Integrity & Sustainability

October 25, 2022

Sector: Semiconductor /Trading Company

Macnica Holdings (3132)

Initiation Report

GIR View

MACNICA

1 Feature

■ The largest semiconductor trading company in Japan

Among Japan's major semiconductor trading companies, the company (Macnica Holdings) has a market share of 12.8% (in the top two along with Toyota Tsusho, which owns three companies including NEXTY Electronics). Globally, the company holds a market share of 2.6% (ranking seventh after Toyota Tsusho with a 2.7% share. source: Gartner, based on 2021 sales).

Mainly imports and sales of semiconductors made overseas (over 90% of purchases).

Macnica and Fuji Electronics, independent semiconductor trading companies, collaborated to establish the company (April 2015).

More than 22,000 customers and 300 suppliers (including more than 170 semiconductor suppliers)

One in three employees is an engineer (about 40% in the network business).

■ Two pillars of business: semiconductor business and network business

Results for the fiscal year ending March 31, 2022 (FY3/2022) : Sales: 761,823 million yen (sales composition: semiconductor business 89.1%, network business 10.9%), operating profit: 36,707 million yen, operating profit margin: 4.8%.

Segment operating profit margin (before deducting corporate wide and unallocated expenses): Semiconductor business 4.1%
Network business 10.9%

In the semiconductor business, the majority (50.6%) of sales are for industrial equipment (37.4%) and automotive (13.2%) (companywide sales composition, FY3/2022). Sales CAGR11.1% (FY3/2016-FY3/2022) driven by 18.1% for industrial equipment and 12.5% for automotive

In the network business, the company is leading the way in the security area.

Focus on service and solution model (originated from new value-added business)

2 Business

See the final page for important disclosures.

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GIR View(cont.)

3 Target value

- **Long-term Management Plan Targets (Vision 2030)**

  FY3/2031: Aim for net sales of 1.3 trillion yen or more, operating profit of 100,000 million yen or more, operating profit margin of 7.5% or more, and ROE of 15% or more.

- **Medium-Term Management Plan Targets (FY3/2023-FY3/2025)**

  Net sales of 970,000 million yen or more, operating profit of 48,000 million yen or more, operating profit margin of 5.0% or more, net profit of 30,000 million yen or more, ROE of 15.0% or more, working capital turnover (= annual net sales / working capital (accounts receivable + inventory - accounts payable)) of 3.8 or more

4 Growth strategy

- **Semiconductor business:** Expanding market share in growing markets, especially in automotive and industrial equipment
- **Network Business:** Expand market share in existing areas (cyber security), expand into new areas, and strengthen in-house services
- **Service/Solution Model:** Business goals are to develop businesses that solve social issues, expand CPS (Cyber-Physical System) platform, and strengthen capability for long-term growth. While upfront investment will continue for some time, the company aims to achieve net sales of 16,000 million yen and operating profit of 1,000 million yen by FY3/2025

5 Global

- Global support with 80 locations in 24 countries around the world
- Overseas sales have exceeded domestic sales since FY3/2021, and the ratio of overseas sales is increasing
  (42.8% in FY3/2016 ⇒ 52.6% in FY3/2022)
- Sales to overseas local companies increased due to M&A of overseas companies
- Sales to overseas local companies accounted for over 50% of overseas sales in FY3/2016 and are still increasing

- Cash generation from improved working capital (accounts receivable + inventories - accounts payable) turnover (3.2 → 3.8)
- Secure cash and cash equivalents and raise funds through interest-bearing debt for growth investments such as M&A and intangible assets
- Stable and continuous dividend with a target dividend on equity ratio (DOE) of 4%
- Investor return policy: Total return ratio (dividends, share buybacks, etc.) to be 30-50%

Financial Strategy 6

Consolidated Results — Share Price ¥2,727 (Oct 21, 2022)

Fiscal year	Sales (mn)	YoY (%)	Operating profit (mn)	YoY (%)	Recurring profit (mn)	YoY (%)	Net profit (mn)	YoY (%)	EPS (Yen)	PER (x)
3/2019	524,235	4.0%	15,324	1.1%	13,101	-12.3%	8,883	-22.2%	142.0	19.2
3/2020	521,193	-0.6%	14,447	-5.7%	11,072	-15.5%	5,633	-36.6%	90.1	30.3
3/2021	553,962	6.3%	18,769	29.9%	16,399	48.1%	10,875	93.1%	175.4	15.5
3/2022	761,823	37.5%	36,707	95.6%	35,487	116.4%	25,798	137.2%	414.9	6.6
1H of 3/2023 CE	464,000	28.1%	22,000	42.5%	20,500	33.6%	14,000	16.8%	225.0	-
2H of 3/2023 CE	466,000	16.7%	22,000	3.4%	21,100	4.7%	14,000	1.4%	225.0	-
3/2023 CE	930,000	22.1%	44,000	19.9%	41,600	17.2%	28,000	8.5%	450.1	6.1

Source: Prepared by Global IR, Inc. based on company data

Note: CE=Company Estimate. Rounded under JPY mn. Rounded to one dicimal place. Caluculated by Global IR, Inc.

FAQs from Investor Meetings

Macnica Holdings (3132) (3132) has been meeting with foreign institutional investors on an ongoing basis. The following is a summary of frequently asked questions by investors arise from these meetings and their responses. The responses are based on the company's answers, with analyst commentary and additional information. The order of the responses is based on the questions that seemed to be of particular interest.

