



**ADVANTEST**<sup>®</sup>

**FY2021 3Q**  
**(Three months ended December 31st, 2021)**  
**Financial Briefing**

January 27th, 2022  
Advantest Corporation

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# NOTE

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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 ...
..._ob.select= 1
..._ob.select= 1
...context.scene.objects.active
...["Selected" + str(modifier ...
...mirror_ob.select = 0
...context.scene.objects.active
```

## Financial Results for FY2021 3Q

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 3Q Summary of Results

(¥B)

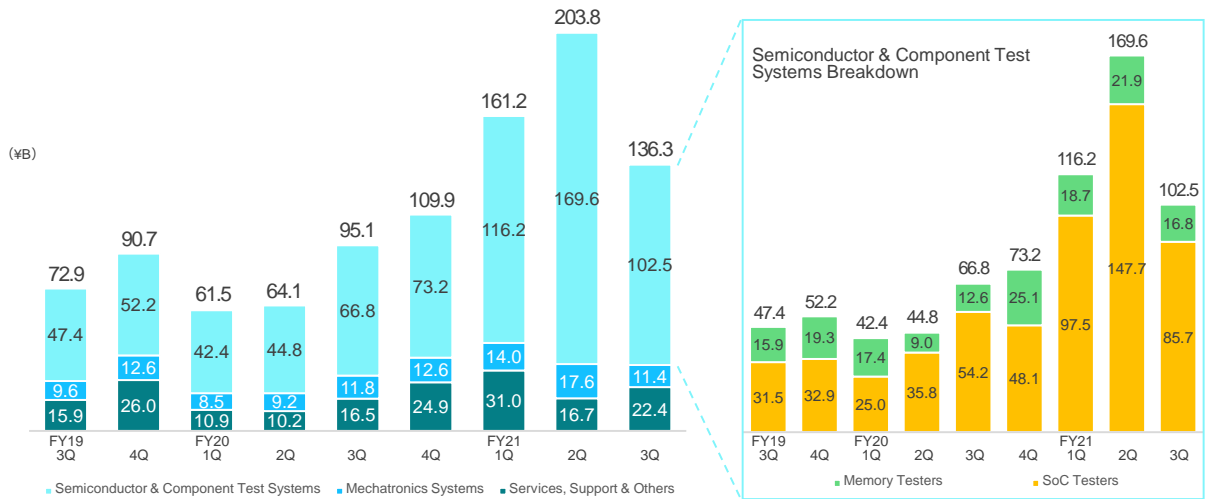
	FY20				FY21				QoQ		YoY	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	(Δ)	(%)	(Δ)	(%)	
Orders	61.5	64.1	95.1	109.9	161.2	203.8	136.3	-67.5	-33.1%	+41.3	+43.4%	
Sales	66.7	77.4	78.1	90.6	97.1	90.9	112.1	+21.2	+23.3%	+34.0	+43.6%	
Gross Profit	38.0	41.6	40.2	48.5	54.7	50.1	64.8	+14.8	+29.7%	+24.7	+61.4%	
Gross Margin	56.9%	53.9%	51.5%	53.5%	56.4%	55.0%	57.9%	+2.9pts		+6.4pts		
Operating Income	13.5	17.4	15.3	24.5	26.1	21.4	33.5	+12.2	+57.2%	+18.3	+2.2x	
Operating Margin	20.2%	22.6%	19.5%	27.1%	26.9%	23.5%	29.9%	+6.4pts		+10.4pts		
Income Before Tax	12.9	16.4	13.9	26.4	25.7	21.6	34.0	+12.6	+58.3%	+20.2	+2.5x	
Net Income	10.6	13.9	12.0	33.3	19.3	15.9	25.7	+9.7	+61.3%	+13.6	+2.1x	
Net Income Margin	15.8%	18.0%	15.4%	36.7%	19.9%	17.5%	22.9%	+5.4pts		+7.5pts		
Backlog*1	85.7	72.5	89.5	108.8	172.9	285.8	312.5	+26.7	+9.3%	+223.0	+3.5x	
Exchange Rate	1 US\$	¥108	¥107	¥105	¥104	¥109	¥110	¥112	¥2 Depreciation		¥7 Depreciation	
	1 Euro	¥118	¥123	¥124	¥127	¥131	¥131	¥130	¥1 Appreciation		¥6 Depreciation	

\*1: FY21 3Q backlog includes ¥2.4 billion of backlog added through our acquisition of R&D Altanova.

