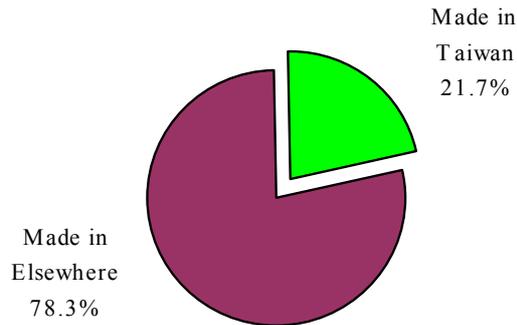


Top Desktop PC Manufacturers in Taiwan

Key Finding: Desktop PC, including full system and motherboard, generates most revenue within the entire IT industry in Taiwan. By counting full system and pure motherboard separately, system and motherboard would be No. 3 and No. 4 IT products in terms of revenues in 1999, according to the information from MIC. Taiwan's desktop PC vendors have different strategies in full system and motherboard. With reference to full system, most of Taiwan's makers focus on ODM/OEM business whereas motherboard makers rely more on brand-name products by targeting the clone market. As requested by the client, desktop PC's could be shipped to the destinations in full system, barebone or pure motherboard. In 1999, more pure motherboards (65M units) were produced than full systems (19M) in Taiwan. According to MIC, the desktop PC production grew 35.7% in 1999 versus 1998.

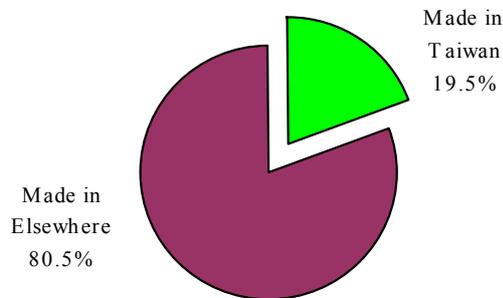
With the worldwide shipment of 89,497k units, Taiwan desktop PC (full system) production seized a 21.7% in 1999 whereas the market share of desktop PC produced in Taiwan was 19.5% in 1998.

Figure 1
1999 Taiwan vs. Worldwide in Desktop PC (Full System) Production



Source: TechInsight/MIC, 1999

Figure 2
1998 Taiwan vs. Worldwide in Desktop PC (Full System) Production



Source: TechInsight/MIC, 1998

After over two decades, Taiwan's desktop manufacturing industry has grown from a small base to become the largest supplier on the worldwide stage. The factors behind the successful story can be attributed to the following:

- A well-established supply chain infrastructure;



- Excellent R&D capability;
- Strong cost competitiveness;
- High flexibility in manufacturing and delivery; and
- Outstanding production efficiency.

As with the different focuses, the Taiwanese desktop manufacturing industry can be split into 3 categories listed as follows

- Deliver full system to the customers: This category is leading by the Taiwanese system vendors such as Acer, FIC, MiTAC and Tatung.
- Deliver barebone to the customers: This category is leading by the key component suppliers who have alliance with professional motherboard vendors. The barebone vendors in Taiwan include Foxconn, LiteOn, Enlight and Delta.
- Deliver pure motherboard to customers: This category is leading by the professional motherboard vendors. In the professional motherboard category, there are 4 leading companies, namely PC Chips, ASUSTeK, Gigabyte and MSI, whose annual shipments are over 5 million units. In addition to the leading 4 companies, USI is almost qualified as the tier-1 professional motherboard vendors and it is dedicated 100% in OEM business.

As the desktop manufacturing industry in Taiwan is complicated and dynamic, each of the Taiwanese manufacturers, whether they deliver in desktop, barebone or motherboard only, must demonstrate their competitive advantages and capabilities to maintain existing partnerships and seeks new ODM/OEM opportunities. Under these circumstances, fierce



competition is expected and the survivors will be those who reach economies of scale with substantial ODM/OEM orders. In response, Taiwanese desktop PC system/motherboard manufacturers are attempting to lower costs, design new products, increase production efficiency and improve product quality to be the victors in this never-ending competition.

TechInsight expects the outsourcing trend to continue and Taiwan to continue gaining market share in the desktop production business. However, finding the most appropriate partner to fit the business strategy of an international vendor is not an easy task.

Factors to be considered when selecting a good OEM candidate in Taiwan are outlined below:

- Vendor's design capability and time to market;
- Vendor's ID creativity for new product;
- Vendor's ramping efficiency in design and production;
- Congruent strategies of both parties;
- Effective global logistics in production and support;
- Reliable technology service and support; and
- Best price/performance ratio.