Regarding markets and trends

Q1: While digital ICs such as memory and general-purpose logic are expected to shift from an easing supply-demand to an oversupply, will the tight supply-demand balance for analog ICs for industrial equipment and automotive applications continue for the foreseeable future?

The company believes that the tight supply-demand situation for analog ICs for industrial equipment and automotive applications will continue for the foreseeable future. Semiconductor market forecasts for industrial equipment and automotive markets are higher than the overall average. The industrial equipment market has a broad base, and investment in semiconductors will continue. The semiconductor production equipment market will also continue to grow. Investments in smart factories and other measures to improve factory efficiency will continue, and the shift to EVs in the automotive market will require new manufacturing lines, so demand for factory automation and robotics will continue to increase. In the automotive market itself, demand for drive motors and batteries will increase in response to the shift to automatic driving and Advanced Driver-Assistance Systems (ADAS) for safety and EVs. The need for semiconductors will increase in many applications, including the instrument panel area for space presentation and improved display functions. However, even so, the sales amount used in industrial equipment and in-vehicles in the overall semiconductor market is far less than that in smartphones and PCs (WSTS data). In other words, it is a market of low priority and influence. In addition, analog ICs and other ICs(and such) used in industrial equipment and automotive applications are based on mature legacy technologies (several microns, 200mm wafers or smaller) from two to three generations ago, and the company believes that the supply rate will continue to slow because of low new capital investment. (see text) The company expects to meet its sales target of 930 billion yen for FY03/2023. However, the company believes that there may be a plateau in FY03/2024 and FY03/2025 (see the medium-term management plan in the main text).

Q2: If EVs become commodities like smartphones, won't the semiconductors they use also become commodities, making it difficult to add value?

With the popularization of EVs, the amount of semiconductors installed in each vehicle is steadily increasing, and both EVs and internal combustion engine vehicles require high-quality, highly reliable semiconductors to move, turn, and stop. Compared to internal combustion engine vehicles, EVs are increasingly digitized in the interior and around the batteries, but this does not mean that demand for analog ICs will decrease. Analog circuits are needed for the suspension and sensors that transmit power to the wheels. Digital ICs also require durability and high reliability for semiconductors used in harsh environments such as high temperature, high humidity, and vibration. The company provides PLDs and FPGAs, which are used extensively from the vehicle development stage, and can offer high-value-added distribution that provides business and services from upstream to midstream and downstream processes.

Q3: Chinese Business Risk: The impact of U.S. economic sanctions against China and Russia?

Since the company sells Western semiconductors in China, there could be geopolitical risk in China. Some Japanese manufacturers are also moving production line aimed for China back to Japan. In the past, there have been export restrictions by the U.S. on Huawei and others, but the impact on the company was small. This time, NVIDIA and Advanced Micro Devices (AMD) revealed that they have received notification from the US government that it has imposed approval by the government for the export of some GPU (image processing semiconductor) products to China and Russia (source: Nikkei Newspaper, September 2, 2022). Although the company handles NVIDIA products, it is not affected because it does not sell the products subject to the export restrictions to Chinese companies.

About Business

Q4: Why do customers purchase from semiconductor trading companies including the company rather than directly from semiconductor manufacturers?

The company's customers include a number of medium- to small-sized companies that purchase a wide variety of components in small quantities, such as industrial equipment, automotive, and telecommunications infrastructure. These customers require flexibility in terms of specification changes and delivery dates, which semiconductor manufacturers are unable to meet without bulk transactions. In addition, since the company excels at finding and sourcing cutting-edge products from start-ups and venture companies, the development divisions of major customers benefit greatly from using the company.

Q5: Are your suppliers domestic or worldwide?

Among semiconductor manufacturers, the company handles products from 15 of the world's top 21 companies (other than DRAM manufacturers such as Samsung and Hynix). The semiconductor makers have defined trading areas for each trading company, but recently the number of trading companies has been narrowed down to about two or three. The company is building a dominant position by expanding its share of the trading area or by acquiring new trading areas. The company is often chosen when considering changes in trade areas or customer commercial distribution in M&As between suppliers. Recently, ADI's agency restructure in 2017 consolidated most of its Japanese business with the company, and in 2020 TI's agency restructure consolidated it with both Tokyo Electron Device (TED) and the company. The company is in the best position to take advantage of such reorganization, as when Renesas Electronics consolidated from 16 to 6 distributors, it removed its original affiliated distributors and selected the company. The company also sources network products from around the world, mainly security-related products. The company often maintains business relationships with CrowdStrike and others from the early days of the company's founding.

Q6: Is the deal with CrowdStrike EXCLUSIVE? Presence of the competing distributors.

The company is the primary distributor for CrowdStrike and other network products, although it does not have exclusive business agreements with suppliers. The company also distributes its products to Fujitsu, NEC, and other SIers, so customers can purchase from them as well as from the company.

Q7: Do customers in the semiconductor business share the same or different customers in the network business?

The semiconductor business has a high percentage of overseas sales (56%), while the network business has a high percentage of domestic sales (74%). Basically, the two businesses have different customer segments (see text). The Service Solutions business is active in six themes (Smart Factory, Smart City/Mobility, CPS Security, Healthcare, Food/Agri-Tech, and Circular Economy), with different customers for each theme and solution.