### ○ FY2021 3Q Summary of Results

- Looking back at 3Q,
- As in the previous several quarters, our business environment continued to be favorable.
- Aggressive tester investment was driven primarily by SoC semiconductor manufacturers amidst trends that are structurally boosting the level of tester demand, such as expanding data center investment, higher 5G smartphone functionality, and semiconductor performance gains including further miniaturization.
- On the other hand, the shortage of semiconductors remains unresolved, and since semiconductor testers use a significant number of semiconductors, we continued to face production difficulties in 3Q.
- However, we made a company-wide effort to secure the necessary parts, and were able to achieve sales and profits that exceeded our expectations as of October.
- As a result, 3Q results include our highest quarterly sales and operating income figures since we began quarterly disclosure.
- Details of these achievements will be explained in the following slides.

## Quarterly Orders by Segment



Note: Intersegment transactions have been eliminated from totals

### ○ FY2021 3Q Orders by Segment

- In 2Q, due to our extended product lead times, customers made production plans further in advance, and we received many orders placed earlier than was conventional in the past with respect to our lead times.
- Although our product lead times have not come down in 3Q, the advance ordering trend that occurred in 2Q has subsided considerably. We believe this is the reason for the significant QoQ decrease in orders in 3Q.

### ○ Semiconductor & Component Test Systems

- ¥102.5 billion      -39.5% QoQ
- Orders for SoC testers were ¥85.7 billion, down ¥62.0 billion QoQ. However, as shown in the graph on the right of the slide, demand for SoC testers is steadily increasing compared to last year and the year before last, mainly for high-end devices. Orders achieved a level higher than our internal forecast of October 2021, and we believe that customer motivation to invest is still strong.
- Memory tester orders were ¥16.8 billion, down ¥5.0 billion QoQ. Orders for DRAM testers, which had been strong for some time through 2Q, are taking a pause here, but this is in line with our expectations.

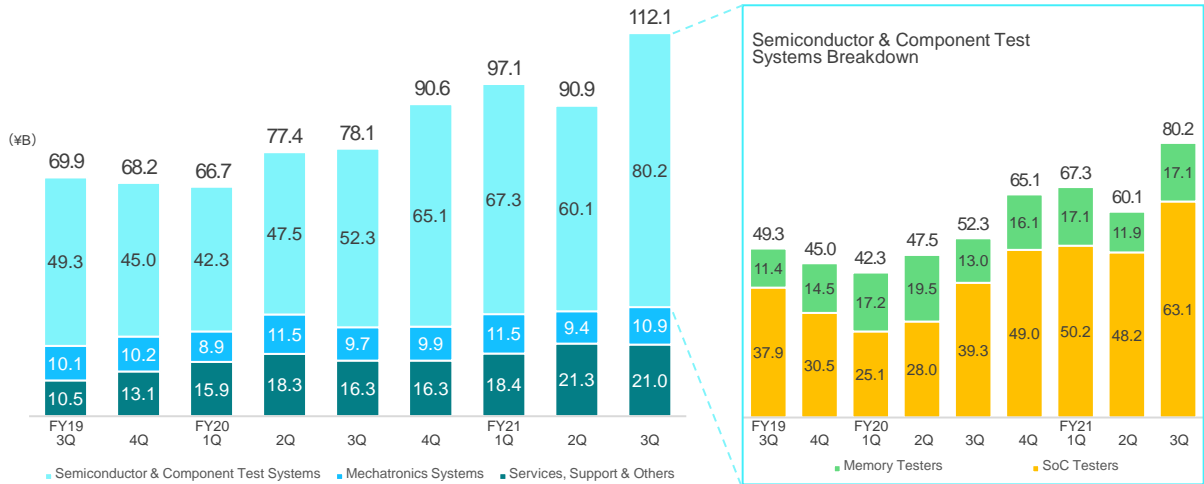
### ○ Mechatronics Systems

- ¥11.4 billion      -35.3% QoQ
- Mechatronics orders decreased in step with the fall-off in tester orders.

