

Advantest Corporation
FY2018 2Q (Three months ended September 30, 2018) Information Meeting
Q & A Summary

October 30th, 2018

Q. In your upward revision, you raised your SoC test system sales forecast by ¥30 billion. Can you analyze the factors of the strong performance of SoC testers?

A. With the use of 10 nm and 7 nm semiconductor processes expanding, higher reliability is required for semiconductors, and as the number of test items increases, test time also increases. Our SoC business is doing well as AI functions are now being built into SoCs for smartphones. Also for display driver ICs, tester demand has exceeded expectations. In particular, the demand for TDDI (Touch and Display Driver Integration) is increasing, not only for smartphones but also for 4K television. We expect these favorable circumstances to continue next year.

Q. With respect to China, more OSATs have begun to move out of China. What is your view of this move?

A. We think that customers in China will have to ramp up domestic production amidst concern about the future of US-China trade. In China there are both domestically capitalized and foreign-capitalized OSATs. The latter have started to move out of China, but their destinations are still in Asia, for instance Taiwan and Malaysia, where we already have a strong business base. I believe there will be no major impact to Advantest's business.

Q. What growth drivers do you expect to see in the industry in 2019?

A. In SoC, the expansion of 7 nm products and the start of 5G. The 5G base station market will go live next year. We have developed solutions for that market and expect to make sales there. In memory, one DRAM supplier will shift from the 1X generation to the 1Y generation. Another company will accelerate its transition from the 2Z generation to the 1X generation. Regarding NAND, 96-layer QLC products were originally scheduled to go into mass production in the second half of 2019, but that is likely to happen ahead of schedule in the first half of the year. We estimate that test time will increase for these products and tester demand will be revived.

Q. Previously, you expected that orders for 2Q would fall below 1Q, but how far have orders improved from your original assumption? And can you break down 2Q orders?

A. SoC tester orders rose by about ¥18 billion, mainly for smartphone-related demand. The rest of the increase was for memory testers and mechatronics.

Q. Orders from China have increased to ¥18 billion. What was the content of these orders, and what are your future prospects in terms of Chinese sales?

A. The main factors are the launch of new memory fabs and the rise of a new display driver IC market. These new fabs will be for pilot lines for domestically capitalized production. DRAM products have already come off pilot lines. Demand for testers is emerging, and will pick up after the second half of 2019. 32-layer NAND products are already in production, and we assume that 64-layer products will start production in the second half of next year. This will help our business.

Q. What is your demand forecast, including next term, for SoC tester applications?

A. In terms of orders, communications and high performance computing are up by 50%+, MCU, analog, and sensors by 10%+, and display driver ICs by 30%. Quantitatively, we do not yet know what SoC tester demand will look like the next term, but we do not expect the ratio to be much different from this term. We think strong demand for display driver IC testers will continue, while demand from automotive and industrial applications may fall slightly.

Q. What ratio of mobile SoC chips have AI functions? What will happen there next fiscal year?

A. You have to think about 10 nm products and 7 nm products separately. For 10 nm products, AI functions have started to be built into new SoC products already. In 2019, 7 nm products will become mainstream. Looking at it this way, new products are definitely going to be multifunctional with AI functionality. We are expecting to see benefits from this shift because it means test times become longer and test becomes more complicated.

Q. Hitherto, tester demand has moved in two-year cycles with a peak one year followed by a trough the next. This year is a good year, and in a normal cycle a trough would come next, but is it true that with the advent of AI-equipped SoC, you are not much concerned about a drop in demand?

A. The demand cycle is related to process node migration. 28 nm products came out five years ago, 14 nm products came out two years ago, and 10 nm products entered production last year. Along with miniaturization, every smartphone maker is now emphasizing the integration of AI functions into smartphone processors. I think that this trend will continue.

Q. What are the prospects for the 5G market next year and beyond?

A. We do not know the size of the market yet, but from the second half of 2019 we will start seeing

5G smartphones and smartphones that can handle both 4G and 5G. Therefore, we believe that base stations must be built in advance and that related demand will begin in the second half of 2019. The market will really take off in 2020. We have already developed a solution with the test functions required for the 5G era, and we expect market growth.

Q. What is your share for base stations?

A. More than 80% for 4G. We want to hold a big share for 5G as well.

Q. What SoC and memory trends do you expect to see in 3Q and 4Q orders?

A. SoC will be strong in 3Q. We assume memory will get stronger in 4Q.

Q. Have any 2Q orders been ahead of schedule?

A. Tester lead times have increased from about 2 months in the past to about 4 months. Orders are in line with lead times, but we do not regard this as being ahead of schedule. Hitherto, orders usually bottom out in 2Q and sales bottom out in 3Q, but this is not the case this year. With the increased use of semiconductors in various applications, we think tester seasonality is getting less pronounced.

Q. Regarding production, it appears that your Gunma Factory is running at close to full capacity. Do you have a plan to establish another factory or use EMS?

A. Sales in both 1Q and 2Q exceeded ¥70 billion. We already have enough production capacity for this level of sales. All production of V93000 is carried out by overseas EMS partners. Production of our T2000 and memory testers has been carried out in the Gunma area, but with the recent increase in production, we are now also using domestic EMS resources. Overseas, some products are being assembled and handlers are being produced in South Korea. We do not want to assume large fixed costs for production, so we envision making greater use of EMS.

Note

This document is prepared for those who were unable to attend the information meeting and is intended only for reference purposes. The original content has been revised and edited by Advantest for ease of understanding.

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