Q8: What are some examples of semiconductor value-added (VAD) business?

When delivering semiconductors for specific applications (e.g., communication systems) to its customers, the company provides not only semiconductor chips, but also designs entire circuit boards and modularizes them to include software as a set. For those customers that have no design capabilities, obtaining an outline and specifications for IOT, DX, etc. from the customer, the company takes on the role of a design house by providing products, from hardware design to system construction, for a fee. One in three of the company's employees is an engineer (approximately 1,500 enigneers in total). Gross profit margins on integrated circuits average around 10%, but this varies depending on whether VADs (value-added services) are available. If only logistics is entrusted to the company, the margin is low; if VAD is provided, the margin ratio is higher.

Q9: Who are the top 3 suppliers of network products and top 10 suppliers of semiconductor products?

The top three suppliers of network products are Box, CrowdStrike, and Trellix (formerly FireEye) (in alphabetical order). CrowdStrike's sales have been growing rapidly in recent years, with a 57% increase in FY2021 sales over the previous year. The top 10 suppliers of semiconductor products are Analog Devices, Broadcom, Infineon, Intel (formerly Altera), Microchip, Micron, NVIDIA, ON Semiconductor, Renesas Electronics, and Texas Instruments (in alphabetical order). The top five account for 40% of sales, and the top ten for 75%.

Q10: Impact of exchange rate fluctuations: What is the change in net sales and operating profit if the exchange rate changes by one yen against the dollar?

About 60% of the company's sales are denominated in foreign currencies (mostly U.S. dollars), and most of the difference between the upwardly revised full-year forecast for FY03/2023 (at the time of the Q1 results announcement) and the original plan is due to the impact of the yen's depreciation. The initial assumption of the yen-dollar exchange rate was changed from 115 yen to 130 yen, resulting in an upward revision of 100 billion yen for net sales and 5 billion yen for operating profit. Therefore, the impact of a one yen change against the dollar can be calculated to be 6.7 billion yen (= 100 billion yen/15 yen) for net sales and 330 million yen (= 5 billion/15 yen) for operating profit (GIR's estimate). The company's response was, "For semiconductors, about half of the amount will be reserved for foreign exchange. The impact on sales is 6 billion yen per 1 yen change, but operating profit is only a few percent (5% equates to about 300 million yen). The network business is mainly yen-denominated sales, so sales will not be affected. In Japan, gross profit is negatively impacted by an increase in cost of sales due to the yen's depreciation: from January-March FY2021 to April-June FY2022, cost of sales rose 3% as a result of the yen's depreciation averaging about 10% during the period. Other than that, the company has been able to reduce costs by purchasing in Japanese yen and negotiating with suppliers. (see text)

Q11: Why is the gross profit margin on integrated circuits almost constant at around 10%?

When quotes are based on the fixed price in the price list, trading companies are free to set gross profit margins to some extent, but very few businesses can sell at the fixed price in the price list. The price list is generally based on a quantity of about 1,000 units. In most cases, a special price is obtained, but it is applied on a per-customer, per-project basis. The supplier determines the gross profit margin for the distributor based on the special price, and the gross profit margin is almost always fixed. The special price is basically valid for one year and is renewed once a year. If conditions change, such as an increase or decrease in quantity, the price may change, but the gross profit margin is almost always fixed. Even if there is a price increase or decrease, the gross profit margin to the distributor remains almost the same.

Q12: How does the company differentiate itself from competitors in the low gross profit margin semiconductor business?

Gross profit margins are basically determined by trading companies' roles. The broad customer base, such as industrial equipment, has a small usage volume per company. Because of the extremely large number of customers and the wide variety of applications, this is a market where it is difficult for semiconductor manufacturers to provide sales and technical support in terms of human resources. Therefore, it is necessary for trading companies to provide sales, technical, and quality support by themselves. Trading companies are responsible for customer relations, information gathering, project identification, technical PR, design support, and response to any defects. What suppliers value most is the ability of trading companies to independently conduct technical PR and decide on projects. The more projects a trading company can win on its own, the higher its gross profit margin will be. Therefore, the industrial equipment market is a market where high profit margins can be earned. On the other hand, for cutting-edge, high-volume, high-value businesses such as smartphones and PCs, semiconductor manufacturers themselves take the lead in the business (customer relations, project identification, technology PR, pricing, etc.). Trading companies as distributors are responsible only for logistics after the business is decided, resulting in low gross profit margins. However, since the business is large in value, even a low gross profit margin can result in a large sum of money.

Q13: Why is it possible to have a high gross profit margin business in the network business?

As an exclusive distributor or primary distributor, the company negotiates with suppliers and purchases goods and services at a base price against a price list and a special price for each deal. The company then negotiates with secondary distributors (partners) and direct end-users, and sells the products and services at the base price and a special price for each deal. Generally, if a supplier's presence in Japan is low and the value it provides is low, the company can obtain a large discount on the purchase price, resulting in a high gross margin business. In addition, if the company is working directly with end-users and the end-users require the assistance, the company do not need to discount much for the sale, resulting in a high gross margin business.

Q14: Is there a quarterly seasonality?