### ○ Services, Support & Others

- ¥22.4 billion      +34.8% QoQ
- On top of continuing annual maintenance contract renewals, system level test orders were strong.

## Quarterly Sales by Segment



Note: Intersegment transactions have been eliminated from totals

### ○ FY2021 3Q Sales by Segment

- Amidst continuing parts shortages, sales trended above our internal forecast.

### ○ Semiconductor & Component Test Systems

- 80.2 billion                    +33.7% QoQ
- Breaking that down, SoC tester sales were ¥63.1 billion and memory tester sales were ¥17.1 billion.
- SoC tester sales were higher than expected, mainly for high-end SoC devices used in smartphones and servers.
- Memory testers performed well overall in both the DRAM and NVM categories. However, sales undershot expectations as some customers revised their investment plans.

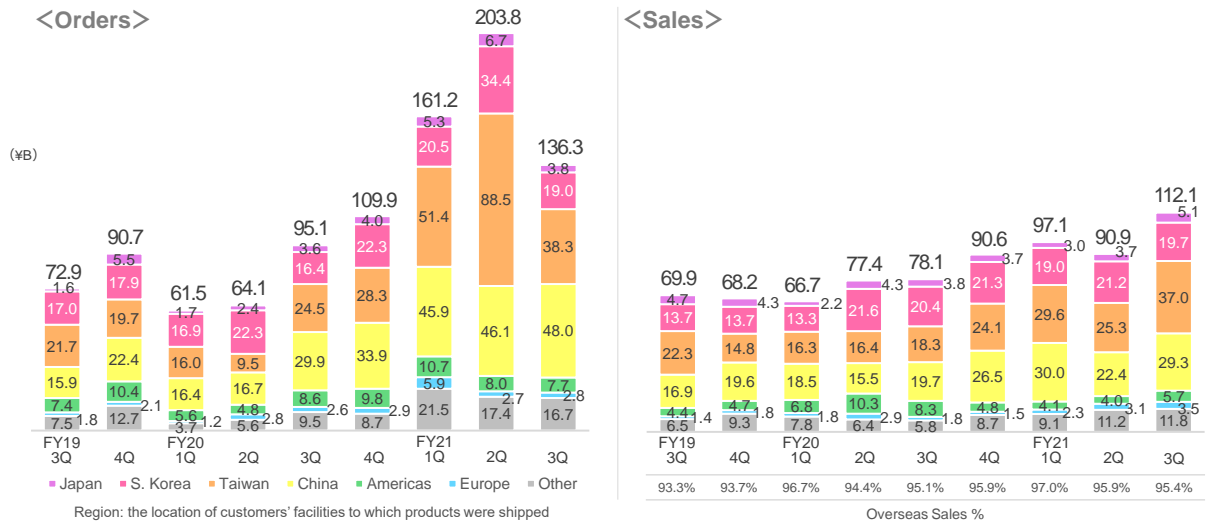
### ○ Mechatronics Systems

- ¥10.9 billion                    +14.9% QoQ

### ○ Services, Support & Others

- ¥21.0 billion                    Flat QoQ

# Quarterly Orders / Sales by Region



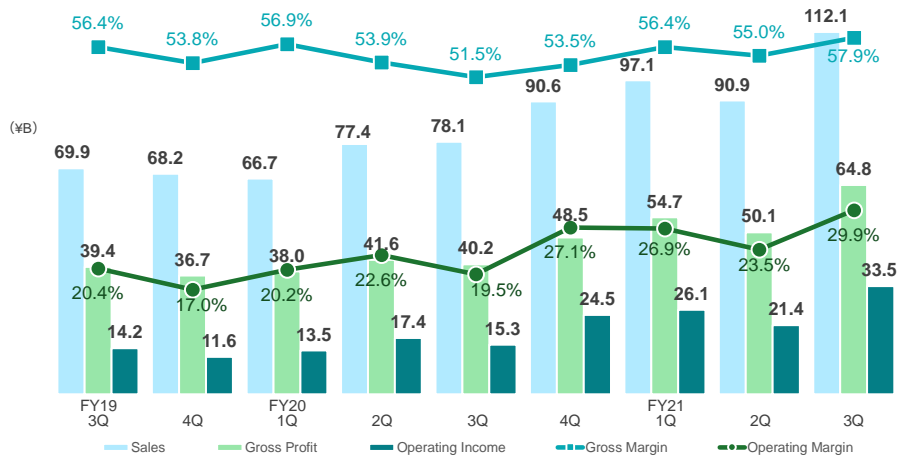
## ○ FY2021 3Q Orders by Region

- Taiwan, South Korea  
