SEMI Business Briefing Session (Semiconductor Back-End Manufacturing Equipment)

Growth Strategy Toward Becoming a World-Class Total Solutions Provider

September 10, 2026

Yamaha Motor Co., Ltd.
Yamaha Robotics Co., Ltd.

YAMAHA

Agenda

1: Overview of the Robotics Business

Ayako Egashira
Executive Officer and Chief General Manager
of Solution Business Operations
Yamaha Motor Co., Ltd.

2: Yamaha Robotics' SEMI Business Growth Strategy

Ryosuke Nakamura
President & Representative Director
Yamaha Robotics Co., Ltd.

- About Yamaha Robotics' SEMI Business
- What Is Semiconductor Back-End Processing?
- Growth Strategy Toward Becoming a Top-Class Solutions Provider

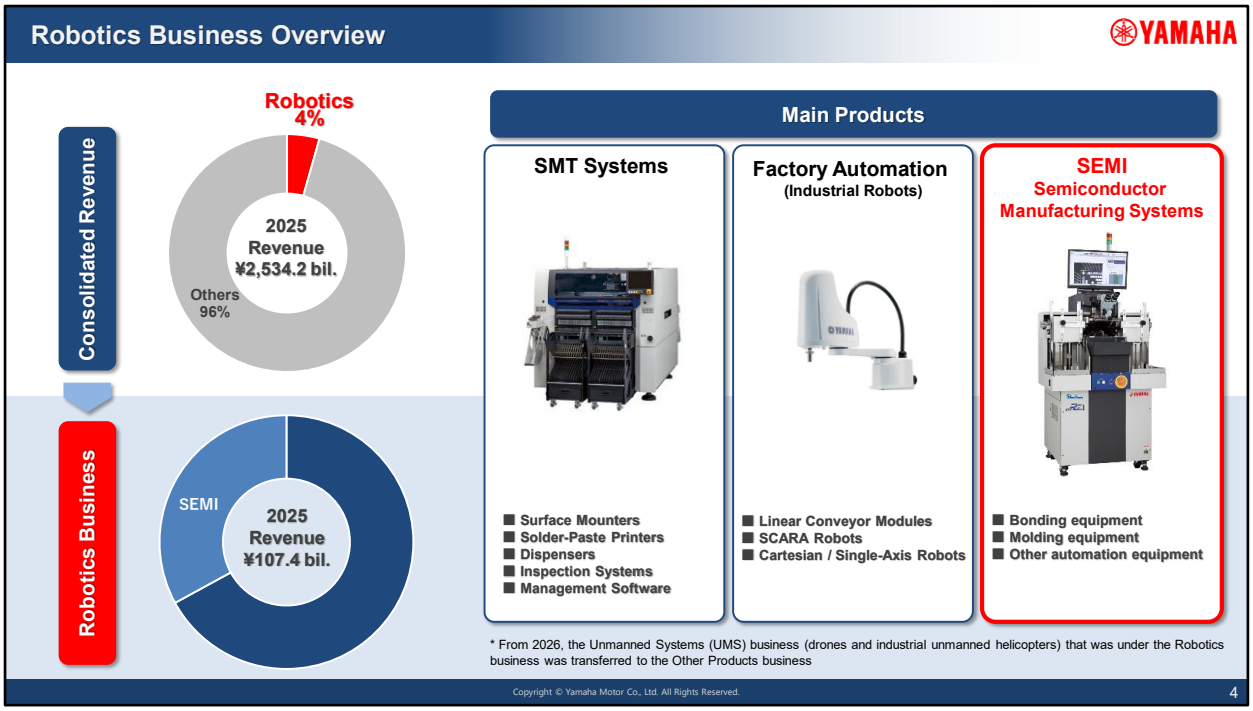
3: Q&A Session

Overview of the Robotics Business

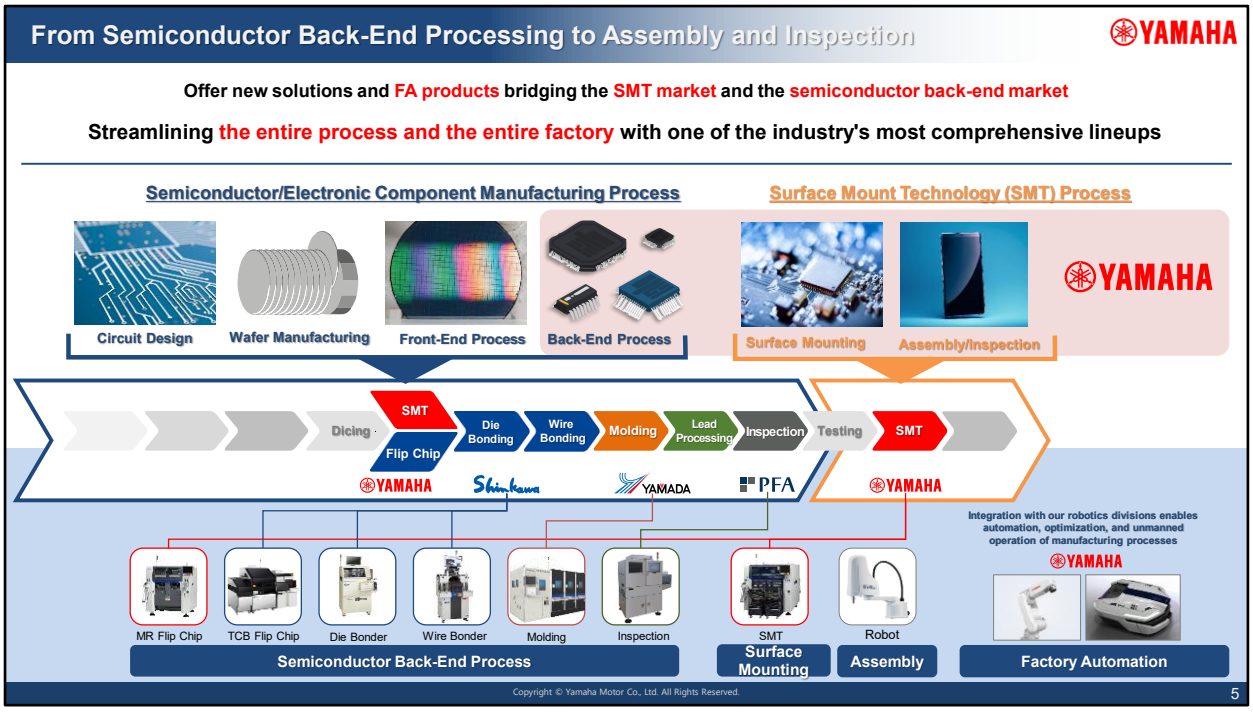
Ayako Egashira

Executive Officer and Chief General Manager
of Solution Business Operations
Yamaha Motor Co., Ltd.