In the semiconductor business, seasonal fluctuations were seen before Covid, but after Covid, no seasonality is seen, partly due to the shortage of semiconductor supply. However, during the month of Chinese New Year in China, customers have

fewer operating days and purchases decrease. In Japan, many companies end their fiscal year in March, so there is a tendency for purchase volume to increase. In the network business, sales in Q4 will be the largest in the fiscal year. This is mainly due to the fact that many sales are booked in Q4 to coincide with the end-of-term budgets of client companies. However, looking at the trend over the past two to three years, this seasonal factor is no longer as pronounced as in the past.

On industry mergers and acquisitions

Q15: Will there be further mergers and acquisitions?

In the semiconductor industry, further mergers and acquisitions are possible in order to increase competitiveness due to both increase in the amount of semiconductor investment and the complexity/speed of product development. In the networking industry, many start-ups are emerging in the security, data, and application domains. It is not just a trend concentrated in large companies.

Q16: What is the company's M&A strategy?

The company is currently investigating M&A deals that are brought to them for their respective investment amounts and current performance. Investment priorities are to expand its market share in Asia in the case of semiconductors, and to expand into new geographic areas in the case of network security, or to conduct M&A vertically to expand its business domain. In the services and solutions model, the company will consider M&A to acquire missing capability and accelerate commercialization, and will finance M&A and intangible asset investments with a combination of operating cash flow generated by the business and bank borrowings, which should account for 50% of net profit. M&A and intangible asset investments will be funded by a combination of operating cash flow generated through the business and bank borrowings.

Q17: What is the company's global strategy?

Expansion of global bases is being considered, particularly in the network and security business. In the semiconductor business, the company is considering to expand its market share in Asia. In addition, as a sourcing base, office expansion to Israel and other countries and regions where many cutting-edge technologies are born is conceivable. Overseas sales are centered on East Asia and the ASEAN region, with the TOP 10 countries accounting for 97% of total sales. All countries are growing universally, including Taiwan, which has an increase due to the consolidation of ANStek in 2021.

Q18: For the purpose of investing in business partners?

The company has not invested in semiconductor manufacturers, but has invested in Israeli AI companies and other companies in the security sector. The company sometimes works with VCs to source technology or, with respect to startups, invests for the purpose of securing the technology. Capital gains are not the initial objective, but they may result in some gains.

Medium-Term Management Plan and Long-Term Objectives

Q19: Is the company's past performance above the industry average due to organic (autonomous) growth or non-organic growth (M&A)?

Sales growth of 37.5% YoY in FY3/2022 is mostly due to autonomous growth (M&A effect of Taiwan ANStek in 2021 is only a few %). The company-wide sales CAGR of 11.1% (FY3/2016 ~FY3/2022) is based on domestic sales of 7.7% and overseas sales of 14.9% (the same period), respectively. Cytech (FY08) and Galaxy (FY10) had annual sales of around 10 billion yen each at the time of acquisition, but have

now grown about 10 fold. This is a typical example of the synergistic effects of M&A. Netpoleon (FY17) has also achieved high growth after M&A.

Q20: Numerical targets for the FY3/2031: 1.3 trillion yen in sales and 100 billion yen in operating income, broken down by business unit? What about gross profit?

The breakdown of the semiconductor: network: services and solutions business is as follows. The sales are 7:2:1 (910 billion yen : 260 billion yen : 130 billion yen), and the operating profit is 39 billion yen : 31 billion yen: 30 billion yen (operating profit margin of 4.3%:11.9%:23.1%) (figures in parentheses are calculated by GIR based on the company's comments, see Figure 14). Gross profit target of 180 billion yen (gross profit margin of 11%: 24-25%, 40%).

Q21: DOE and ROE metrics and investor return policies?

The company has set a medium-term target of 4% DOE (in line with the actual results for FY3/2022). The company's total return target, including dividend payout ratio and share buybacks, is 30-50%. The company aims for ROE of 15% or more, but it hopes to improve ROE to a level similar to its U.S. peers by increasing working capital turnover through liquidation of receivables and payables.

Regarding Strengths

Q22: What is the company's uniqueness, corporate culture, comparative advantage, barriers to entry, etc.? Why is it possible for the company to do what other companies cannot?

The company's uniqueness lies in its ability to identify and absorb superior technologies and concepts. Since the company's founding, it has been identifying venture companies and other companies with superior technologies and selling them to its clients as a distributor. Because venture companies do not have the resources to provide technical support in Japan, for example, the company has taken on the responsibility of providing all technical support. Therefore, unlike ordinary trading companies, the company quickly understands and absorbs cutting-edge technologies, and has accumulated the knowledge and know-how to implement them.

In addition, the corporate culture necessary for its business model takes root throughout the company. The corporate culture includes delegation of authority that allows the company to move and make decisions at the same speed as a startup, a frontier spirit of being “the first penguin” without fear of failure（fearless）, and a culture that celebrates challenges. In the past, many competitors have tried to emulate its business model (i.e., discovering ventures that possess the world's most advanced technologies and developing them into markets), but have had little success.

For example, it is not enough to simply set up an office in Silicon Valley and sign a contract with a talented venture firm, but it is necessary to strengthen partnerships with these firms in creating business and to overcome numerous challenges together. In this process, other competitors have failed to meet the expectations of their suppliers in terms of strategy and speed, and have withdrawn before reaching success. In the networking business, there are competitors in the same industry, but there are only a few competitors that have expertise in cybersecurity and offer consulting sales and technical support with in-depth product knowledge.