Orders decreased in a reaction to 2Q's surge triggered by longer lead times for our products, which has now subsided.
- China  
Orders for testers for display driver ICs used in TVs and smartphones were strong in 3Q.

## ○ FY2021 3Q Sales by Region

- Sales to South Korea declined slightly, but overall, sales were on a growth trajectory.

## Sales / Gross Profit / Operating Income



### ○ FY2021 3Q Sales / Gross Profit / Operating Income

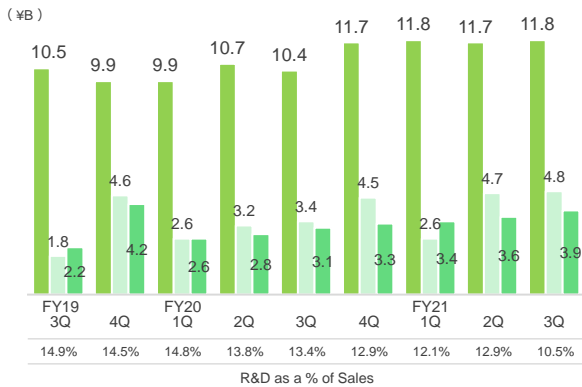
- Gross margin 57.9%  
Our sales mix shifted towards more profitable products.
- SG&A (including all other income and expenses) ¥31.3 billion  
Support and other expenses increased fractionally following growth in revenues.
- Operating income ¥33.5 billion
- Operating margin 29.9%



# Investments / Cash Flow

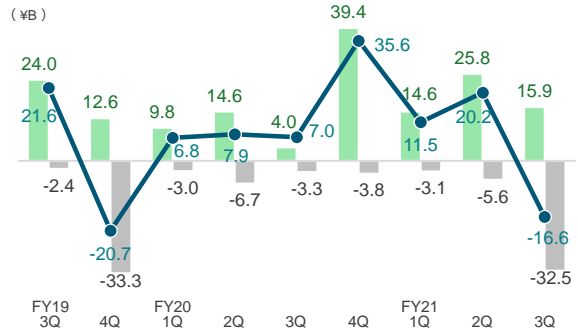
## <Investments>

- 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 3Q R&D Expenses/Capex/D&A

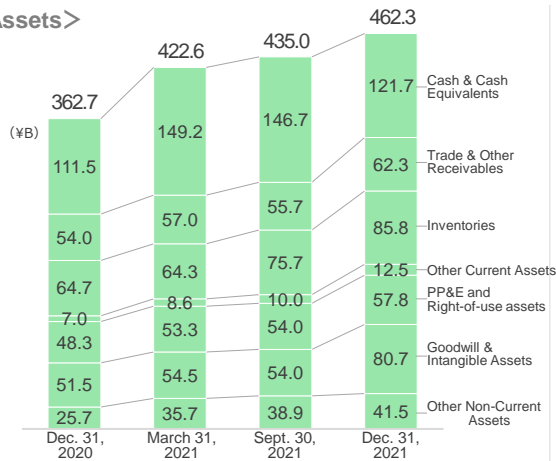
- R&D Expenses      ¥11.8 billion
- R&D to sales ratio    10.5%
- Capex                      ¥4.8 billion  
In 3Q we continued to steadily invest in the expansion of our US manufacturing base, begun in 2Q.