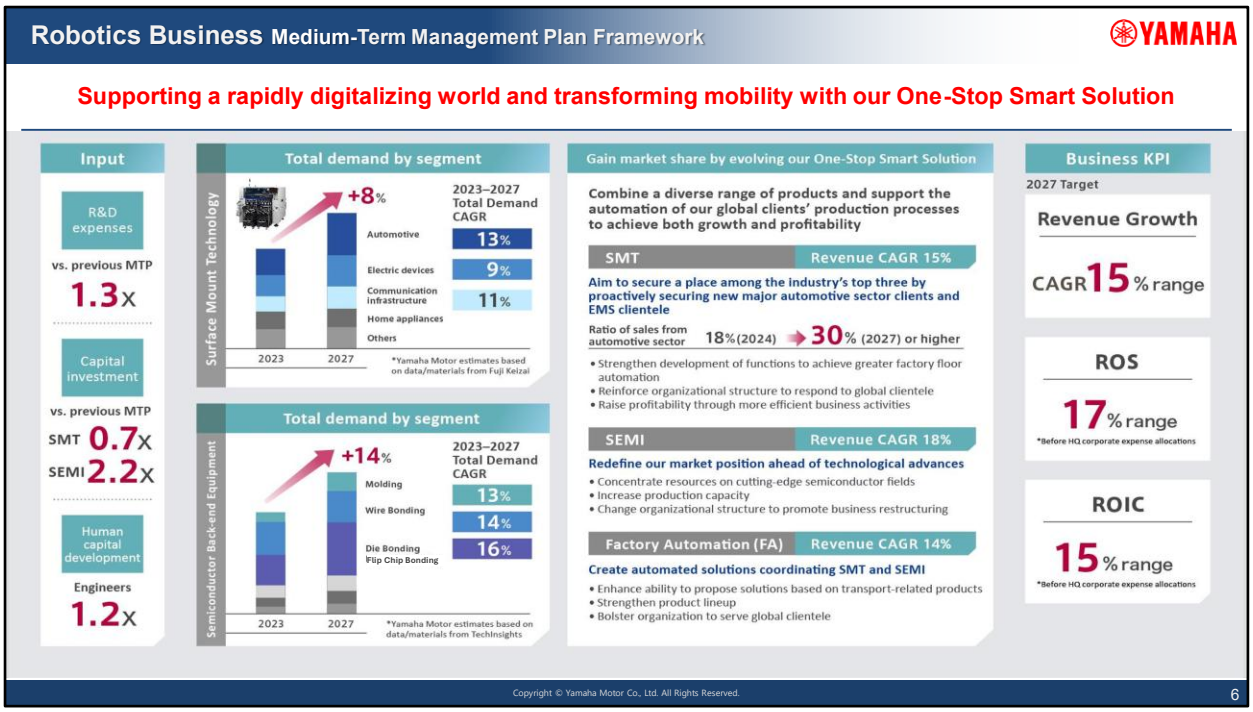
Hello everyone and thank you for coming.
I'm Ayako Egashira from Yamaha Motor's Solution Business Operations.
I'll provide a brief overview of Yamaha Motor's Robotics business.



Let me begin by explaining our business in general.
The Robotics business is positioned as one of Yamaha Motor's strategic businesses that will shoulder its future growth, posting 107.4 billion yen in revenue in fiscal 2025. Additionally, thanks to our recent revenue structure reforms and business integrations, we have steadily improved our profitability and brought a double-digit operating profit margin into view for our full-year forecast.
The Robotics business consists of three areas: SMT systems, which support the printed circuit board manufacturing process; Factory Automation, which facilitates the automation of production equipment; and our semiconductor manufacturing systems, which assist with the various semiconductor back-end processes.
What sets us apart is how we combine the equipment, software, process technologies, and services across these three businesses. This enables us to go beyond individual device sales to help clients solve comprehensive challenges across their entire production line.
Among these, we position the SEMI business as a core area driving the growth of our Robotics business, particularly in semiconductor back-end processes, whose importance is escalating with the spread of generative AI.



This slide shows the process from semiconductor manufacturing to surface mounting on circuit boards and final integration into end products.
Our group offers equipment and solutions supporting the semiconductor back-end, surface mounting, assembly, and inspection processes.
Our goal with our One-Stop Smart Solution is not just to offer multiple devices. By connecting our equipment, software, inspection machinery, automated transport devices, and services, we help create production lines that do not stop, do not produce defects, and become less dependent on manual labor.
Beyond the individual capabilities of our equipment, we help boost client productivity and competitiveness by optimizing the entire line's workflow, from semiconductor back-end to surface mounting and assembly.
Furthermore, because our SMT, FA, and SEMI divisions approach shared clients as a unified front, we can address factory-wide challenges rather than issues with isolated processes and thereby propose optimal, all-inclusive solutions. This is one of our key strengths.
This ability to make cross-process proposals gives us a real competitive edge that supports the growth of the Robotics business.



Lastly, let me report on the progress of our Medium-Term Management Plan for the Robotics business.

Under our policy of supporting a rapidly digitalizing world and transforming mobility with our One-Stop Smart Solutions, we are actively investing in R&D, human resources, production capabilities, and sales and service networks.

In R&D, alongside highly cost-competitive SMT models and the development of features specifically for AI servers, we established a Technology Research Center for the SEMI business to advance technological development for advanced semiconductors.

In manufacturing, we are reorganizing production layouts across domestic and international sites and enacting *Monozukuri* reforms to strengthen our framework for converting orders into firm sales.

We are also boosting our global client support capabilities by hiring and developing engineering talent, leveraging cross-business resources following the intercompany integration into Yamaha Robotics, restructuring overseas locations, and opening a sales and service base in India.

While conducting these investments, market situations vary by segment.

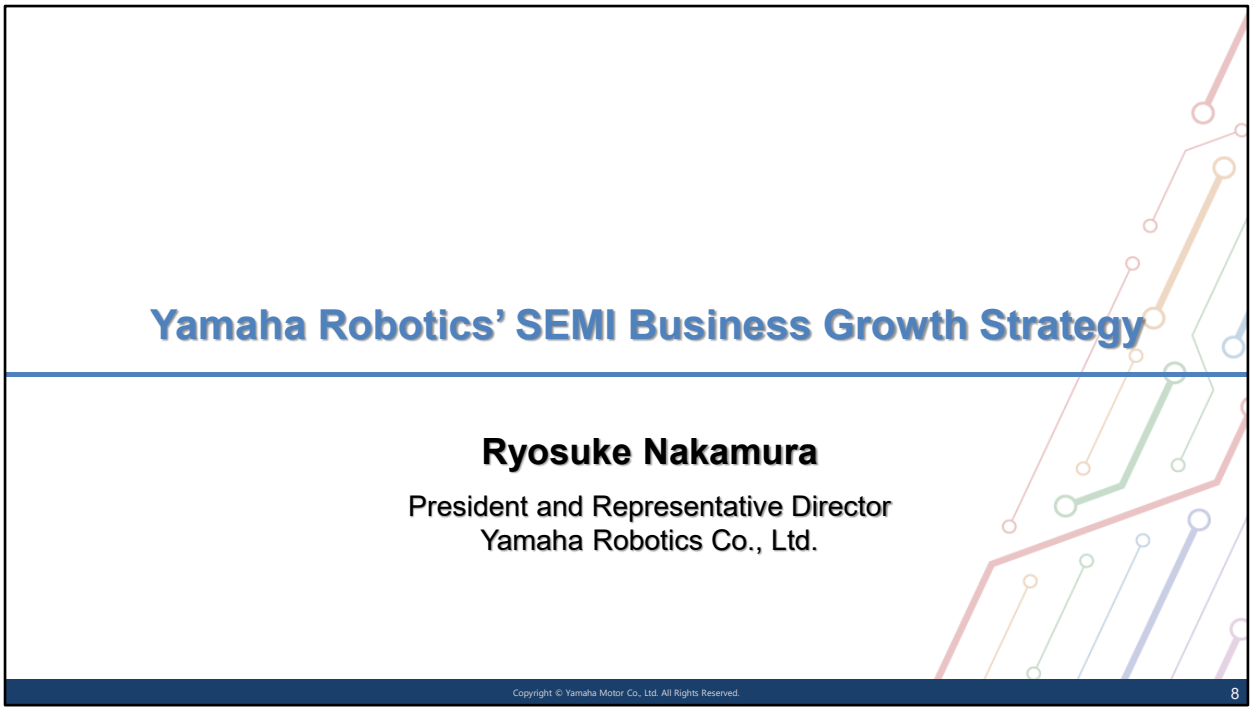
In the SMT business, capital expenditure in the automotive market has been cautious, whereas demand for high-density, high-quality mounting for AI servers and data centers is surging alongside the spread of generative AI.

