



**ADVANTEST**<sup>®</sup>

**FY2021 2Q**  
**(Three months ended September 30<sup>th</sup>, 2021)**  
**Financial Briefing**

October 28th, 2021  
Advantest Corporation

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# NOTE

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## Accounting Standards

– Our results and outlook, described in this presentation, have been prepared in accordance with IFRS.

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– This presentation contains “forward-looking statements” that are based on Advantest’s current expectations, estimates and projections. These statements include, among other things, the discussion of Advantest’s business strategy, outlook and expectations as to market and business developments, production and capacity plans. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as “anticipate,” “believe,” “estimate,” “expect,” “intend,” “project,” “should” and similar expressions. Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause Advantest’s actual results, levels of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking statements.

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```
...mirror_object = ...
operation == "MIRROR_X":
    mirror_mod.use_x = True
    mirror_mod.use_y = False
    mirror_mod.use_z = False
operation == "MIRROR_Y":
    mirror_mod.use_x = False
    mirror_mod.use_y = True
    mirror_mod.use_z = False
operation == "MIRROR_Z":
    mirror_mod.use_x = False
    mirror_mod.use_y = False
    mirror_mod.use_z = True

...selection at the end -add ...
obj.select= 1
obj.select= 1
context.scene.objects.active
obj.select= 0
obj.select= 0
```

## Financial Results for FY2021 2Q

Atsushi Fujita

Director, Senior Executive Officer, CFO & CCO (Chief Financial Officer & Chief Compliance Officer), Executive Vice President, Corporate Administration Group

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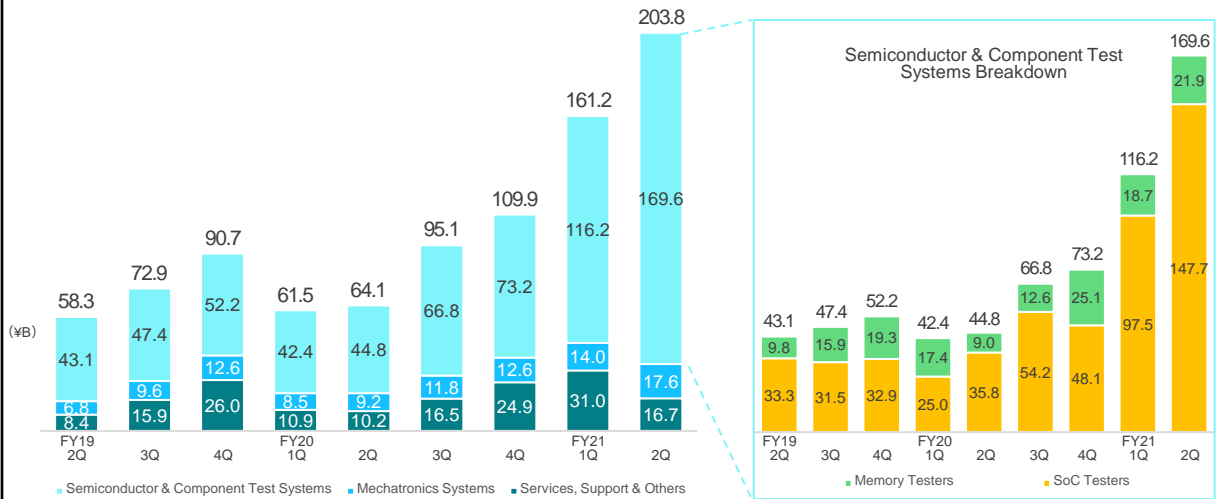
## FY21 2Q Summary of Results

	FY20				FY21							(¥B)
	1Q	2Q	3Q	4Q	1Q	2Q		QoQ		YoY		
						Forecast	Actual	(Δ)	(%)	(Δ)	(%)	
Orders	61.5	64.1	95.1	109.9	161.2	98.8	203.8	+42.6	+26.4%	+139.6	+3.2x	
Sales	66.7	77.4	78.1	90.6	97.1	93.9	90.9	-6.2	-6.4%	+13.5	+17.4%	
Gross Profit	38.0	41.6	40.2	48.5	54.7	-	50.1	-4.7	-8.7%	+8.3	+20.0%	
Gross Margin	56.9%	53.9%	51.5%	53.5%	56.4%	-	55.0%	-1.4pts		+1.1pts		
Operating Income	13.5	17.4	15.3	24.5	26.1	23.5	21.4	-4.8	-18.3%	+3.9	+22.2%	
Operating Margin	20.2%	22.6%	19.5%	27.1%	26.9%	25.0%	23.5%	-3.4pts		+0.9pts		
Income Before Tax	12.9	16.4	13.9	26.4	25.7	23.5	21.6	-4.2	-16.4%	+5.1	+31.0%	
Net Income	10.6	13.9	12.0	33.3	19.3	17.6	15.9	-3.4	-17.8%	+2.0	+14.1%	
Net Income Margin	15.8%	18.0%	15.4%	36.7%	19.9%	18.7%	17.5%	-2.4pts		-0.5pts		
Backlog	85.7	72.5	89.5	108.8	172.9	177.8	285.8	+112.9	+65.3%	+213.4	+3.9x	
Exchange Rate	1 US\$	¥108	¥107	¥105	¥104	¥109	¥110	¥110	¥1 Depreciation	¥3 Depreciation		
	1 Euro	¥118	¥123	¥124	¥127	¥131	¥135	¥131	-	¥8 Depreciation		

### ○ FY2021 2Q Summary of Results

- In our earnings forecast three months ago, we expected that 2Q orders would decrease compared to 1Q, partly as a reaction to the rapid increase in orders in 1Q.