- Depreciation and Amortization      ¥3.9 billion

### ○ FY2021 3Q Cash Flow

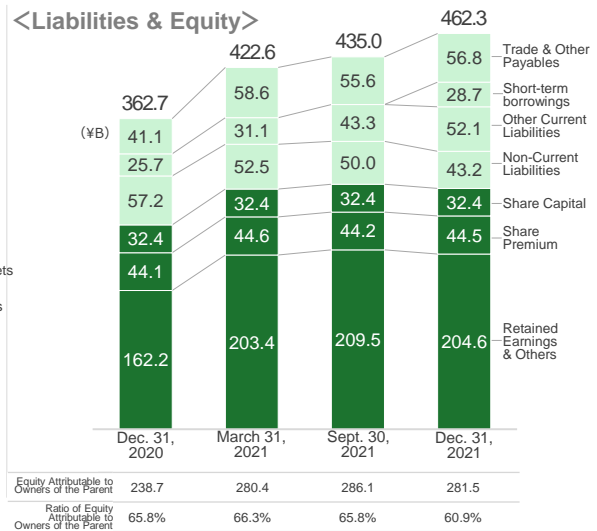
- Free cash flow      -¥16.6 billion
- Due to our acquisition of R&D Altanova in November, cash flows from investing activities increased in 3Q and free cash flow became negative.

# Financial Position

## <Assets>



## <Liabilities & Equity>



## ○ Balance Sheet for Period Ending December 31st, 2021

- Total Assets                                   ¥462.3 billion
- Cash & Cash Equivalents                   ¥121.7 billion
- Goodwill & Intangible Assets            ¥80.7 billion   + ¥26.6 billion QoQ  
Increased QoQ due to our acquisition of R&D Altanova. As final figures for purchase price allocation (PPA) are not available yet, we have booked goodwill and intangible assets based on provisional estimates.
- Short-term borrowings                       ¥28.7 billion  
We continue to make aggressive investments in the United States, such as the acquisition of R&D Altanova and expansion of our production base there, and we have raised the necessary funds through short-term borrowing.
- Equity Attributable to Owners of the Parent    ¥281.5 billion
- Ratio of Equity Attributable to Owners of the Parent   60.9%  
Down 4.9 points from the end of the previous quarter
- The progress of our share repurchase is disclosed in our filing. By the end of December, 4.68 million shares of common stock had been acquired for ¥45.7 billion, equaling 47% of our upper limit of 10 million shares, and 65% 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: January 2022 Outlook

## CY21 Actual (Provisional)

- SoC tester market: Expanded approximately 40% YoY due to higher performance and increased production of high-end SoCs, and increased demand for automotive, industrial, and consumer devices
- Memory tester market: Although growth fell short of October 2021 estimates, the market did grow due to greater memory device density and the kick-off of DDR5 DRAM investment

## CY22 Estimate

- SoC tester market: In addition to steady growth centered on leading-edge products such as HPC devices, we expect automotive, industrial, and consumer-related semiconductors to make further gains in 2022
- Memory tester market: Memory device performance gains including greater density, faster speed, and higher bandwidth will continue to drive growth of test demand

	CY20 Actual	CY21 Actual (Prelim.)	CY22 Estimate
SoC Tester Market	Approx. \$3.0B	Approx. \$4.1B (October estimate: approx. \$4.1B)	Approx. \$4.5B - 5.0B
Memory Tester Market	Approx. \$1.2B	Approx. \$1.3B (October estimate: approx. \$1.4B)	Approx. \$1.4B - 1.5B

Source: Advantest

## ○ Semiconductor Tester Market Trends

- Ongoing semiconductor performance gains and growing production volumes made 2021 a very active year for the semiconductor tester market. Although this is a preliminary figure, the value of the semiconductor tester market in 2021 is thought to have been about US \$5.4B, an increase of about 30% YoY.
