the processing power becomes more powerful and application software become more diverse.