- However, as semiconductors continue to make performance and complexity gains, the industry's need for future expansion of test capacity has increased, and customers' motivation to invest in testers has become even stronger, mainly for leading-edge products.
- In addition, as the global semiconductor shortage continues, chipmakers also actively placed orders for testers as a part of aggressive capacity-building investments for various trailing-edge semiconductors.
- As a result, 2Q orders increased significantly.
- Sales were ¥3.0 billion yen below our 2Q forecast announced in July, due to logistical difficulties caused by the impact of COVID-19 restrictions.
- Orders, sales, and profits will be explained in detail in the following slides.

## Quarterly Orders by Segment



Note: Intersegment transactions have been eliminated from totals

### ○ FY2021 2Q Orders by Segment

Orders in 2Q alone were equivalent to our full-year sales in FY2017. This was the fourth straight quarter of record-high quarterly orders, thanks to the continuing high-demand environment.

### ○ Semiconductor & Component Test Systems

- ¥169.6 billion +46.0% QoQ
- Orders for SoC testers climbed once again, this time by ¥50.2 billion, to ¥147.7 billion. In particular, orders for high-end SoCs such as application processors (APU), which are the core components of smartphones, and high performance computing (HPC) devices drove order strength. Inquiries for trailing-edge devices used in automobiles, industrial equipment, and consumer electronic were also strong.
- Memory tester orders were ¥21.9 billion, an increase of ¥3.2 billion QoQ. In addition to a high level of DRAM orders, orders for flash memory increased.

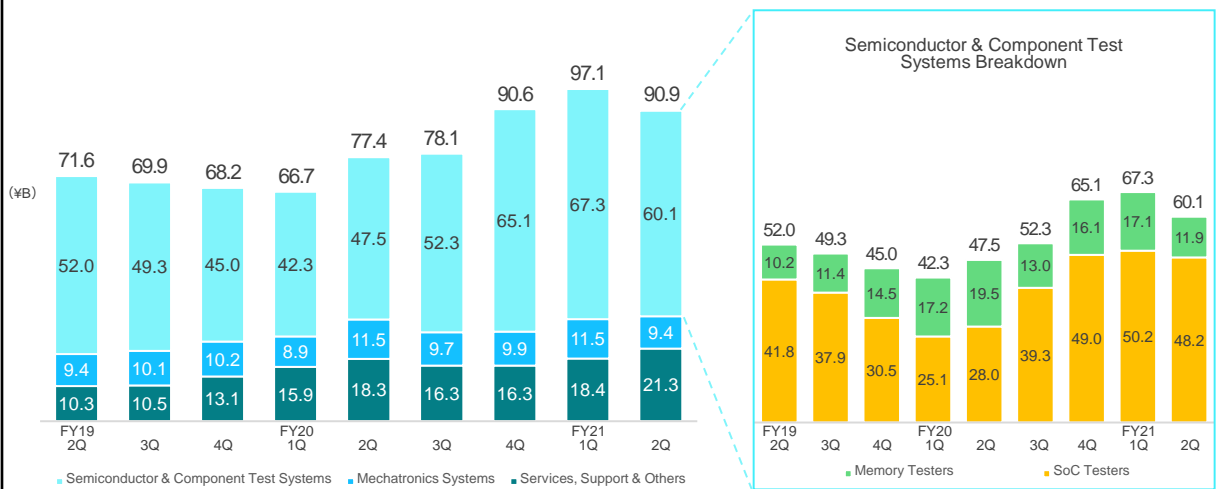
### ○ Mechatronics Systems

- ¥17.6 billion +25.3% QoQ
- With tester orders booming, device interface and test handler orders were also strong. Orders for EUV-related nanotechnology products also increased.

### ○ Services, Support & Others

- ¥16.7 billion -46.4% QoQ
- System-level test orders declined in reaction to the large number of orders received in 1Q.

## Quarterly Sales by Segment



Note: Intersegment transactions have been eliminated from totals

### ○ FY2021 2Q Sales by Segment

We delivered total sales above the ¥90.0 billion level for the third consecutive quarter, as our system-level test business grew, in addition to continued demand for testers.