- Various changeable factors may affect the 2022 tester market, such as our lead time situation, and visibility is poor, but we expect SoC tester market growth to range from about 10% to slightly over 20% YoY.
- Breaking this down, we expect that automotive, industrial, and consumer-related semiconductors will make further gains in 2022. At the same time, leading-edge products will continue to play the role of growth driver. For the past decade, smartphone application processors (APUs) have been in the forefront of semiconductor performance gains, but in 2022, we expect high performance computing (HPC) devices to take the lead.
- Memory tester market growth is expected to range from slightly below 10% to 15% YoY in 2022. The trend toward memory device performance gains including greater density, faster speed, and higher bandwidth is promoting the growth of the test market.
- We still cannot make any clear and quantitative predictions about 2023 and beyond. However, we believe that even if the current serious shortage of semiconductors resolves, structural demand for semiconductors will continue to grow. Further miniaturization and further improvements in semiconductor integration through the adoption of advanced packages will generate demand for more sophisticated and more highly integrated test solutions.
- We believe that the tester market will continue to grow over the medium to long term, despite minor adjustments.

# FY21 Forecast

								(¥B)		
	FY20	FY21					vs. FY20		vs. New Full-Year Forecast	
	Results	1Q Results	2Q Results	3Q Results	4Q Forecast	Full-Year Forecast	(Δ)	(%)	FY21 Forecast as of Oct.	(Δ)
Orders	330.6	161.2	203.8	136.3	148.7	650.0	+319.4	+96.6%	565.0	+85.0
Sales* <sup>1</sup>	312.8	97.1	90.9	112.1	109.9	410.0	+97.2	+31.1%	400.0	+10.0
Operating Income	70.7	26.1	21.4	33.5	34.0	115.0	+44.3	+62.6%	105.0	+10.0
Operating Margin	22.6%	26.9%	23.5%	29.9%	30.9%	28.0%	+5.4pts		26.3%	+1.7pts
Income Before Tax	69.6	25.7	21.6	34.0	33.7	115.0	+45.4	+65.2%	105.0	+10.0
Net Income	69.8	19.3	15.9	25.7	25.4	86.3	+16.5	+23.7%	78.8	+7.5
Net Income Margin	22.3%	19.9%	17.5%	22.9%	23.1%	21.0%	-1.3pts		19.7%	+1.3pts
Backlog* <sup>2</sup>	108.8	172.9	285.8	312.5	351.2	351.2	+242.4	+3.2x	273.8	+77.4
R&D Expenses	42.7	11.8	11.7	11.8	12.7	48.0	+5.3	+12.4%	48.0	-
Capex	13.7	2.6	4.7	4.8	11.9	24.0	+10.3	+75.2%	24.0	-
D&A	11.8	3.4	3.6	3.9	4.1	15.0	+3.2	+27.1%	14.5	+0.5
Exchange Rate* <sup>3</sup>	1 US\$	¥106	¥109	¥110	¥112	¥115	¥112	¥6 Depreciation	¥110	¥2 Depreciation
	1 Euro	¥123	¥131	¥131	¥130	¥131	¥8 Depreciation		¥133	¥2 Appreciation

\*1: Intersegment transactions have been eliminated from totals

\*2: FY21 3Q backlog includes ¥2.4 billion of backlog added through our acquisition of R&D Altanova.