We are taking the quality assurance, traceability, and automation technologies we've cultivated in the automotive field into the AI server space, accumulating client evaluations, and strengthening our supply structures.

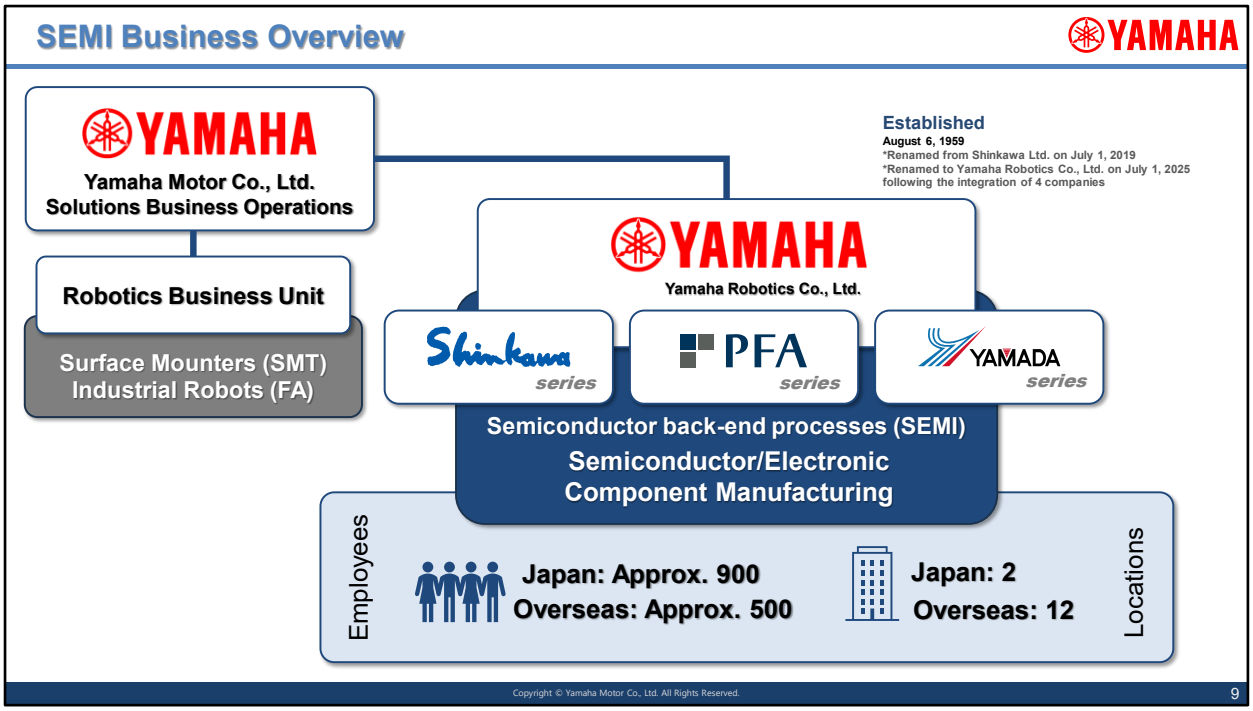
We aim to thoroughly capture immediate AI-related demand while pursuing mid- to long-term growth opportunities in the automotive segment. In the SEMI business, we are focusing on the advanced semiconductor field, while in factory automation, we have positioned automation solutions coordinated with our SMT and SEMI arms as key growth areas, concentrating our management resources accordingly.

As I've described, we are making steady progress with the key initiatives under our Medium-Term Management Plan. We are strengthening our business foundations for future growth by turning market shifts into opportunities for greater expansion.

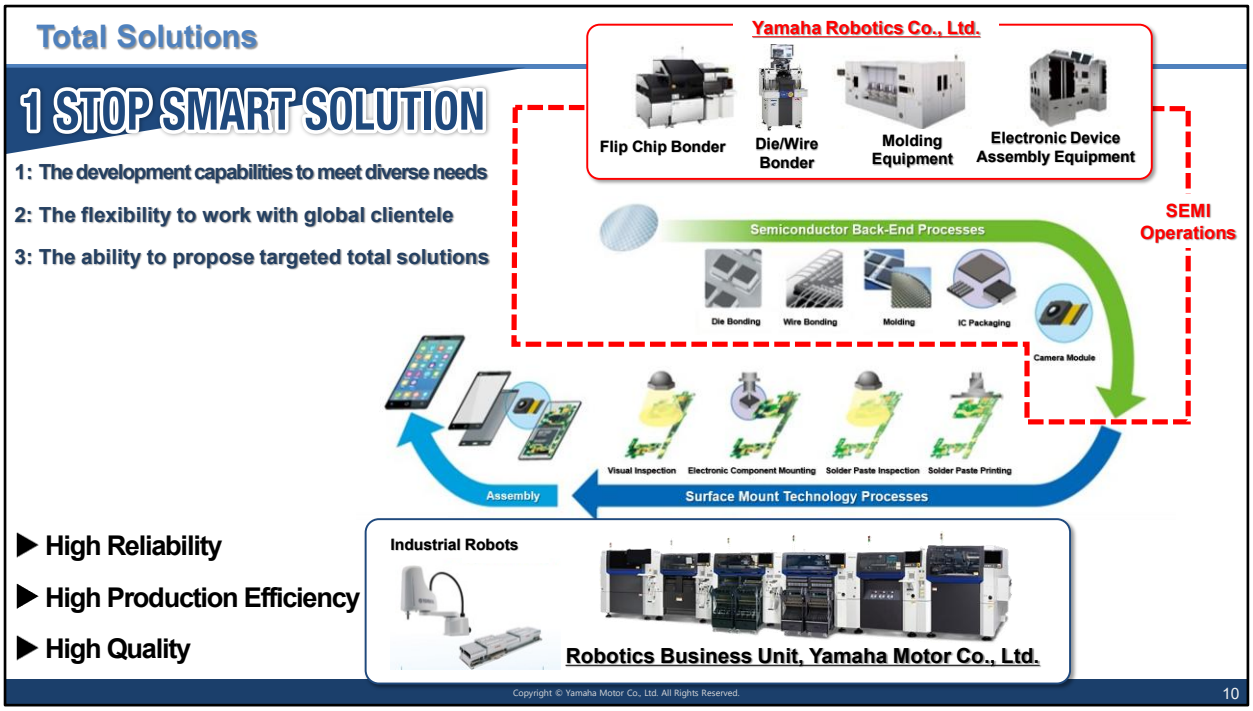
Through cutting-edge robotics and process-wide solutions, we aim to transform productivity, quality, and working styles across *Monozukuri* operations worldwide. By leveraging these strengths and turning changes in the market environment into growth opportunities, we will continue delivering value to clients and achieve further growth and profitability for the Robotics business.
Next, Nakamura-san will explain our growth-driving SEMI business.