### ○ Semiconductor & Component Test Systems

- 60.1 billion                    -10.8% QoQ
- Breaking that down, SoC tester sales were ¥48.2 billion and memory tester sales were ¥11.9 billion.
- Some SoC testers could not be delivered due to logistical disruptions. Memory tester sales also decreased from the previous quarter, much as expected.

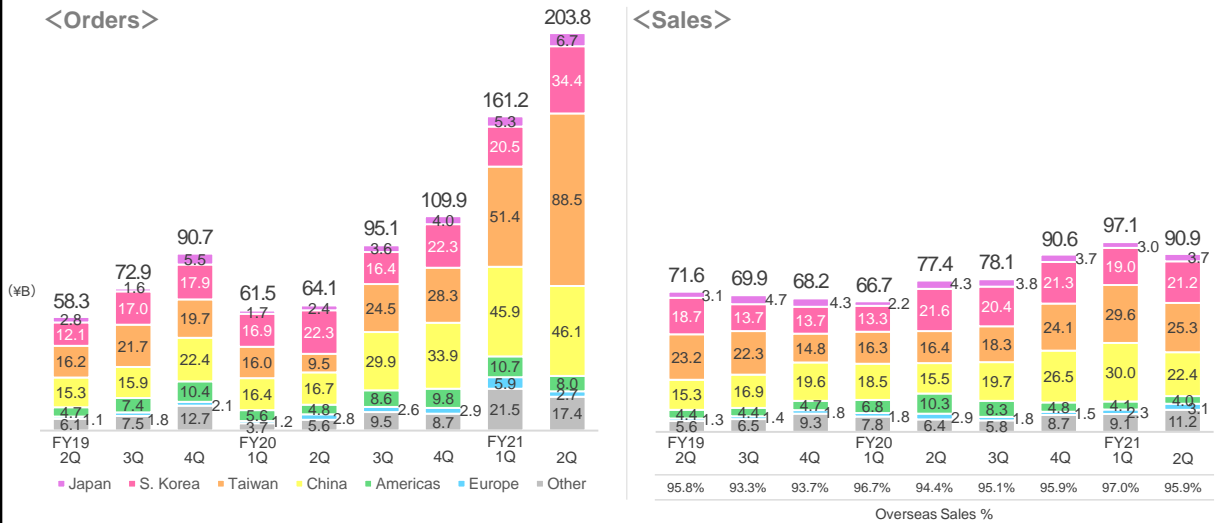
### ○ Mechatronics Systems

- ¥9.4 billion                    -17.3% QoQ
- Sales of test handlers and device interfaces decreased in line with the decrease in sales of memory testers.

### ○ Services, Support & Others

- ¥21.3 billion                    +16.5% QoQ
- System-level test product sales have grown steadily, mainly for high-end SoCs.

# Quarterly Orders / Sales by Region



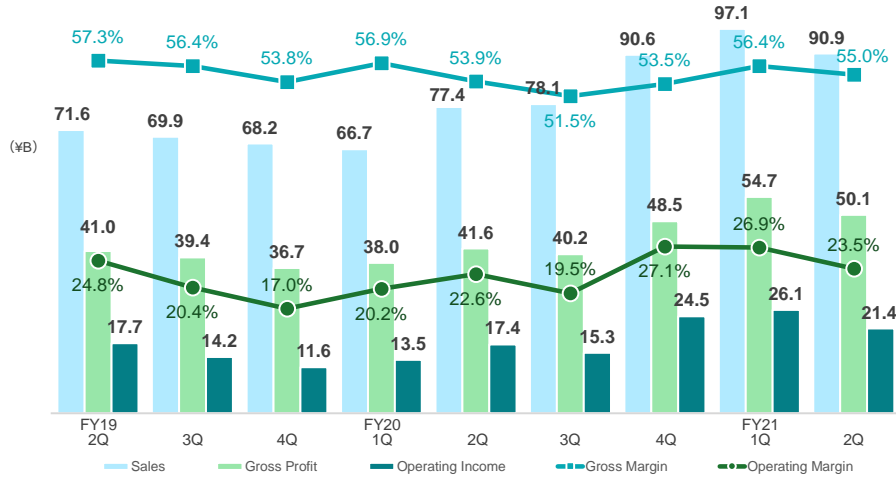
## ○ FY2021 2Q Orders by Region

- Taiwan  
Continuing the trend seen in 1Q, orders for high-end SoCs, mainly smartphones and HPC-related products, increased significantly.
- China  
As in 1Q, orders for both SoC testers and memory testers continued to hold a high level amidst strong customer motivation to invest.
- South Korea  
We received active inquiries regarding various smartphone-related semiconductors.

## ○ FY2021 2Q Sales by Region

- Setting aside the lag caused by temporary factors such as logistics, our regional breakdown generally conformed to expectations.
