

# **DKN Research Newsletter**

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## **Circuit Board Shipments in Taiwan Up Slightly**

The COVID-19 pandemic continues to disrupt the global economy. Countries around the world are struggling with opening their economies while maintaining safety protocols. This conflict provides uncertainty for many individuals and companies. Let's look at Taiwan.

Taiwan reported 498 new cases and seven deaths since the beginning of the year. These numbers are negligible when looking at their twenty million person population. Inbound and outbound international travel is restricted, but domestic travel continues. Taiwanese companies posted positive results compared to last year as manufacturing and exports increase.

Taiwanese printed circuit manufacturers shipped 56.85 billion NT\$ worth of product during July. This is an increase of 9.5% compared with previous month, and 1.7% more than the same month last year. The growth rates are not record breaking, but they are positive. Rigid board manufacturers performed better than flexible circuit manufacturers during the first half of the year. Flex circuit manufacturers started the year off slowly, but shipments increased due to a ramp up in inventory for the Christmas season. Third quarter results are predicted to show a small uptick, but forecasts remain positive for second half growth. Apple sales are critical for manufacturers to remain in the green.

Many employees continue to work from home and work from home products is on the rise. They include telecommunication systems, personal computers and related equipment such as desk top monitors and additional memory. Taiwan is the largest supplier of IT devices in the world, and Taiwanese PCB manufactures received additional orders for multilayer boards during the first half of year. Many are predicting the work from home model to continue for a while, so demand for PCs and related devices will be strong.

A few of my business associated in Taiwan are very optimistic for a vaccine and a strong rebound in business. Total shipments from circuit board manufacturers grew 3.5% for the first seven months year over year and forecasts show a continued growth for Taiwanese manufacturers during the last five months of the year.

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#### Headlines of the week

(Please contact [haverhill@dknresearch.com](mailto:haverhill@dknresearch.com) for further information and news.)

1. Kyushu University (Japan) 8/31

Has co-developed a new polymer optical transducer with high speed up to 100Gbit/sec with Nissan Chemical.

2. Toshiba Device & Storage (Major device supplier in Japan) 9/1

Has rolled out a series of small size photo relays with the smallest SMT areas.  
SMT area: 2.0 x 1.45 mm, Height: 1.3 mm.

3. Panasonic (Major electronics company in Japan) 9/1

Has completed to sell semiconductor business to Nuvoton Technology, a subsidiary of Winbond Electronics in Taiwan.

4. Toyota Motors & Honda Motors (Major car suppliers in Japan) 9/3

Will start field test of fuel cell buses as the portable power supplier for the power outage areas caused by natural disasters. The capacity is ten times larger compared with typical EV.

5. Fuji Keizai (Market research firm in Japan) 9/4

Has released a new report about global semiconductor material market. The total revenue in 2024 will be 40.5 billion dollars in 2024, 23% grow from 2019.

6. Ushio (Lighting device manufacturer in Japan) 9/5

Was successful to make Coronavirus non-active by 30 seconds irradiation of 222 nm ultraviolet.

7. Mitsubishi Electric (Major electric & electronics company in Japan) 9/8

Has developed a new semiconductor laser device “ML770B64” with metallic can package for 100Gbit/sec telecommunication.

8. Renesas Electronics (Major semiconductor manufacturer in Japan) 9/8

Has rolled out a new wireless charger IC “P9415-R” for mobile devices such as smart phones and tablet PCs

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9. Asahi Kasei Electronics (Device manufacturer in Japan) 9/10

Has rolled out a new voltage detection ICS “AP4405AEN Series”. Voltage controller, control logic, MOSFET, etc. were built in one chip. It consumes small current down to 10nA.

10. Koki HD (Power tool manufacturer in Japan) 9/9

Has rolled new codeless band saw “CB 3612DA” with lithium ion battery. It works 6 times faster compared with the old model.

11. Sumitomo Electric (Major Cable manufacturer in Japan) 9/11

Has developed new manufacturing process of fluororesin base flex circuits for 5G telecommunication devices. They have smaller loss than LPC resin base circuits.

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16. Nippon Koei (Major consulting firm of construction industry in Japan) 8/5

Has co-developed the Fly Wheel type energy storage device “Flystab” with STORNETIC, A German company. Capacity: 3.6 kWh per unit.

17. Kaneka (Major material supplier in Japan) 8/12

Newly developed photovoltaic cell based on multi-crystal silicon was certified by Toyota as the roof power source of “e-Patette”, new model of the auto-drive EV.

18. On-Semiconductor (Semiconductor manufacturer in the U.S.) 8/11

Is considering to sell its manufacturing plant in Niigata, Japan. The company is looking for a capable company to continue the supply for the current customers.

19. JEITA (Industry organization in Japan) 8/12

Has unveiled the 2019 version of the roadmap for the printed circuit industry in Japan. Semiconductor package will lead the technology of fine lines.

20. Kawasaki Heavy Industry (Major heavy equipment supplier in Japan) 8/17

Has started the field test of the all plastic secondary battery based on the next generation lithium ion battery technology designed for unmanned submarines.

21. Molex Japan (Major connector supplier in Japan) 8/18

Has unveiled a new high retention force connector series HRF 7S and HRF 7L with 0.4 mm pitch for SlimStack boards.

22. Tohoku University (Japan) 8/19

Has developed a new power generation device. It generates electric power using the temperature difference. It works in dark circumstances at room temperature.

23. Tokyo University (Japan) 8/25

Has co-developed a new high performance organic semiconductor “C10-DNS-VW” for low cost tag and sensor devices.

24. Littel Fuse (Component supplier in the U.S.) 8/26

Has rolled out new PPTC (Polymer Positive Temperature Coefficient) series “Poly Switch zeptoSMDC Series” in Japan for portable equipment.

25. SMK (Major connector supplier in Japan) 8/26

Has rolled out a new connector series “RB-1 Series” for the BtoB connections of 5G antenna boards. Pitch: 0.35 mm, Height: 0.6 mm. Capable up to 12 GHz.

26. TSMC (Major semiconductor manufacturer in Taiwan) 8/27

Has developed the N4 manufacturing process as the post N5 process. The company plans the production in 2021 and volume production in 2022.

27. JDL (Major display supplier in Japan) 8/26

Has agreed to sell the company and manufacturing facilities to Apple and Sharp, a subsidiary of Hon Hai Precision in Taiwan.

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