Q23: Reasons for continuing long business relationships with overseas suppliers and sustainability?

The company has a culture of encouraging young employees to play an active role, and has proactively sent young salespeople overseas (President Hara was one of them). The temperament of the company is also compatible with the venture spirit of its suppliers. For example, the company has had a long relationship with CrowdStrike since it was a start-up with only a few employees, and the company became its world's first distributor. The business was in the red for five years, but after persistent sales and marketing, the business turned profitable in the seventh year and has reached its current high level of growth. Most of the company's mid-career employees come from different industries and are highly skilled and eager to take on new challenges. The company believes that its corporate culture of independence and autonomy and the diversity of its human network are factors that differentiate it from its competitors.

Q24: Investor-oriented business management indicators?

Since the previous mid-term management plan, the company has introduced management with an awareness of the cost of capital. The management control indicators include ROIC (numerator: operating income after tax, denominator: interest-bearing debt + shareholders' equity) as a financial approach and ROWC (numerator: operating income after tax, denominator: working capital (accounts receivable + inventories - accounts payable)) as a business approach. Hurdle rates for ROWC are set for each major line of semiconductor business and monitored in each month. To reduce working capital, the company has strengthened its inventory and accounts receivable management. In the past, it focused on PL and watched only sales and operating profit, but after the introduction of ROWC, the company is also emphasizing BS. At the shop floor level, the scope of negotiations with suppliers has expanded, such as shortening payment terms instead of lowering prices. (See main text). The network business does not require large working capital due to high weighting of software and services, but it has been commoditized and the operating profit margin is showing a downward trend.

Regarding employees and others

Q25: Employee composition (women, foreigners, mid-career hires)

The figures as of the end of March 2022 are as follows (Source:Corporate Governance Report 2022). Macnica Corporation, a major operating subsidiary, has 2,095 employees (including 512 female employees, 37 non-Japanese employees, and 1,304 mid-career hires). 733 managers (including 31 female managers, 7 non-Japanese managers, and 471 mid-career hires). The ratio of women in the group as a whole is 24.4%, and 4.2% in management positions. Domestic group companies have 37 non-Japanese employees, 7 of whom are in management positions (18.9%). Management of overseas subsidiaries is entrusted to local personnel in each country who are familiar with local conditions, and the number of employees on loan from Japan is kept as low as possible.

Q26: Hiring policies, salary levels, and turnover

Traditionally, mid-career hiring has been a constant, with 64% of management positions occupied by mid-career hires, mainly by second-time graduates. The company's mid-career hiring policy is basically not to hire from other companies in the same industry. The company's salary level is among the highest in the industry. The basic salary is fixed, but promotions are based on merit. In addition to regular bonuses, the company offers a closing bonus. Turnover is about 4%, which is relatively low within the industry.

Q27: Origin of the company name?

Before becoming Macnica Corporation, the company name was Japan Macnics Corp (JMC). The name was derived from the phrase "Japan the Master of Advanced Concepts in electroNICS".

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Business Model

Business Overview

Japan's largest semiconductor trading company

Macnica Holdings, Inc. (hereafter "the company") is the largest semiconductor trading company in Japan. In FY3/2022, the company posted sales of 761.8 billion yen (89.1% of sales from semiconductor and 10.9% from network business) and operating profit of 36.7 billion yen (4.8% of operating profit margin). Among Japan's major semiconductor trading companies, the company has a market share of 12.8%, ranking in the top two along with Toyota Tsusho (which owns three companies including NEXTY Electronics). Globally, the company ranked seventh with a 2.6% share, after Toyota Tsusho with a 2.7% share (source: Gartner, based on 2021 sales). The company's operating profit margin of 4.8% (segment profit margin (before deducting corporate wide and unallocated expenses): 4.1% for semiconductors and 10.9% for the network business) is higher than Toyota Tsusho's 3.7% (most recent fiscal year).

History

Macnica and Fuji Electronics merger

Macnica (formerly Japan Macnics) and Fuji Electronics were established in October 1972 and September 1970, respectively. In October 2020, the two companies merged, with Macnica as the surviving company. Both companies are independent semiconductor trading companies that mainly import and sell semiconductors made overseas (more than 90% of their purchase volume). They are distinct from affiliated semiconductor trading companies (Ryosan, Ryodeni, Ryoyo Electro, etc.), which mainly handle products of domestic semiconductor manufacturers.

Percentage of distributor sales worldwide and in Japan

Relatively high ratio of distributor sales in Japan

According to the company, the ratio of direct to distributor sales of semiconductors is 74:26 worldwide. Globally, the ratio of direct sales is high, while in Japan, the ratio of distributor sales is relatively high. This is due to the difference in market structure between the world and Japan. Globally, the market for smartphones, data centers, and PCs is large and centered on large-lot customers such as Apple and Amazon, and direct sales, mainly bulk sales, are more common. In Japan, on the other hand, industrial equipment and in-vehicle (automotive) equipment account for a high percentage of the market, and there is a wide scope for distributors to play an active role. In addition, there are many small and medium-sized companies in Japan, and many customers cannot be directly supported by the manufacturer, which is another reason for the relatively high ratio of distributor sales.