- With orders dramatically surging, some parts of our supply chain are not able to fully keep up with the pace of demand. This is a top priority for us at present.

## Sales / Gross Profit / Operating Income



### ○ FY2021 2Q Sales / Gross Profit / Operating Income

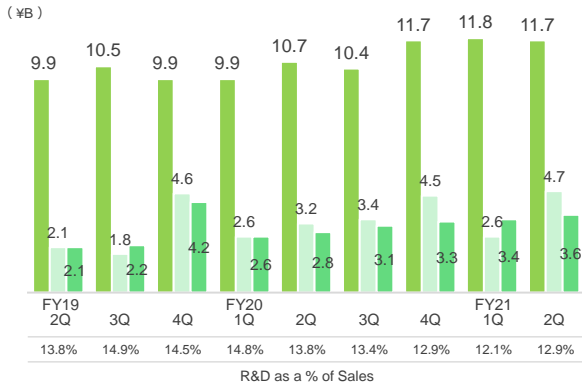
- Gross margin 55.0%  
Although sales fell short of our July forecast, our gross profit margin was generally in line with expectations.
- SG&A (including all other income and expenses) ¥28.7 billion
- Operating income ¥21.4 billion
- Operating margin 23.5%



# Investments / Cash Flow

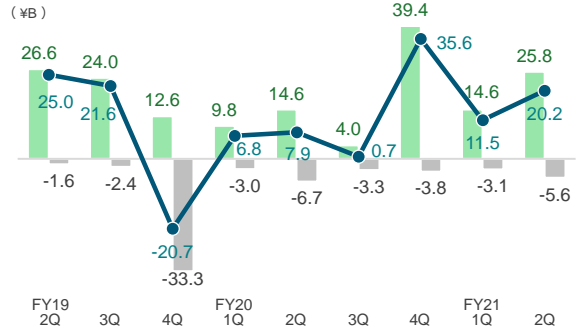
## <Investments>

- R&D Expenses
- Capital Expenditure
- Depreciation & Amortization



## <Cash flow>

- Cash flows from operating activities
- Cash flows from investing activities
- Free cash flows



\*Free Cash Flows = Cash flows from operating activities + Cash flows from investing activities

### ○ FY2021 2Q R&D Expenses/Capex/D&A

- R&D Expenses      ¥11.7 billion

- R&D to sales ratio    12.9%

- Capex                      ¥4.7 billion

Our system-level test business is doing well, and we have begun to expand production capacity in the United States to keep up with the ongoing increases in demand.

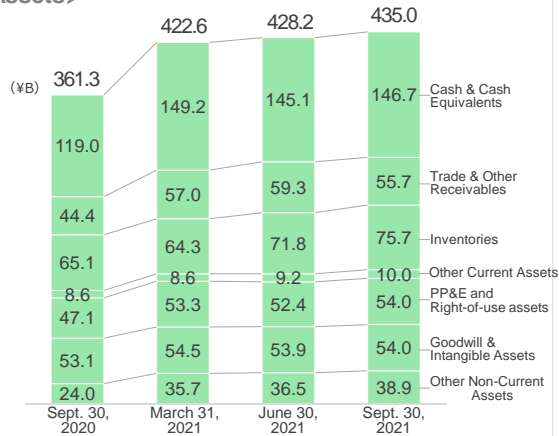
- Depreciation and Amortization      ¥3.6 billion

### ○ FY2021 2Q Cash Flow

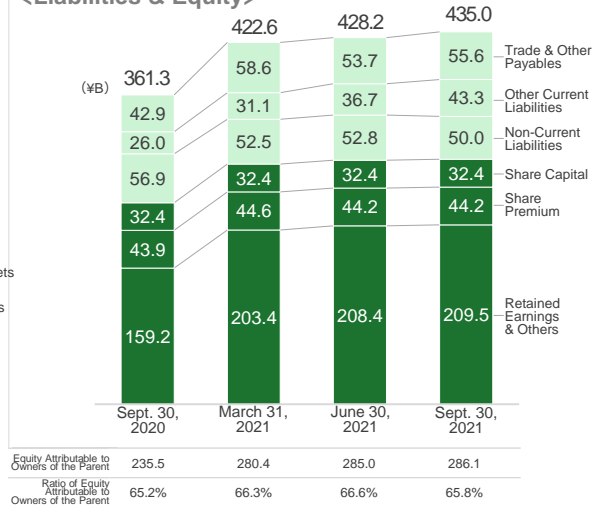
- Free cash flow      ¥20.2 billion

# Financial Position

## <Assets>



## <Liabilities & Equity>



## Balance Sheet for Period Ending September 30th, 2021

- Total Assets                                   ¥435.0 billion
- Cash & Cash Equivalents                                   ¥146.7 billion
- Equity Attributable to Owners of the Parent                                   ¥286.1 billion
- Ratio of Equity Attributable to Owners of the Parent   65.8%  
Down 0.8 points from the end of the previous quarter
- The progress of the share repurchase announced in July has been disclosed in our filing. By the end of September, 1.8 million shares of common stock had been acquired for ¥17.8 billion, equaling 18% of our upper limit of 10 million shares, and 25% of our upper limit of ¥70.0 billion.