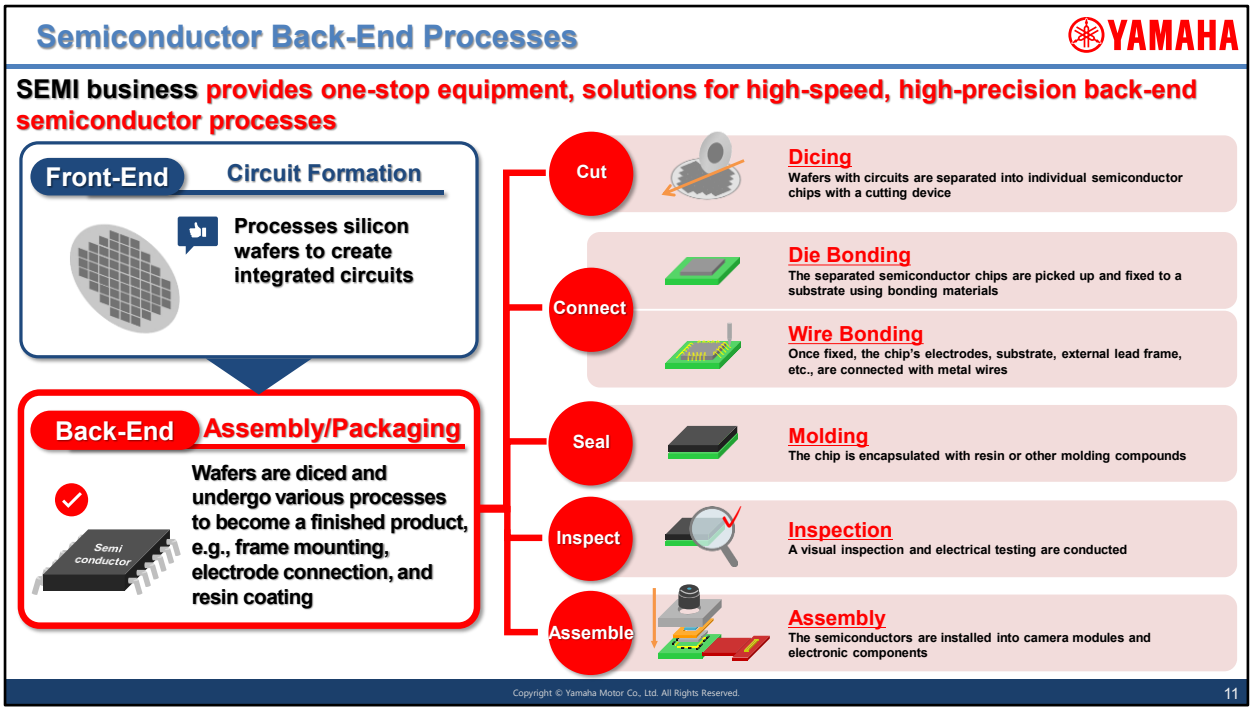
I'm Ryosuke Nakamura and I will be explaining Yamaha Robotics' SEMI Business Growth Strategy.
There are three key points I would like to highlight today:
Why semiconductor back-end processing is a market poised for growth
Why Yamaha Robotics has a competitive advantage in this market
How we intend to convert growth into earnings



Yamaha Robotics serves as the core company handling the SEMI business within Yamaha Motor's Robotics Business Unit.
Through the four-company merger completed in 2025, we integrated technologies, personnel, and sales and service networks, significantly enhancing our ability to address growing market opportunities.
Today, our business has approximately 1,400 employees worldwide, with two locations in Japan and twelve overseas.
By combining the specialized technologies and expertise of Shinkawa, Apic Yamada, and PFA with the wide-ranging capabilities of the Yamaha Motor Group, we provide tailored solutions to clients around the world.
The objective of the integration was not merely to increase the scale of operations. Rather, it was to combine different but complementary technologies in order to generate greater value for clients throughout the entire semiconductor back-end manufacturing process.

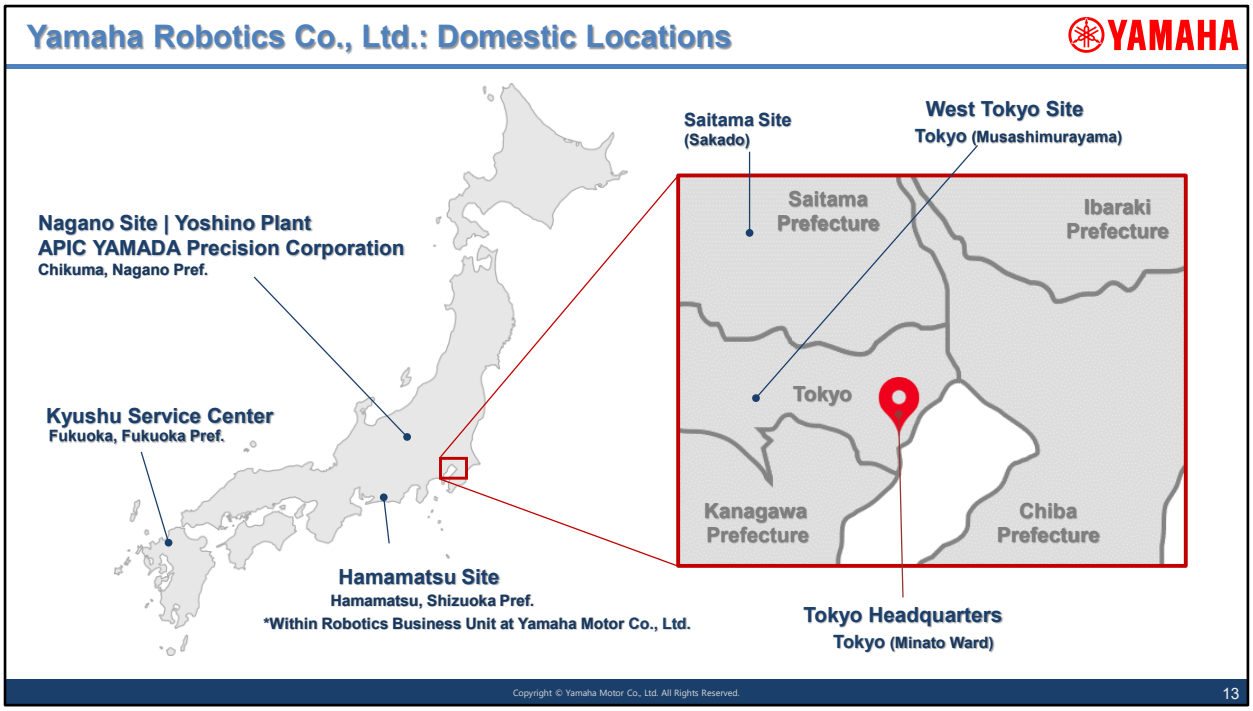


Our group covers a broad range of *Monozukuri* domains, from semiconductor back-end processes and surface mounting to final assembly.
Instead of simply supplying individual devices, we provide total solutions that optimize the entire factory, addressing management challenges clients face regarding productivity, quality, and labor savings.
This breadth of business coverage is a key differentiator from standalone equipment manufacturers.
Our competitive advantage is built on three core strengths.
First, our development capabilities enable us to rapidly answer diverse client needs with practical solutions.
Second, our global reach allows us to provide comprehensive support to clients worldwide.
And third, our ability to design entire processes enables us to propose targeted total solutions for our clients.
By combining Yamaha Robotics' core semiconductor back-end technologies, including flip-chip bonding, die and wire bonding, molding, and electronic device assembly, with the comprehensive capabilities of the Yamaha Motor Group, we provide highly reliable, efficient, and high-quality production systems for clients through our One-Stop Smart Solution approach, from standalone equipment to fully integrated production lines.