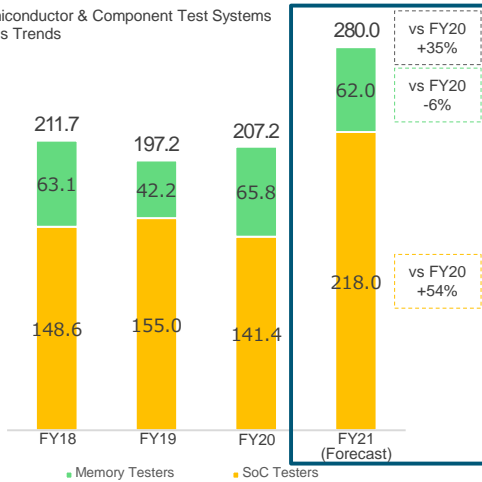
\*3: Our latest forecast for the impact of exchange rate fluctuations on FY21 operating income is plus ¥1,000 million per 1 yen of JPY depreciation vs USD, and minus ¥150 million per 1 yen of JPY depreciation vs the Euro

## ○ FY2021 Forecast

- Based on our results through 3Q and our outlook for 4Q, we have revised our full-year forecast upward. Orders are now expected to increase by ¥85 billion to ¥650 billion, sales and operating income are each expected to increase by ¥10 billion to ¥410 billion and ¥115 billion respectively, and net income is expected to increase by ¥7.5 billion to ¥86.3 billion.
- Our current priority is parts procurement, and we cannot yet be optimistic here. Sudden delays in the delivery of parts may occur, and we cannot assume this present no risk to our achievement of our 4Q sales plan. That said, we are working to secure necessary parts, and expect to set new sales and net income records for the second consecutive year.
- Gross profit margin is expected to be around 57% for the full year, as our product mix in 2H is better than it was three months ago. SG&A expenses in 4Q are expected to be flat or slightly down from 3Q.
- This forecast is based on exchange rate assumptions of 1USD to 115 JPY and 1 euro to 130 JPY for 4Q FY2021.
- 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.
- As announced in November 2021, we acquired R&D Altanova and started financial consolidation from the middle of 3Q. However, the impact on our business results for the current fiscal year is expected to be minor.

# FY21 Outlook by Segment

Semiconductor & Component Test Systems Sales Trends (¥B)



## Semiconductor & Component Test Systems

### <SoC Testers> (+¥16.0B vs Oct. forecast)

- Growth in demand for leading-edge SoCs such as APU and HPC devices will drive results in FY21
- Strong demand also continues in the automotive, industrial, and display sectors, among others

### <Memory Testers> (-¥10.0B vs Oct. forecast)

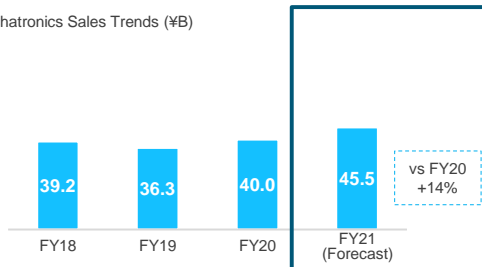
- Orders for high-speed DRAM and NVM testers have held firm amidst device density and speed gains
- We have lowered our full-year sales forecast following investment plan reviews by some customers

## ○ FY2021 Semiconductor & Component Test Systems Outlook

- Our full-year sales forecast for SoC testers is ¥218 billion, up ¥16 billion from our October forecast.
- The increasing complexity of testing APU, HPC, and other devices due to miniaturization continues to drive strong demand for testers.
- Customer motivation to invest in automotive, industrial, and display test has remained high, and strong orders for SoC testers continue.
- Our full-year sales forecast for memory testers is ¥62 billion, down ¥10 billion from our October forecast.
- As you can see from our orders, demand for DDR5 (next-generation DRAM) and non-volatile memory is solid as a whole, but we lowered our sales forecast due to certain customers revising their investment plans in 2H.