## **FY2021 Outlook**

Yoshiaki Yoshida  
Representative Director, President and CEO

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# Semiconductor Tester Market Trends: October 2021 Outlook

## CY21 Estimate

We expect the overall semiconductor tester market to be worth approximately \$5.5B in CY21 (+ 30% YoY) due to the progress of aggressive investments in higher semiconductor performance and active investments in production capacity expansion

- SoC tester market estimate: approx. \$4.1B (Revised upwards from July forecast)
  - Investments in test capacity expansion for leading-edge nodes, such as those used for high-end SoCs, is strongly driving market expansion.
  - In addition, chipmakers are making aggressive capacity-building investments for various semiconductors manufactured at trailing-edge nodes.
- Memory tester market estimate: approx. \$1.4B (Unchanged from July forecast)
  - Device evolution (miniaturization, multilayering, higher speed and bandwidth) is continuously driving tester demand.

	CY20 Actual	CY21 Estimate
SoC Tester Market	Approx. \$3.0B	Approx. \$4.1B (July estimate: \$3.8B)
Memory Tester Market	Approx. \$1.2B	Approx. \$1.4B (July estimate: \$1.4B)

Source: Advantest

## ○ Semiconductor Tester Market Trends

- In 2021, chipmakers are continuing to actively invest in semiconductor performance improvements and production capacity expansions to resolve the global semiconductor shortage, in line with the growth of final demand and higher final product performance.
- The 2021 semiconductor tester market is expected to grow by approximately 30% YoY to approximately \$5.5 billion.
- We expect that the 2021 SoC tester market will grow by approximately \$300 million, primarily reflecting growing demand for leading-edge processes, to approximately \$4.1 billion, indicating a growth rate of 37% YoY.
- Our outlook for the memory tester market is unchanged. We expect YoY growth of about 17%, to approximately \$1.4 billion.
- Regarding our market forecast for 2022, we cannot yet give exact figures, but there is no sense that the current serious semiconductor shortage will be resolved rapidly, and we believe strong semiconductor demand will continue.
- In addition, with regard to semiconductor performance gains—the driver of large tester orders in 2Q—we expect continuing demand in the future amidst further device miniaturization.
- Based on the above, we believe that a favorable market environment will continue for the present. We believe a sharp drop in tester demand will not occur.
- At the same time, we are aware of the need to put an even greater effort into resolving procurement issues linked to the ongoing semiconductor shortage, as we also use numerous semiconductors in our testers.

# FY21 Forecast

	(¥B)							vs. New Full-Year Forecast		
	FY20	FY21					vs. FY20		FY21 Forecast as of July	(Δ)
	Results	1Q Results	2Q Results	1H Results	2H Forecast	Full-Year Forecast	(Δ)	(%)		
Orders	330.6	161.2	203.8	365.0	200.0	565.0	+234.4	+70.9%	400.0	+165.0
Sales*1	312.8	97.1	90.9	188.0	212.0	400.0	+87.2	+27.9%	385.0	+15.0
Operating Income	70.7	26.1	21.4	47.5	57.5	105.0	+34.3	+48.5%	100.0	+5.0
Operating Margin	22.6%	26.9%	23.5%	25.3%	27.1%	26.3%	+3.7pts		26.0%	+0.3pts
Income Before Tax	69.6	25.7	21.6	47.3	57.7	105.0	+35.4	+50.8%	100.0	+5.0
Net Income	69.8	19.3	15.9	35.2	43.6	78.8	+9.0	+12.8%	75.0	+3.8
Net Income Margin	22.3%	19.9%	17.5%	18.7%	20.5%	19.7%	-2.6pts		19.5%	+0.2pts
Backlog	108.8	172.9	285.8	285.8	273.8	273.8	+165.0	+2.5x	123.8	+150.0
R&D Expenses	42.7	11.8	11.7	23.5	24.5	48.0	+5.3	+12.4%	47.0	+1.0
Capex	13.7	2.6	4.7	7.3	16.7	24.0	+10.3	+75.2%	15.0	+9.0
D&A	11.8	3.4	3.6	7.0	7.5	14.5	+2.7	+22.9%	13.5	+1.0
Exchange Rate*2	1 US\$	¥106	¥109	¥110	¥110	¥110	¥4 Depreciation		¥110	-
	1 Euro	¥123	¥131	¥131	¥135	¥133	¥10 Depreciation		¥134	¥1 Appreciation

\*1: Intersegment transactions have been eliminated from totals

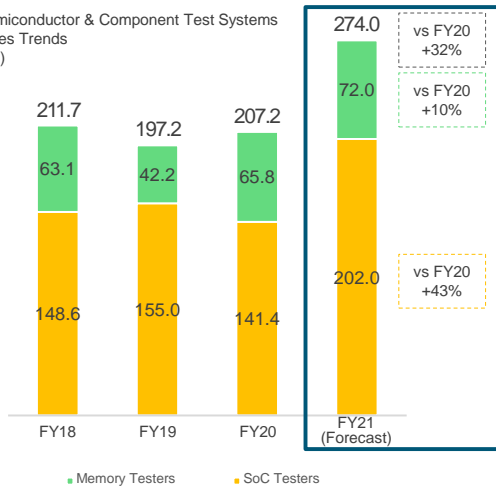
\*2: Our latest forecast for the impact of exchange rate fluctuations on FY21 operating income is plus ¥1,000 million per 1 yen of JPY depreciation vs USD, and minus ¥150 million per 1 yen of JPY depreciation vs the Euro

## ○ FY2021 Forecast

- Based on our first half results and future outlook, we have raised our full-year forecast to ¥565.0 billion in orders, ¥400.0 billion in sales, ¥105.0 billion in operating income, ¥105.0 billion in income before income taxes, and ¥78.8 billion in net income.