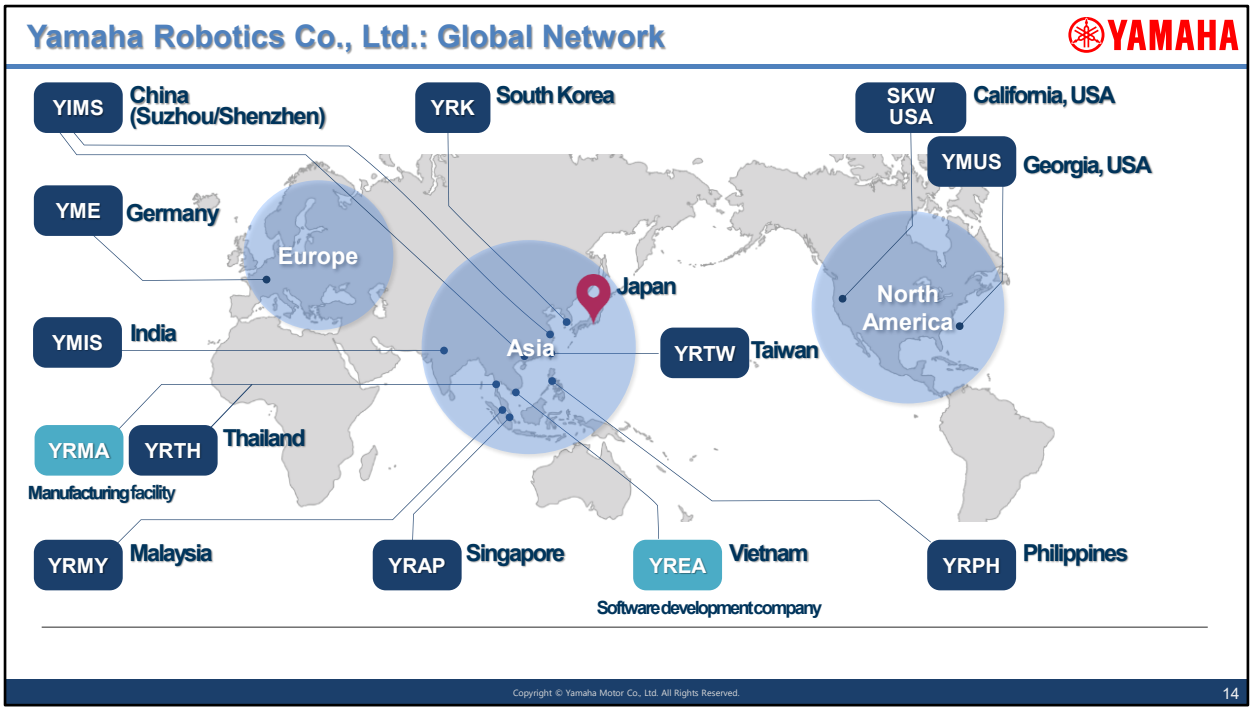


Semiconductor manufacturing is broadly split into front-end and back-end processes. The front-end forms circuits on silicon wafers, while the back-end dices the wafers, connects components, encapsulates them with resin, inspects the workpiece, and assembles everything into final products. In simple terms, these processes can be described as "cut, connect, seal, inspect, and assemble".
These steps are known as dicing, die bonding, wire bonding, molding, inspection, and assembly.
The front-end has relied mainly on miniaturization to boost performance, but this has become difficult in recent years, further increasing the importance of precision back-end processes that integrate multiple chips.
We offer all the primary equipment and solutions for these back-end processes, making us a one-stop brand supporting the evolution of semiconductors.

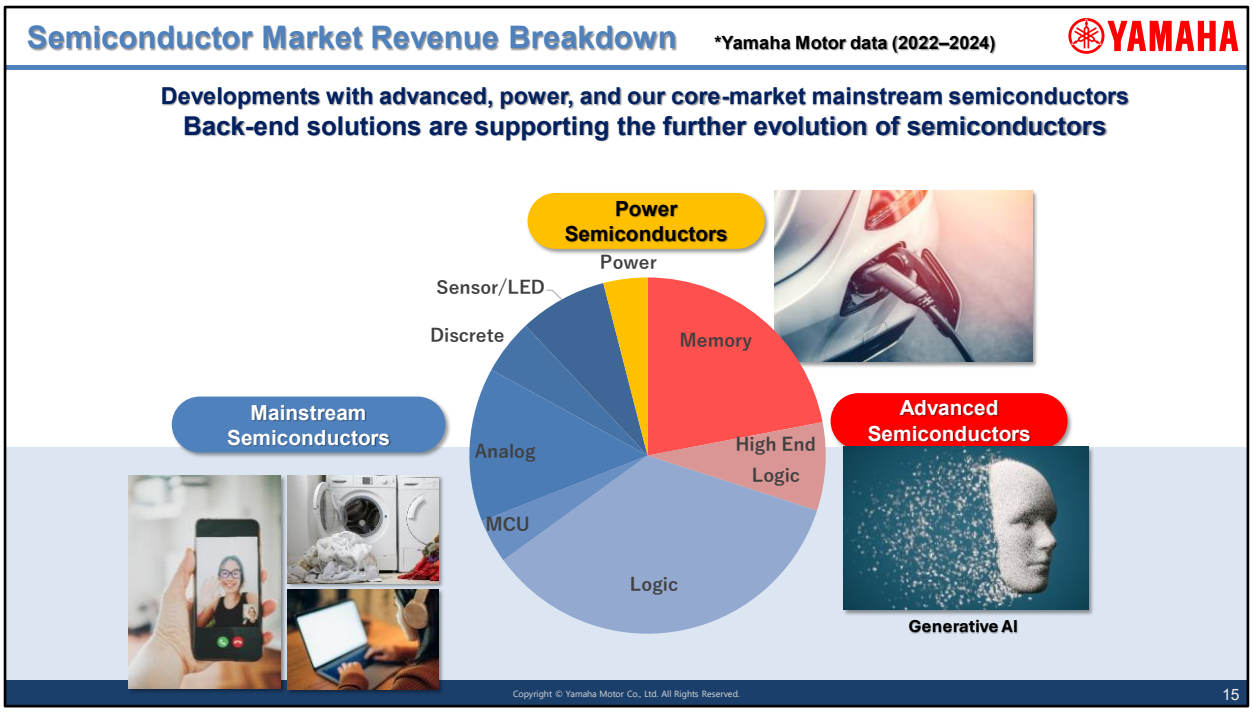
Our SEMI business consists of Assembly Solutions and Packaging Solutions.
The SHINKAWA Series has strengths in bonding technologies, enabling highly precise semiconductor interconnections with its die bonders, wire bonders, and flip-chip bonders.
The PFA Series specializes in assembly, rapidly addressing diverse semiconductor and electronic component assembly needs.
The APIC YAMADA Series boasts industry-leading molding technologies, delivering high-quality semiconductor packaging through molding equipment and precision molds.
We also incorporate inspection technologies into each process.
The unique value the Yamaha brand has in this space is our ability to provide connecting, assembly, packaging, and inspection operations as a fully integrated package.



In Japan, our operations are centered at our Tokyo headquarters, with other sites in western Tokyo, and Nagano, Saitama, Shizuoka, and Fukuoka prefectures.
Each site has its own individual strengths and roles to fulfill, coordinating with one another on R&D, production, sales, and service functions.
The company integration in 2025 was also an opportunity to promote technical and human resource exchanges between our different locations, thereby strengthening and optimizing operations companywide.



The semiconductor industry is a global market.
In addition to Asia, the main hub of semiconductor manufacturing, we have established sales and service bases in North America and Europe, where development of advanced technologies is concentrated. We also have a manufacturing facility in Thailand and a software development company in Vietnam.
To strengthen our sales and support capabilities, we integrated our Taiwan operations in July 2025 and our European operations in January 2026.
Furthermore, we opened a robotics sales and service facility in India in April 2026 and established a SEMI department there in July.
Going forward, we will further strengthen our service network in key advanced semiconductor regions, including North America, Taiwan, and South Korea, thereby expanding sales opportunities and enhancing service quality.



