

DKN Research Newsletter

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(Micro Electronics & Packaging)

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Taiwan Snapshot – Things Are Good!

Taiwan continues to exceed expectations as the manufacturing hub for consumer electronics. Trends for the global electronics market can be forecasted by analyzing shipments of printed circuits from Taiwanese manufacturers.

The year started off slow. Shipments for January 2017 was negative comparing year over year (month to date), and continued to be sluggish through April 2017. Predictions for the industry to finish in the black were pessimistic. Shipments rebounded dramatically in May, 2017; growth rates were finally in the black. Shipment data for every month during 2017 was stronger than the previous year comparing month over month (except October 2017). Shipments were up, and revenues were on a record pace.

By year's end, total revenue for publicly traded printed circuit manufacturers in Taiwan came in at 594.4 billion NT\$ (20.4 billion US\$), an increase of 9.58% compared with 2016. Taiwan had the largest growth in printed circuits manufacturing than other countries.

Drilling down to segment performance, rigid circuits increased by 4.23% during 2017, and flexible circuits increased by 27.1% growth. Clearly most of the growth for the industry came from flexible circuits. Total revenue during December 2017 was a whopping 69.58% larger than revenue for December 2016.

Most of the flexible circuits manufactured were earmarked for use in mobile devices. Apple consumed most of these circuits for their smart phones, notebook PCs and smart watches. The iPhone 8 and iPhone X was launched during the Christmas season; this also marked the ten year anniversary for the iPhone series. Most of the assembling for Apple products is completed by Taiwanese EMS companies. Hon Hai Precision and ZD Technology profited from the strong growth with Apple. The historic growth from flexible circuits can be directly attributed to Apple's success.

Two companies from Japan, Nippon Mektron and Fujikura, were Apple's primary suppliers for flexible circuits before Apple decided to go in a different direction and use Taiwanese suppliers. Apple recently added a few more flexible circuit manufacturers from Korea, however, they have yet to prove themselves as a reliable supplier, and Apple continues to use Taiwanese companies for the lion's share for flexible circuits.

How are things in 2018? Shipments for January declined 6.65% compared to December 2017, but this is attributed to seasonal fluctuations. On a positive note, total revenue for January increased by 31.64% January 2017. Most Taiwanese manufacturers for printed circuits are extremely optimistic with their forecasts for the year. Volume for the first quarter is exceeding expectations, and pre-books for the second quarter are also strong. Looks like this is going to be a banner year!

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Headlines of the week

(Please contact haverhill@dknresearch.com for further information and news.)

1. Shimadzu (Major equipment supplier in Japan) 1/25
Has commercialized a new high intensity blue laser (100W, 1.3x10ext6W/cm2) for engraving process gold and copper.
2. Mitsui Metal Mining (Major copper foil supplier in Japan) 1/25
Has commercialized a new version of HRDP (High Resolution De-bondable Panel) for Fan-Out Panel Package. It is capable to generate 2micron line/space.
3. Denso (Major automobile device supplier in Japan) 1/29
Has developed a new image sensor for automobiles. Combination with millimeter radar can detect pedestrians in the night.
4. Tokyo University of Agriculture & Technology (Japan) 2/2
Has developed a new jet nozzle for high viscosity liquids. It will expand the availabilities of ink jet printers and 3D printers.
5. Asahi Glass (Major glass product supplier in Japan) 2/5
Will expand the manufacturing capacity of photo mask blanks for the EUV photolithography process of semiconductors.
6. AIST (Major R&D organization in Japan) 2/6
Has developed a new pressure sensor array built by printing process on thin flexible film. It can detect wind pressure distribution with high resolutions.

7. Kyoto University and Kyushu University (Japan) 2/7

Have co-developed a new innovative control process for crystal structures of nano-alloys. The process is valuable to create new features with traditional alloys.

8. Panasonic (Major electronics company) 2/8

Will start volume production of encapsulation resins in Shanghai, China for molding and under-fill process in China.

9. AIST (Major R&D organization in Japan) 2/9

Has developed a new soldering technology introducing microwave heating. It makes low temperature soldering for PET substrate possible with heat damage.

10. Tokyo University (Japan) 2/9

Has developed a strain direction sensor built on a flexible substrate. It could be a practical progress as Flexible Spintronics.

11. Teijin (Major organic material supplier in Japan) 2/13

Will build a new compounding plant and R&D center in Thailand with annual capacity of 10000 tons for electronics customers in China and ASEAN area.

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