- Orders are expected to decline in reaction to the sharp increase in orders in the first half. However, ongoing semiconductor performance gains are currently raising baseline demand for semiconductor test. Therefore, we expect that orders will continue on a positive trajectory in the second half.
- We will do our utmost to secure the parts needed to avert opportunity losses amidst strong demand, aiming to set new records for both sales and net income for the second straight year.
- Gross profit margin is expected to be around 55-56% for the full year. The impact of rising parts prices in 2H is accounted for in our expectation that GPM will hold the 55% line.
- This forecast is based on exchange rate assumptions of 1USD to 110 JPY and 1 euro to 135 JPY for the second half of the current fiscal year.
- Our latest forecast for the impact of exchange rate fluctuations on FY21 operating income is plus ¥1,000 million per 1 yen of JPY depreciation vs USD, and minus ¥150 million per 1 yen of JPY depreciation vs the euro.

## FY21 Outlook by Segment

Semiconductor & Component Test Systems  
Sales Trends  
(¥B)



### Semiconductor & Component Test Systems

#### <SoC Testers> (+¥8.0B vs July forecast)

- Growth in demand for leading-edge products such as APUs and HPC devices will drive results in FY21
- Customers continue to make strong additional tester investments for automobiles, industrial equipment, consumer electronics, and other sectors

#### <Memory Testers> (+¥3.0B vs July forecast)

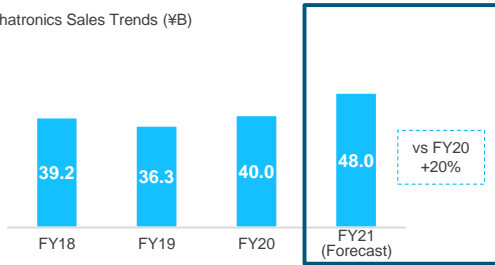
- Demand for non-volatile memory is picking up, in addition to strong high-speed DRAM test demand

### ○ FY2021 Semiconductor & Component Test Systems Outlook

- We have increased our 2021 full-year SoC tester sales forecast by ¥8.0 billion from our July forecast, to ¥202.0 billion.
- As expected, demand for testers continues to be strong due to the increasing complexity of APUs, HPC devices, etc., resulting from migration to smaller nodes.
- In addition, due to the global shortage of semiconductors, we anticipate ongoing demand for additional testers for automotive, industrial, and consumer products.
- We have increased our 2021 full-year memory tester sales by ¥3.0 billion from our July forecast, to ¥72.0 billion.
- In addition to high-speed DRAM test, where Advantest is particularly strong, non-volatile memory demand is also exceeding expectations.

## FY21 Outlook by Segment

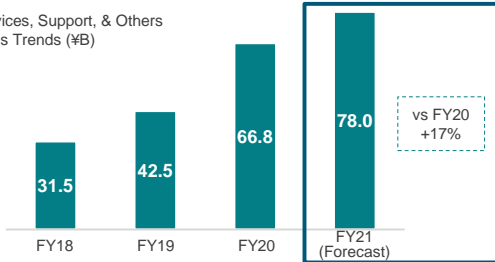
Mechatronics Sales Trends (¥B)



### Mechatronics Systems (Forecast unchanged from July)

- Demand for testers is also driving correlated demand for device interfaces and test handlers
- Amidst the adoption of EUV lithography, sales of nanotechnology products are also trending positively

Services, Support, & Others Sales Trends (¥B)



### Services, Support, & Others (+¥4.0B vs July Forecast)

- Demand for system-level test products is steadily growing
- Field service revenues also continue to be strong, due to the steady growth of our installed base

## ○ FY2021 Mechatronics / Services & Other Business Outlook

- Our mechatronics-related business sales forecast is unchanged at ¥48.0 billion.