Role of Semiconductor Trading Companies

Japan's unique market structure with many small and medium-sized customers

Semiconductor trading companies, along with “Sogo Shosha” (general trading company), play a major role in supporting Japan's unique market structure. Semiconductors use extremely advanced technology and cannot be manufactured in-house or by outsourcing to subcontractors. In addition, a wide variety of

semiconductors are developed and manufactured around the world under the division of labor, and it is not enough to simply buy semiconductors from directly managed stores. Manufacturers must always consider which semiconductors from which companies around the world to use, and must rely on specialized semiconductor trading companies to ensure smooth procurement of parts. Especially in the Japanese market, which has many small and medium-sized customers, small and medium-sized foreign manufacturers with no local knowledge are increasingly dependent on semiconductor trading companies.

Financial functions and high value-added distribution model

Semiconductor trading companies are also responsible for all operational aspects of selling products to customers, including credit, inventory, shipping, price control, collection of accounts receivable, and return and replacement of defective products. In addition, the company promotes the supplier's brand, promotes the design-in of new products to customers, and provides technical support as needed to facilitate market penetration of new technologies. The company calls this framework a high-value-added distribution model.

Movement to Web direct sales

On the other hand, some major semiconductor manufacturers are shifting to direct sales via the Web. TI has begun downsizing its distributor channels in the Chinese market, and TI itself is promoting a direct Web sales system called "My TI," in which TI itself operates the business aspects of the important role of a semiconductor trading company. In Japan, Marubun has been terminated from its agency contract with TI. As direct sales of semiconductors via the Web and AI logistics, such as fully automated warehouses, become more widespread, semiconductor trading companies will need to shift from the field of business operations to a proposal-based business model as a survival strategy.

Building a Business Foundation

Providing the latest technology from around the world

The company's mission is to "provide the latest technology from around the world," and it has built its business foundation on a high-value-added distribution model, centered on its semiconductor and network businesses. One in three of the company's employees (more than 40% in the network business) is an engineer, and the company focuses on providing added value that meets customer needs. In its previous medium-term management plan (FY3/2020-FY3/2022), the company focused on a new value-added business strategy. Based on the results of these efforts, the company reorganized its business into the Services and Solutions segment in the current medium-term management plan (FY3/2023-FY3/2025). The company aims to make this business profitable as soon as possible, and intends to make it a pillar of its long-term goal (Vision 2030, ending in FY3/2031).

Commercial products, customer base, and growth markets

Sales for industrial equipment expanded

Of the company's suppliers (over 170 companies; over 300 companies in all businesses), the top 20 account for 80% of its purchases (the top 5 account for 55%). As a primary distributor, the company is positioned like a Japanese subsidiary of its suppliers. The company has more than 22,000 customers, and the top 10 largest customers accounted for 41% of sales in FY3/2016 and declined to less than 30%

in FY3/2022, indicating that the company is expanding its customer base (more than 70% are mainly small and midsize companies in the industrial equipment industry). The percentage of sales to industrial equipment, the company's focus, increased from 25.8% in FY3/2016 to 37.2% in FY3/2022. Combined with the 13.2% for automotive equipment, this represents the majority of the company's total sales.

Positioning (Semiconductor Business)

Overseas sales ratio increased

Compared to Ryosan (established in 1957) and Ryoyo Electro (established in 1961), both long-established semiconductor trading companies, the company established in 1972 (formerly Macnica) has focused on overseas markets from the beginning, "providing the latest technologies from around the world". While the former's earnings have been stagnant due to the rise and fall of the Japanese semiconductor industry, the company has been able to ride the growth wave of the overseas semiconductor industry and focus on industrial equipment and automotive applications, achieving high growth (~FY3/2022 6-year sales CAGR 11.1%) even as overseas manufacturers have shifted to direct sales and mergers and acquisitions. Furthermore, the company has established overseas bases, mainly in China and Hong Kong, and has expanded overseas markets operation, which has also contributed to its high growth. The company's overseas sales have exceeded its domestic sales since FY3/2021, and the ratio of overseas sales to total sales has increased (from 42.8% in FY3/2016 to 52.6% in FY3/2022).

Overseas development

M&As of overseas companies lead to over 50% of sales geared toward local overseas companies.

The company provides global support through 80 offices in 24 countries. The company's overseas business began by supporting the overseas expansion of Japanese-affiliated companies, but sales to local overseas companies increased as a result of mergers and acquisitions of overseas companies. Compared to FY03/2009, when most of the company's overseas sales were to Japanese-affiliated companies, in FY3/2016, sales to local companies overseas accounted for over 50% of overseas sales, and are still increasing.

Figure 1. M&A Transition

M&A	FY08	FY10	FY11	FY12	FY16	FY17	FY19
APAC	Cytech	Galaxy				Netpoleon	ANSTek
EMEA	ActiveComp			Scantec	ATD		
USA			Octera	DHW			

Source: Prepared by Global IR, Inc. based on company data

Segment

Sales Composition

Semiconductor business: 89.1%, Network business: 10.9% (sales composition ratio, FY3/2022)

The company's business segments (sales composition, FY3/2022) are 89.1% semiconductors (integrated circuits, electronic devices, and others) and 10.9% network business. The semiconductor business is divided into integrated circuits (82.2%), electronic devices (5.1%), and others (1.8%). Over the past six years (~FY2022), the semiconductor business has grown at a CAGR of 10.2% (integrated circuits: 10.1%; electronic devices: 9.3%; other businesses: 25.1%) and the network business at 20.5%. During this period, the network business increased its sales composition from 6.7% (FY3/2016) to 10.9% (FY3/2022) (peak value was 13.1% (FY3/2021)).