## FY21 Outlook by Segment

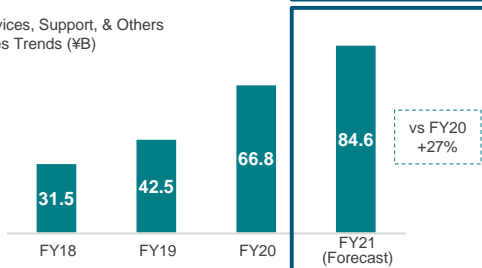
Mechatronics Sales Trends (¥B)



### Mechatronics Systems (−¥2.5B vs Oct. Forecast)

- Demand for device interfaces and test handlers is strong, correlated to strong tester demand
- We have revised our full-year sales forecast due to changes in some customers' investment plans

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



### Services, Support, & Others (+¥6.6B vs Oct. Forecast)

- Our system-level test business has grown faster than expected in October 2021, as high-end SoC shipments increase and performance further improves
- Maintenance services are also strong, amidst steady growth in our installed base

### ○ FY2021 Mechatronics / Services & Other Business Outlook

- Our full-year sales forecast for mechatronics systems is ¥45.5 billion, slightly lower than our October forecast.
- We have raised our full-year sales forecast for our Services & Other segment by ¥6.6 billion to ¥84.6 billion.
- Currently, our system level test business mainly targets high-end SoCs. As seen in our SoC tester outlook, test demand in that area is growing more than expected, raising our expectations for the full year.
- Also in the system-level test business, we plan to strategically increase recurring revenue as a percentage of sales through aggressive M&A and flexible capital investment. We will continue to steadily implement business expansion measures and promote the diversification of our earnings base.

## Summary

- As the semiconductor market continues to grow, and semiconductor performance continues to improve, demand for test equipment also continues to increase.
- We aim to deliver another record-breaking year in FY21 by stabilizing parts procurement, thus improving our ability to keep up with strong customer appetite for investment.
- We are steadily implementing measures to strengthen our medium- to long-term business growth potential and resilience, and to promote diversification of our earnings base.
- As the scale of our business expands rapidly, we will strengthen our internal control system in order to reflect social changes for ESG initiatives, workstyle reforms, etc.
- We aim to achieve the targets of our mid-term management plan while being fully alert to the following risks:
  - ① Worsening issues with parts procurement due to supply chain bottlenecks and logistical difficulties
  - ② Decrease in demand due to slowdowns in the ongoing global economic recovery
  - ③ Potential impacts from US-China conflict and economic security policies on the semiconductor industry

### ○ Summary

- 2021, a very strong year for the tester market, is over, but based on our business discussions with semiconductor manufacturers, there is currently no sign that demand is declining anywhere.
- The direction of the semiconductor market and final product markets prefigures continued active investments in test capacity to improve the performance and reliability of semiconductors in 2022.
- In order to keep up with our customers' appetite for investment, we will continue to make stabilizing parts procurement a priority.
- With future sustainable expansion of our business opportunities in view, we will steadily promote measures for medium- to long-term business growth and greater resilience.
- Our sales have almost doubled in the four years since 2017. We believe that it is necessary for us to steadily strengthen our internal control systems in line with the expanding scale of our business. We will improve operational excellence by responding to shifts such as changes in workstyles and lifestyles triggered by COVID-19, ESG-related changes in the capital markets and society, etc.
- Finally, demand is strong, but we are alive to the risk of new issues appearing just when everything seems to be going well. Potential issues include:
  - ① Worsening issues with parts procurement due to supply chain bottlenecks and logistical difficulties
  - ② Decrease in demand due to slowdowns in the ongoing global economic recovery
  - ③ Potential impacts from US-China conflict and economic security policies on the semiconductor industry, and geopolitical risks such as the recent Ukraine-Russia tensions
- Thank you for your attention.