

**Advantest Corporation**  
**FY2021 3Q (Three months ended December 31, 2021) Financial Briefing**  
**Q & A Summary**

January 27, 2022

Q: Why have you raised your order forecast?

A: Total company orders exceeded our internal plan by ¥36 billion. SoC tester orders accounted for ¥27 billion of that overshoot. We saw increased demand for testers for application processors (APUs) and high-performance computing (HPC) chips, as well as growth in testers for display driver ICs (DDICs). The breakdown for 3Q SoC tester orders was 70% for computers and communications; 15% for automotive, industrial, and consumer devices; and 15% for DDICs. Memory tester orders were in line with our plan. Mechatronics systems orders exceeded our plan by ¥3 billion, primarily due to demand for device interfaces. Services, support & others orders beat our plan by ¥6 billion. We raised our full-year order forecast by ¥85 billion, and around ¥70 billion of that increase is for SoC testers. The upward revision is based on our expectation that tester demand will increase across the board rather than solely for leading-edge chips. We also raised our order forecast for services, support & others by around ¥15 billion, mainly because of growth in system level test (SLT) systems.

Q: Your peers have indicated that they are concerned about the potential for orders to slow going forward, but you do not seem concerned. Is that correct?

A: We have a broad customer base in the HPC-related market, which is the area that currently has the greatest momentum. It is likely the orders that we are booking there that account for this difference. Leading-edge processes are increasingly being used for HPC devices, which is leading to longer test times and significant demand growth.

Q: You say that HPC devices will drive market growth going forward, but are you referring to GPUs, or are you referring to some other type of device using ARM cores?

A: When we refer to HPC devices, we refer not only to GPUs but to a broad range of semiconductors whose high-end performance can be leveraged in environments such as data centers. This would include accelerators, FPGAs, and the like.

Q: How do you expect your share of the SoC and memory tester markets to change in 2022? I think it is fair to expect your share of the SoC tester market to grow as your HPC customers transition to leading-edge processes.

A: We think that strong investment by our customers should work to our advantage in 2022 in terms of market share. We do expect our share of the SoC tester market to increase as our sales to HPC customers grow. In parallel with growth in the HPC market, we expect the memory market to see increased demand for DRAM testers for HBM2, GDDR6, and DDR5, which is an area where we are well positioned to gain market share.

Q: I am clear on where you expect to head in 2022, but how about 2023? I see the potential for customer mix to put your peer at an advantage as 3nm devices get off the ground.

A: We believe that the tester market grew by 30% in 2021 and look for it to grow by 20% in 2022. Whether it will continue to grow at a similar pace in 2023 is unclear, so we are not yet taking an optimistic stance. That said, the migration from the 5nm to the 3nm process node is making testing extremely challenging, and our customers are struggling with the question of how to go about their testing. This provides us with the opportunity to market the testing technology that sets us apart. While the market may slow in the future, we expect to see sustained test demand for new technologies in 2023, 2024, and 2025.

Q: You expect your operating margin to reach 30.9% in 4Q, which would be near your all-time record. Given that you have a large order backlog and that SoC testers are accounting for a greater portion of your product mix, can we assume that your operating margin will either remain at the current level in FY2022 or potentially even improve further? Also, what upside potential or downside risks should we take into account in considering your FY2022 operating margin?

A: Our expectation for a 4Q operating margin of 30.9% is based on our outlook for a favorable product mix. Given our current order backlog for SoC testers, we do think it would be fair to anticipate an operating margin roughly on par with the current level in FY2022.

That said, we also expect parts, logistics, and labor costs to rise. Please note that uncertainty continues to surround parts procurement in particular, as we have not yet been able to secure everything that we need for our 2022 production.

Q: How much of your order backlog can you cover, or how long do you think you will be able to continue supplying products with the parts that you have already been able to secure?

A: Our parts supplies are so tight that, as we noted earlier in our presentation, we cannot rule out risk to our 4Q sales. The semiconductor shortage is impacting Advantest and a diverse range of industries. At present we are unable to say when that situation might be resolved.

Q: Has the parts procurement environment changed versus where it was three months ago?

A: The issues that we faced three months ago persist with no major changes in the situation. It is primarily semiconductors that are difficult to procure, and the problem has not spread in any significant way to additional parts. That said, we do not get the impression that the situation has improved. Given the growth in our orders, we find ourselves having to go back to suppliers whom we had already asked to increase production to do so again, and they are struggling to keep up with our demand because the capacity at their fabs is so tight.