- We anticipate strong demand for device interfaces and test handlers, which are highly correlated with our tester business. Sales of nanotechnology products are also robust amidst the adoption of EUV technology.
- We have raised our sales forecast for our Services, Support, & Others business by ¥4.0 billion to ¥78.0 billion.
- This is based on the increase in demand in our system-level test business, and the growth of field service revenues linked to the growth of our installed base of semiconductor testers.

# Mid/Long-Term Initiatives

## Grand Design (Mid/Long-Term Management Policy FY18-27)

Vision Statement: **Adding Customer Value in an Evolving Semiconductor Value Chain**

Management goal: **Early Achievement of ¥400B in Sales**

## 2<sup>nd</sup> Mid-Term Management Plan (MTP2, FY21-23)

We will strengthen our foundation for sustainable growth along the following two axes:

- ① **Leverage existing strengths to expand our business domains**
- ② **Build up new businesses, a mid/long-term theme**

	FY2021-23 Avg.
Sales	¥350.0-380.0B
Operating Margin	23-25%
Net Income	¥62.0-70.0B
ROE	>20%
Earnings Per Share (EPS)	¥320-370

## MTP2 Growth Investments

### Strategic investments in M&A etc.: ¥100.0B

- ✓ Search for good targets with potential synergies in areas that will lead to strengthening our end-to-end test solutions serving our customers' needs
- ✓ Additionally, execute initiatives in line with mid/long-term strategy such as ramping up new businesses

### R&D investments: ¥150.0B

- ✓ Maintain a high level of R&D investment as a driving force for value creation and ESG contributions

### Capital investments: ¥40.0B

- ✓ Mainly for improving development & production capabilities and work efficiency to strengthen growth foundation, as well as employee engagement

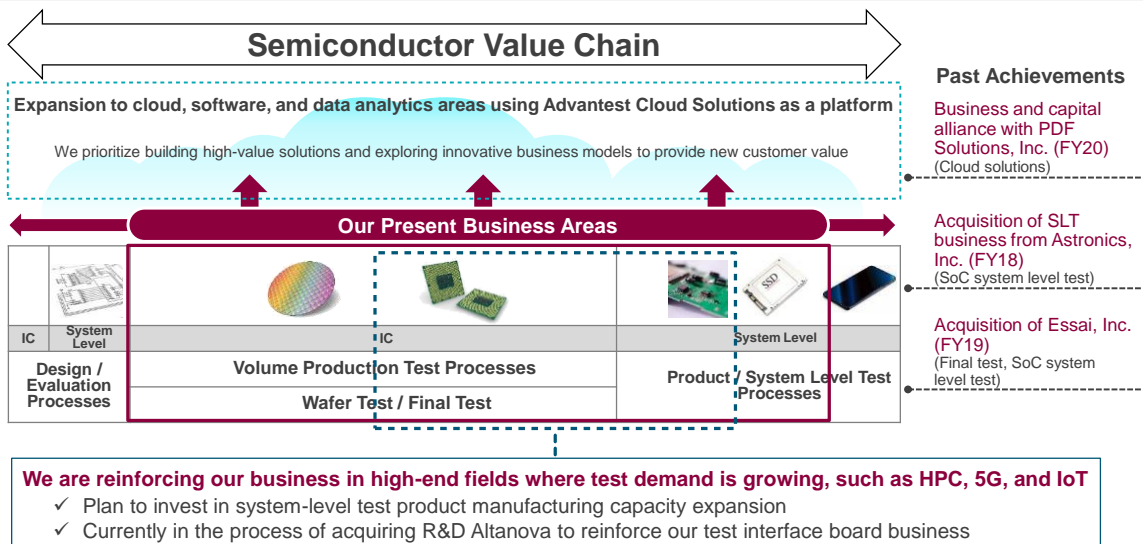
**We are making active investments in FY21 in accord with the above.**

## ○ Mid / Long-Term Initiatives

- We continue to execute our growth strategy in line with the 10-year mid / long-term management policy formulated in April 2018.
- Our second mid-term management plan, formulated in May of this year, also emphasizes that aggressive growth investment is a necessary key to achieving growth.
- We will continue to aggressively invest in FY21, which is the first year of our second mid-term management plan.
- This is only the first year of the plan, but demand is presently growing above expectations. Although our goal at present is to early achievement of ¥400 billion in sales, we may revise our mid-term management plan targets depending on how circumstances develop.



## Business Expansion / Reinforcement Initiatives Based on Grand Design



### ○ Business Expansion / Reinforcement Initiatives Based on Grand Design

- To achieve mid- to long-term growth, we are reinforcing our core businesses and moving into adjacent business domains through R&D investment and capital investment, and also utilizing methods such as M&A and partnerships.