We classify the semiconductor market into three segments: mainstream semiconductors, power semiconductors, and advanced semiconductors.
Mainstream semiconductors are characterized primarily by well-established packaging technologies and are a high-volume market segment that serves as a stable source of earnings for our business.
The power semiconductor segment is growing on the back of energy efficiency and electrification trends, while the spread of generative AI is driving advanced semiconductor market growth. Advances in packaging technologies are ongoing in both these segments.
By generating steady earnings in the mainstream semiconductor market while capturing opportunities in the growing power semiconductor and advanced semiconductor markets, we have built a well-balanced business portfolio.

Semiconductor Market Trends: Structural Changes Driving Back-End Market Growth

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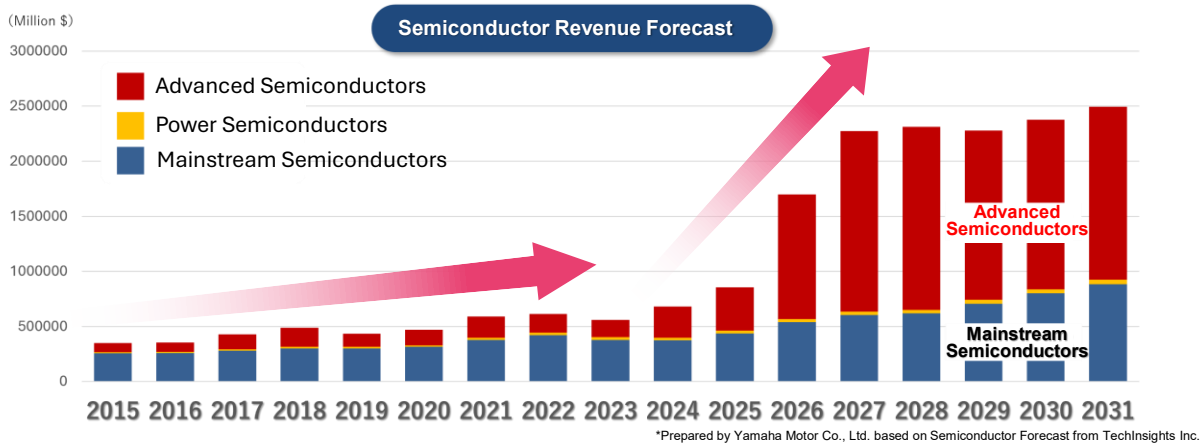
The arrival of the AI era is sending the semiconductor market upward faster than expected
Expected to exceed $1 trillion in 2026 ahead of the 2029 forecast



*Prepared by Yamaha Motor Co., Ltd. based on Semiconductor Forecast from TechInsights Inc.

With generative AI emerging as the primary driver of market growth, the semiconductor industry is now at a major turning point. The semiconductor market was once expected to exceed $1 trillion in 2029, but it is now projected to surpass that level as early as 2026. AI servers require high-performance GPUs, HBM, and the advanced packaging technologies for their high-density mounting.
As a result, investments are growing globally not only into semiconductor manufacturing, but also into back-end processing technologies. It's important to note that this is not a temporary cyclical trend for this business either.
With the greater adoption of AI, the main area influencing semiconductor performance enhancement is expanding beyond just front-end miniaturization to include increasingly sophisticated back-end processes.
We view this development as a long-term structural shift, and the semiconductor back-end processing at the center of it is exactly where our business sits.

Focus Markets Early Investments to Position Yamaha to Capture AI-Driven Growth

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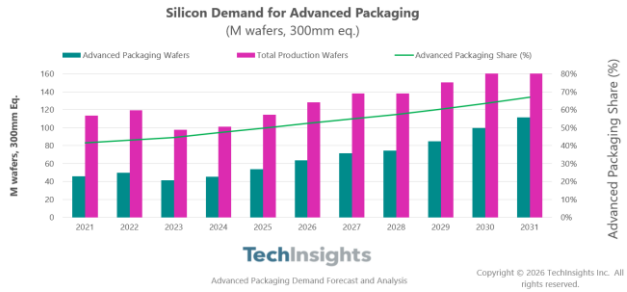
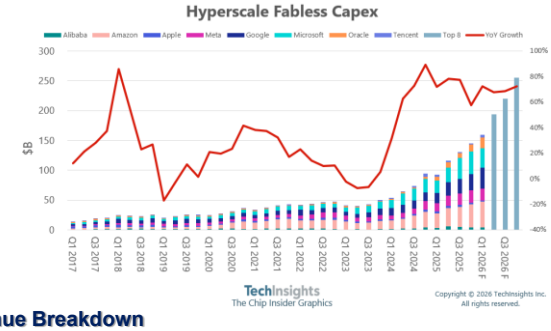
Advanced semiconductors driving the semiconductor market



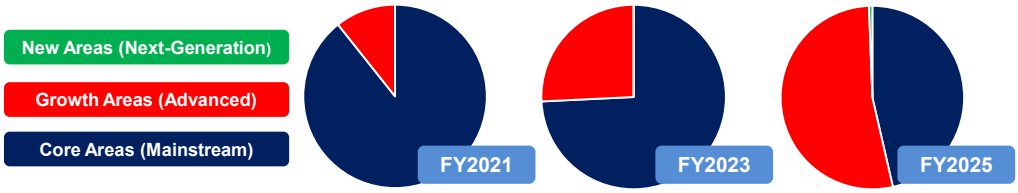
Investment in AI data centers expected to continue



Source: TechInsights Inc.

Yamaha Robotics Revenue Breakdown

Revenue from advanced semiconductor applications (growth area) is becoming a primary driver



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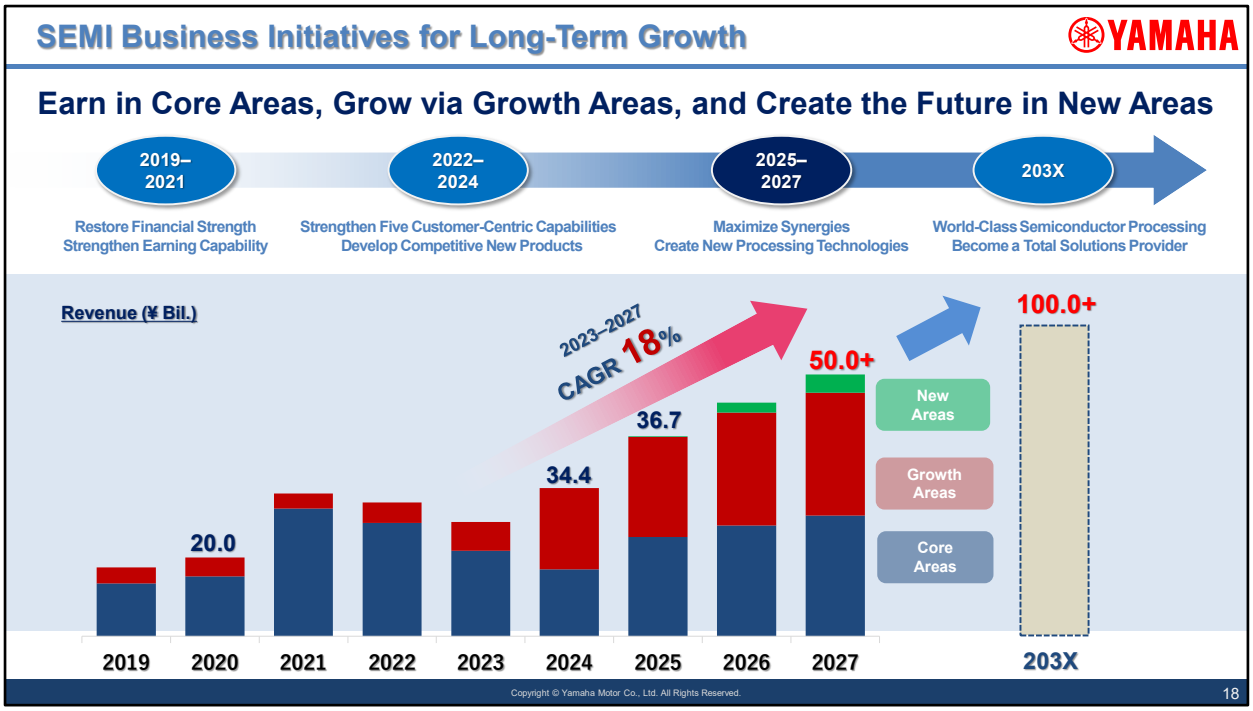
The market structure has changed significantly, driven by investments in Advanced semiconductors and AI data centers.
In line with these market changes, our revenue mix has also evolved significantly.
While our business was centered on our core area of mainstream semiconductors in fiscal 2021, by fiscal 2025, growth areas like advanced semiconductors started to become the main driver of the business's growth.
This was not the result of responding after the market had already expanded.
We moved ahead of the market and consistently invested in technologies like flip-chip bonders and advanced molding systems, while proactively bringing new proposals to clients.
These early investments have begun to deliver real results as demand driven by generative AI begins to accelerate. Having already prepared ourselves to capture the growth of the AI market, Yamaha is in a position of strength.