Q: You expect the SoC tester market and your own sales to grow, and based on what you have said, I get the impression that while you have not secured all the parts that you will need, you to some degree see a path to meeting your procurement requirements. What sort of steps have you taken to that end?

A: We have taken steps to procure what we need to fulfill our substantial order backlog. Our approach has been to provide our suppliers with long-term forecasts and to place our orders early. We believe that this will enable us to increase our procurement volumes beyond what they have been. However, if your question is whether that means that we have absolute certainty about our semiconductor supplies, I have to say that the situation remains uncertain given the variety of things that can occur in the manufacture of semiconductors, including unexpected defects.

Q: I believe that the recent briskness of your SLT orders owes to demand increasing along with that for SoC testers, but I would like to know more. Is it the number of customers or the number of applications that is growing?

A: There are two reasons that our SLT orders are brisk. The first is that the number of applications is growing, with examples including smartphones, HPC, and automotives. This is resulting in a broader customer base. The second reason is growth in system sales, which is enabling us to also capture demand for consumables.

Q: How does the profitability of the SLT business compare to your companywide margin?

A: Our SLT business currently comprises multiple operations, including the business for SSDs, the two businesses for SoCs that we acquired in the past, and our more recent

acquisition, R&D Altanova. While not at the level of our semiconductor testers, whose profitability has improved substantially recently, the profitability of our SLT business exclusive of R&D Altanova is good.

Q: You said that some of the customers in the memory tester business have changed their investment plans. To the extent possible, could you provide some additional color? Please also describe conditions across the memory tester market for individual applications.

A: We will refrain from commenting on any particular customer. What we can say is that the ¥10 billion cut to our sales forecast does not owe to order cancellations, peers nabbing our deals, or the market slowing down. We made the cut based on the belief that the demand has merely been postponed and that we will see an equivalent amount reflected in our FY2022 sales.

The market environment is very good for memory testers as a whole. In the DRAM space, the DDR5 is ramping to mass production, and LPDDR5 investment is underway. NAND manufacturers have made plans to add even more layers, and they are steadily executing those plans. The environments for both applications are favorable, so we intend to continue to steadily capture demand.

Q: The estimate you presented for the 2022 SoC tester market is \$4.5-5 billion, which is quite a wide range. Is it fair to say that its eventual size depends more on your ability to procure parts than on how demand trends?

A: That is correct. We believe that our procurement of parts will be a major determinant of the size of the market going forward. In addition to that, we do not yet have a good idea of how much investment will take place this year at semiconductor manufactures where our exposure is small. It is for these two reasons that the range of our estimate is so wide this time.

Q: The midpoint of your 2022 SoC tester market estimate suggests YoY growth of just over 15%. Given that and the likelihood that your market share will expand in 2022, is it fair to assume that your SoC tester sales for calendar year 2022 will grow by around 20% or even more?

A: That is what we believe.

Q: I would like to ask about YoY growth by application in the SoC tester market in 2022. If you were to divide the market into HPC, mobile, and automotive/industrial, how would you rank them in terms of growth prospects?

- A: While small in market size, automotive/industrial is the category among those that you mentioned that we think will demonstrate the strongest growth. HPC would be next. Mobile remains a large market, but we expect flat growth from it. We look for demand for DDIC testers to either trend flat or grow slightly.
- Q: I would like to ask about potential market share gains. You excel at testers for modems, so if the major semiconductor manufacturer where your share is currently low were to start using its own modems, would it be fair to expect your share of that customer's business to increase as a result? Also, the hyperscalers are increasingly using their own chips. Do they represent a potential new customer base for you?
- A: We have very high expectations for the hyperscalers. However, we do not have good visibility on how much demand they are likely to generate. We are working to gain substantial business from the major player where our share is low by engaging in aggressive marketing. However, our peer is also being aggressive in its approach toward our customers. At present, our honest opinion is that with this one-on-one competition persisting, we will not be able to say what 2023 and 2024 SoC tester market shares look like until the results are out. The SoC tester market is split between Advantest and our peer, and we think that that dynamic is likely to continue.
- Q: Based on previous company presentations, my understanding is that your production capacity equates to roughly ¥120 billion per quarter. However, given your 2022 market outlook and the potential for you to gain market share, your quarterly sales could reach a level greater than ¥120 billion. If that proves to be the case, will you need to engage in additional capital expenditure?
- A: With the exception of some of our consumables, our basic policy on production capacity is that we should address swings in product demand by adjusting the amount of outsourcing capacity that we use. We at present are not considering altering this policy and increasing our internal capacity. If we were to see new demand growth, we would increase the amount of outsourcing capacity that we use.

#### 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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