Segment profit margin

Trends in Gross Profit Margin

Gross profit margin (for the last three fiscal years) has been just under 12% on a company-wide basis. The breakdown is as follows: semiconductor business around 10% (integrated circuits: less than 10%, electronic devices: 7-13%, others: 10-18%), and network business around 26-34%. Integrated circuits remained flat (reached the 10.0% mark in FY3/2022), while electronic devices and others are rising.

Gross profit margin for integrated circuits is fixed at around 10%.

The gross profit margin in the logistics operations of semiconductor trading companies is fixed at a few percent, with semiconductor manufacturers having the right to make decisions. There was a time when the gross profit margin for integrated circuits reached 20%, when sales of highly profitable engineering services were high. Since then, as engineering services have become increasingly sold directly by manufacturers and semiconductor trading companies have become logistics agents, gross profit margins of around 10% have taken hold.

Gross profit margin in the network business is declining.

On the other hand, the gross profit margin of the Networks business has been declining, partly due to commoditization. The gross profit margin of this business has

declined by several percentage points from 30.2% at FY3/2018 to 25.5% at FY3/2022 due to the acquisition of Netpoleon (2017), which had a low margin of about 15% for the same business.

Trends in operating profit margin

The operating profit margin had been hovering around 3%, but rose sharply to 4.8% for the entire company (4.1% for the semiconductor business and 10.9% for the network business) in FY3/2022. The semiconductor business rose 2.1 percentage points YoY, while the network business declined 1.3 percentage points YoY.

Sales Analysis

Unit price, quantity, minimum lot

Unit price varies depending on quantity (minimum lot)

Sales are determined by unit price x quantity. Quantity depends on the minimum lot size for the application. In the case of semiconductors, the unit price is higher for products with high functionality and performance and for small-lot, high-variety products (several cents to several million yen/unit). For industrial and medical equipment, space and defense equipment, and automotive applications, the smaller the quantity (several to several thousand units), the higher the unit price. Even for the same product, application varies from commercial, in-vehicle protoype or to testing use, etc. Therefore, the number of in-vehicle protoype or testing use products made in the one sitting is small. On the other hand, consumer products, PCs, and smartphones are made in large quantities (several million units) and have low unit prices. The unit price of network devices varies from several thousand yen to several hundred million yen, depending on the product and quantity.

Delivery time (lead time)

Semiconductor Lead Time

In the process of manufacturing semiconductors, the basic manufacturing process is the same, and there is no significant difference in lead time for memory, analog, etc. However, depending on the type and grade of product, the number of wafer fabs and testing processes and procedures may differ, affecting lead time. High-grade products, such as those for automotive and space/defense equipment, require longer testing processes. Since the lead time is long and the quantity of products that can be made at one time is small, the unit price is higher than that of commercial products.

Business model for Semiconductors is to order prospectively and have a stockpile

Since semiconductors are produced in manufacturer's lots, trading companies will place prospective orders and hold inventory to shorten delivery time to customers. Under normal circumstances, the lead time for semiconductors from order placement with suppliers to delivery (“zero-base”) is about 4 months. Since the lead time for formal orders from customers is one to two months, and one to two weeks for automobiles, it is necessary to shorten delivery time by placing anticipated orders with suppliers. For this reason, the company obtains demand forecasts from customers in advance and makes arrangements with suppliers for delivery six months in advance (i.e., two months of inventory plus four months of released order).

Longer lead times for semiconductors

As of August 2022, the zero-base lead time for semiconductors is approximately 1 year. Therefore, customers issue formal purchase orders with lead times that match

or exceed the zero-based lead time, and place long-term orders with suppliers. Hence, there are now fewer orders placed in advance based on demand forecasts.

Lead time for network products

Network products are sold on an order-only basis, with virtually no inventory. As the sales mix of software and services increases, lead times have been reduced to a few days.

Business practices unique to semiconductor trading companies

Ship & Debit

In direct sales of semiconductors, it is common to sell at different prices (end price) for each specific customer, depending on the volume size and other factors. On the other hand, when semiconductor manufacturers use distributors such as semiconductor trading companies, they first ask distributors to purchase inventory at a regular price higher than end price, and then debit (refund) it after it is sold to customers at a lower end price. This method, called "ship-and-debit," allows semiconductor manufacturers to improve their operating cash flow and manage the risk of end-price fluctuations. From a financial perspective, it is equivalent to semiconductor manufacturers being able to take out short-term loans at zero interest rates.

Semiconductor trading companies bear the risk

This approach would result in semiconductor trading companies taking on the inventory risk and interest burden of purchasing at a higher cost, even though the money will be refunded later. Since payment from the semicondutor companies is several months away, semiconductor trading companies' working capital increases and operating cash flow deteriorates. Although this process also places a considerable operational burden on semiconductor companies themselves, they give priority to the need to manage the selling price for each negotiation.