Our growth strategy is straightforward: “Earn in Core Areas, Grow via Growth Areas, and Create the Future in New Areas.”
We will expand our business through this three-level framework.
We will establish a stable earnings base through bonders and molding equipment for mainstream semiconductors in our core areas, while investing those earnings into high-growth areas such as AI, HBM, and advanced packaging.
At the same time, we will make early investments in new areas, including silicon photonics and other new fields to build up the next drivers of growth.
Since the full-scale strengthening of our SEMI business through M&A in 2019, we have steadily implemented growth initiatives, including restoring financial strength, developing competitive new products, and maximizing synergies through the integration of four companies. In this medium-term plan, we are targeting over 50 billion yen in revenue by 2027, and more than 100 billion yen in the long term.
Through the integration of the four companies in 2025, we have brought together capabilities in technology, personnel, production, sales, and services, helping put us on solid ground to execute this growth strategy.

Business Growth: Core Area (Mainstream Semiconductors)

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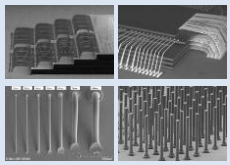
Launch Progress of New Platform Models

UTC-RZ1: High-Speed, High-Precision Wire Bonder

- Compact design with high productivity (37% higher productivity per unit floor space)
- Energy savings (-12% power consumption, -50% air consumption)
- Proprietary automation technology



High-Speed, High-Precision Wire Bonding in a Compact, Energy-Saving Design

UTC-RZ1

- Client certifications progressing, full-scale sales expected from 2026
- Growing demand for several products for AI data centers and optical transceivers
- Developing next-generation technologies using the new platform as a base

MS-R Series: Multi-Process Molding System

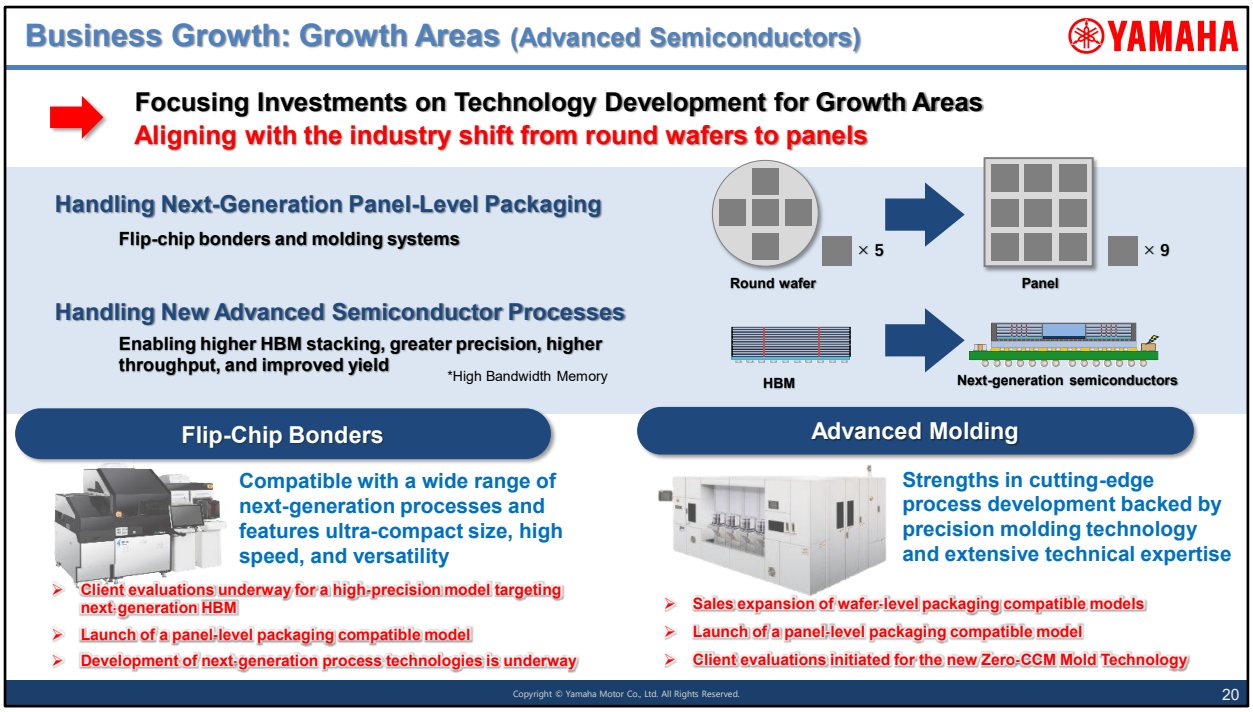
- High productivity and ultra-high precision
- Versatility and scalability
- Equipped with newly developed workpiece handling mechanism
- Narrow-gap molding and Mold Under Fill (MUF) technology
- Flash-free and chip exposure molding

Precision Molding Technology Providing Compatibility with the Latest Processes

MS-R series

- Handling a wide range of semiconductor manufacturing processes, with client certifications progressing steadily and receiving high evaluations
- Higher orders thanks to high quality and productivity enabled by unique molding technology

The foundation supporting our growth strategy is the earnings power of our core area.
In our core area, we released two new platforms last year: the UTC-RZ1 high-speed, high-precision wire bonder and the MS-R Series multi-process molding system.
In addition to high-speed and high-precision wire bonding, the UTC-RZ1 offers advantages with its compact design and energy-saving performance.
Demand is growing significantly for semiconductors used in AI data center applications, various AI-related products and optical transceivers.
The MS-R Series has been highly regarded for its precision mold technology, advanced resin molding capabilities such as exposed-chip molding, and its ability to support a wide range of advanced semiconductor manufacturing processes.
Both products have received positive customer evaluations and have begun making full-scale contributions to our revenue.
By expanding sales of these new platforms, we will further strengthen our core area as a cash engine that generates stable earnings.