- I would like to highlight two growth investments we are making in FY21.
- One is capital investment. We plan to expand our manufacturing capacity for system-level test products in Arizona in response to major customers' plans to increase production in the United States.
- The second is the acquisition of R&D Altanova, as announced in our press release the day before yesterday.
- In sectors such as HPC, 5G, and IoT, semiconductor demand is expected to go on increasing while semiconductor performance also improves. At the same time, high-precision test is becoming indispensable for semiconductors used in these high-end fields.
- From this perspective, we aim to further reinforce our business foundation as support of our customer base with this acquisition.

# Acquisition of R&D Altanova, Inc.

## Overview

- R&D Altanova is a leading supplier of consumable test interface boards headquartered in New Jersey, USA. It is an unlisted company.
- The closing of the transaction is tied to regulatory approvals, which are expected within CY2021.
- At the moment, the impact on FY21 results is expected to be minor.



## Strategic Significance

- R&D Altanova's engineering and manufacturing capabilities, excellent customer base, and first-rate technical team will complement Advantest's semiconductor test equipment business, enhancing our end-to-end solutions.
- Additionally, this acquisition will help serve our customers' needs and strengthen our presence in growing markets such as HPC.
- The acquisition will directly strengthen our recurring business and will thus contribute to diversifying and stabilizing our earnings base.



**High-quality end-to-end solutions that are indispensable for future high-end semiconductor test**

## ○ Acquisition of R&D Altanova

- R&D Altanova is a leading supplier of consumable test interface boards, which are used to connect semiconductor devices with testers.
- If approval by the relevant authorities goes smoothly, we expect that closing of the transaction will be completed by the end of the year.
- R&D Altanova's engineering and manufacturing capabilities, excellent customer base, and first-rate technical team will complement Advantest's semiconductor test equipment business.
- We believe we can accelerate the growth of R&D Altanova's business by leveraging our global customer base and production process expertise.
- We also believe that combining their products with our solutions will further strengthen our presence in future growth areas such as HPC.
- Like test sockets, interface boards are consumable products which need to be customized for each device. These products will contribute to the diversification and stabilization of our earnings base by strengthening recurring business.

## Summary

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- The semiconductor market continues to expand, and we expect that test equipment investments will continue to hold a high level
- Our resolute implementation of business expansion strategies provides a foundation for ongoing diversification of our earnings base
- We are responding to surging customer demand by reinforcing our production capabilities and stabilizing parts procurement
- We aim to achieve the targets of the mid-term management plan while being fully alert to the following risks:
  - ① Issues with parts procurement due to supply chain bottlenecks and logistical difficulties
  - ② Decrease in demand due to slowdowns in the highly-anticipated global economic recovery
  - ③ Potential impacts from US-China conflict and economic security policies on the semiconductor industry

### ○ Summary

- We believe that the current active tempo of investments in production capacity for resolution of the global semiconductor shortage, as well as investments in semiconductor performance gains, will continue for the present.
- We anticipate that a stable and favorable market environment will continue, as there is no sign of a sharp drop in demand for testers.
- Under these circumstances, we are steadily implementing business expansion initiatives such as reinforcing our core businesses and developing adjacent business areas through capital investment and M&A, promoting diversification of our earnings base.
- In addition, we are actively working to stabilize parts procurement and increase production capacity to meet surging customer demand.
- Lastly, although demand is presently strong, we will continue to be alert to the following risks, among others:
  - ① Issues with parts procurement due to supply chain bottlenecks and logistical difficulties
  - ② Decrease in demand due to slowdowns in the highly-anticipated global economic recovery
  - ③ Potential impacts from US-China conflict and economic security policies on the semiconductor industry while striving to achieve the targets of our mid-term management plan.
- This concludes my presentation.
- In closing I would like to point out that the next page covers topics related to ESG and external evaluation. Please view it at your own convenience.

# ESG & External Evaluation (April – October 2021)

## Advantest's Gunma Factory Achieves 100% Renewable Energy Use

- Achieved RE100 at all US and European subsidiaries (as of the end of FY20)
- 50% of the entire Group's energy needs are expected to be sourced from renewables by the end of FY21.

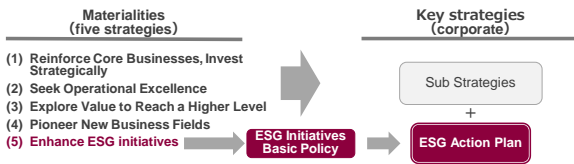


## Advantest Again Named THE BEST Supplier of Chip Making Equipment in VLSIresearch Customer Satisfaction Survey



## Formulated ESG Basic Policy and ESG Action Plan 2021

- Accelerated the development of company-wide ESG measures under our second mid-term management plan



## Published Integrated Annual Report 2021

- Reinforced sustainability disclosure centering on our climate change initiatives [\(Link\)](#)