The advanced semiconductor segment here will be what drives our growth going forward.
As generative AI continues to evolve, investments in HBM and next-generation packaging technologies are advancing rapidly.
Panel-level packaging, which improves production efficiency by using square panels instead of conventional round wafers, is continuing to evolve.
In addition, high-performance memory HBM is evolving further, while 2.5D/3D stacking technologies and chiplet architectures, which integrate different chips at high density, are becoming increasingly prevalent.
In anticipation of these advances in advanced semiconductor packaging, our flip-chip bonders and advanced molding equipment are also evolving.
Our flip-chip bonders achieve compact size, high precision, high speed, and high versatility through their ultra-compact module design and proprietary control technologies.
Client evaluations are progressing for high-precision models designed for next-generation HBM, and we have also introduced models supporting panel-level packaging.
In advanced molding, our strength lies in high-precision resin molding technologies centered on precision molds.
In addition to expanding sales of wafer-level packaging molding equipment, which is currently the mainstream, we have also begun receiving orders for models supporting next-generation panel-level packaging.
Client evaluations are also progressing for our new molding technology, called Zero-CCM, which enables high-precision resin molding right up to the edges of wafers and panels.

Business Growth: New Areas (Silicon Photonics)

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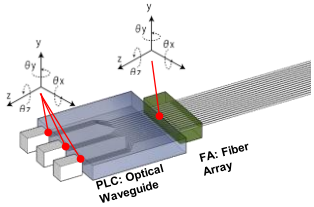
Silicon Photonics

Adapting Active Alignment Technology to Achieve Highly Precise Optical Connections
Contributing to lower power consumption by shifting from electrical to optical connections



High-speed active alignment technology

Strengths in high-precision mounting and automation technologies

Transceiver/LPO	NPO	CPO
200 Gbps–1.6 Tbps	800 Gbps–3.2 Tbps	6.4 Tbps or more

*Product images created by Yamaha Motor based on materials from various companies

Silicon photonics is another area we are cultivating to be a future pillar of growth.
In AI data centers, reducing power consumption while increasing data transmission speeds has become a critical challenge.
One promising solution is optoelectronic integration, which replaces some electrical signal transmissions with optical transmissions.
In this field, high-speed and high-precision active alignment technology, which identifies the optimal connection position while transmitting light, is a key enabler.
By leveraging the high-precision mounting technology we have developed over the years and active alignment technologies, we are developing solutions that can take projects for research purposes through to mass production.
Rather than entering markets after they have become established, our strategy is to secure the requisite technologies before that happens. This is the general direction of our growth strategy.

Business Growth: New Areas
(Pushing the Development of Future Technologies and New Businesses)

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Collaboration and Co-Creation with Partners, Universities, and Research Institutions

CEATEC AWARD 2025: Innovation Award

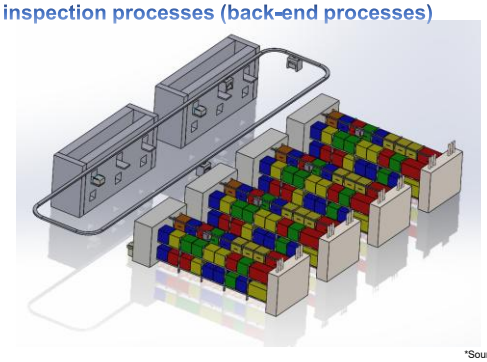
*Jointly developed and awarded with
AIST and Tokyo University of Science

- Micro-particle removal/cleaning and foreign particle inspection
- Ultrasonic contactless handling technology

Joined the Semiconductor Assembly Test Automation and Standardization Research Association (SATAS)

Contributing to the Automation of Semiconductor Back-End Packaging Processes

Promoting labor savings, automation, and standardizations in semiconductor assembly and inspection processes (back-end processes)



*Source: SATAS

Tomorrow's growth is driven by the R&D investments we make today.
Through collaborations and co-creation projects with companies, universities, and research institutions, we are developing next-generation semiconductor back-end technologies.
For example, the development of chiplet-on-wafer bonding technology, one of the outcomes of our joint development efforts, led to receiving the Innovation Award at the CEATEC AWARD 2025.
In March 2026, we also formally joined the Semiconductor Assembly Test Automation and Standardization Research Association (SATAS). We are working on the automation of semiconductor back-end manufacturing processes.
While continuing to grow our existing businesses, we are cultivating the seeds of future growth in the areas of next-generation processes and factory automation, strengthening our ability to provide integrated solutions encompassing equipment, processes, and automation.

Strengthening Competitiveness to Support Profitable Growth

More high-value-added offerings, manufacturing reforms, greater revenue from services, and talented personnel will support growth and improved profitability

■ Enhancing Profitability

1) Focused Investments into Growth Markets
- Increase high-value-added offerings in AI, HBM, and photonics-electronics convergence
- Expand sales in advanced semiconductor applications
- Capture opportunities in the growing generative AI market

2) Manufacturing Reforms and Intercompany Synergies
- Improve cost competitiveness
- Expand production capacity at Nagano plant and increase utilization at Thailand facility
- Improve productivity and reduce costs

3) Expansion of Solutions and Services
- Shift from equipment sales to production-line solutions
- Strengthen maintenance and upgrade services
- Increase the proportion of service-related revenue

■ Bolstering the Personnel Base for Growth

1) Securing Global Talent
- Boost recruitment of new graduates and experienced professionals
- Leverage the Yamaha brand to attract talent
- Expand international hiring

2) Enhancing Technological Capabilities
- Work together with universities and technical high schools
- Promote joint research initiatives
- Develop next-generation engineering talent

3) Improving Organizational Capabilities
- Maximize synergies among the four group companies
- Promote technology exchanges and joint development
- Strengthen global coordination

Finally, I would like to explain our initiatives to strengthen profitability and build a stronger talent foundation to enhance our competitiveness.
There are three pillars to strengthening profitability.
The first is increasing added value through focused investment in growth markets, including AI, HBM, and photonics-electronics convergence, while capturing opportunities in the advanced semiconductor and generative AI markets.
The second is enhancing manufacturing competitiveness through production reforms and integration synergies. We are strengthening our manufacturing capabilities by leveraging the strengths of the group, including increasing production capacity, utilizing overseas factories, and shortening lead times.
The third is expanding our solutions and services businesses.
In particular, we see ample room for growth in the services business. Rather than ending our relationship with clients upon delivery of the equipment they've purchased, we will build long-term relationships and recurring revenue streams with them through maintenance, upgrades, process support, and software-based services.
Next, I would like to discuss strengthening the talent foundation that supports our growth.
The first is global talent acquisition. Leveraging the Yamaha brand, we are expanding recruitment efforts both in Japan and overseas.
The second is strengthening our technological capabilities. Through collaboration and joint development with universities and technical colleges, we are developing the next generation of engineering talent.
The third is enhancing organizational capabilities. Through the sharing of best practices across the four integrated companies, as well as technology exchanges and global collaboration, we are strengthening our organizational capabilities.

Finally, I would like to summarize the three key takeaway points I hoped to communicate today.
First, driven by the widespread adoption of generative AI, the semiconductor back-end market has entered a phase of medium- to long-term growth. We will continue to focus our management resources on growth areas, including HBM, advanced semiconductors, and photonics-electronics convergence, to drive revenue growth.
Second, we possess strong core technologies in connecting, molding, assembling, and inspection, and are one of few companies capable of providing them as an integrated package with our One-Stop Smart Solution approach.
By leveraging the four-company integration and the wide-ranging strengths of the Yamaha Robotics Group, we will further enhance our competitive advantages.
And lastly, third, we will generate stable earnings from our core business areas, promote more high-value-added offerings in growth areas, and make early investments in new business areas in order to achieve both growth and high profitability while enhancing corporate value.
Yamaha Robotics will bring together its strengths in technology, production, sales and services, and personnel to become a world-class total solutions provider in the semiconductor back-end manufacturing industry.
Thank you all very much for your attention today.

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