Impact of exchange rate fluctuations

Weak yen has positive impact on semiconductor business, negative impact on network business

The company has a majority of its sales overseas (52.6% in FY3/2022), and the majority of these sales are dollar-denominated. Since the majority of its purchases are overseas products, the majority of its purchases are dollar-denominated. For semiconductors, the majority of purchases are dollar-denominated and slightly more than half of sales are dollar-denominated (slightly less than half are yen-denominated). The positive effect on earnings (with the impact of ship-and-debit transactions) will be apparent during the yen's depreciation phase. Since most purchases of network products are denominated in dollars and most sales are denominated in yen, a weaker yen is a negative factor for gross profit due to increased cost of sales. (See FAQ).

Impact of exchange rate fluctuations on Ship & Debit

In ship-and-debit transactions, large foreign exchange gains or losses occur when the exchange rate fluctuates sharply. That is, when the dollar appreciates against the yen, a foreign exchange gain is generated when cash is paid back in dollars and the yen depreciates against the dollar. For example, if the company purchases goods from a manufacturer for $10 and sells them for $1.1, the manufacturer later adjusts the company's purchase price to $1 and the company receives $9 cash back. If the yen depreciates by 15 yen (from 115 yen to 130 yen/dollar) in the meantime, the company will receive a foreign exchange gain of 135 yen (= cash back of 9 dollars x

15 yen). Since the gross profit margin on a $1.1 sale would be about 10% ($0.1 = ¥11.5) if there were no exchange rate fluctuations, the larger the gap between the purchase price and the sales price, the greater the leverage effect of the foreign exchange gain (currently, the average gap is decreasing from 10:1 to about 3:1. In Hong Kong, it is about 7:1, but it can be as high as 50:1 for some products). (See FAQ)

Price shift (semiconductors)

Price increase factor

In semiconductors, when the exchange rate moves against the yen, the dollar price of purchases itself rises in yen terms, so the company generally negotiates a higher selling price in yen (the supplier factor). In reality, it is difficult to raise prices based on exchange rate fluctuations alone, since exchange gains from ship-and-debit transactions and inventory interest burdens during that period are also involved. However, when the company retains several years' inventory of discontinued products for customers' convenience (e.g., for automotive and public facilities), soaring raw material and wafer prices, outsourcing line availability, and rising market prices (e.g., for memory) are direct factors for raising prices.

Price reduction factor

Conversely, if the exchange rate moves in favor of the yen, the dollar price of the purchase itself will drop in yen terms, which will lower the selling price in yen (the supplier factor). In general, apart from exchange rate fluctuations, Japanese customers tend to demand periodic cost reductions (on a semi-annual or yearly basis). Price reductions are also demanded when there is an increase in volume. A specific example of this is when the quantity of a product is doubled by using it for a new model in the next year, in addition to the existing model. In addition, strategic price reductions may be made when there is a possibility of being replaced by a competitor who has lowered prices. For products such as memory, for which market prices fluctuate, there are periodic price reviews. Since many medium-sized companies for industrial equipment demand small-lot orders, volume and delivery time are prioritized, and simple price reduction requests are rare, according to the company.

Bulk discount

Along with the increase in quantity, there is a negotiation for a price reduction. Basically, the reason for negotiations is the annual usage volume and usage period. Negotiations for price reductions also occur when multiple semiconductors of the same manufacturer are used in the same product. In the case of annual lump-sum purchases, there is some discounting, but in reality there are various circumstances that make it impossible to sell the entire year in one lump-sum, and there are few actual negotiations.

Price shift (Network Products)

Price increase/reduction factors

For network products, it is rare for a supplier's list price to increase, but there are price increases when a supplier's policies change significantly due to mergers and acquisitions. For example, a supplier changes to a new model or a new pricing format.

Bulk discount

In general, under the terms of transactions with suppliers, unit prices often decrease as purchase volume increases. In addition, both suppliers and the company often offer large discounts for large-scale projects.

Figure 2. Business Segments — Unit: JPY mn, %

	FY3/2016	FY3/2017	FY3/2018	FY3/2019 Consolidated	FY3/2020	FY3/2021	FY3/2022	FY3/2023 CE	CAGR 3/16 – 3/22
Sales	**405,315**	**398,503**	**504,085**	**524,235**	**521,193**	**553,962**	**761,823**	**930,000**	**11.1%**
YoY	-	*-1.7%*	*26.5%*	*4.0%*	*-0.6%*	*6.3%*	*37.5%*	*22.1%*	
Domestic	231,740	222,322	270,448	267,380	263,401	267,114	361,450		7.7%
Overseas	173,575	176,181	233,637	256,855	257,792	286,848	400,373		14.9%
Integrated circuits and electronic devices and others	378,069	365,602	465,120	470,338	459,971	481,125	678,601	836,413	10.2%
YoY	-	*-3.3%*	*27.2%*	*1.1%*	*-2.2%*	*4.6%*	*41.0%*	*23.3%*	
Composition ratio	93.3%	91.7%	92.3%	89.7%	88.3%	86.9%	89.1%	89.9%	
Integrated-circuit	351,726	339,808	425,642	439,361	425,297	438,352	626,122		10.1%
YoY	-	*-3.4%*	*25.3%*	*3.2%*	*-3.2%*	*3.1%*	*42.8%*	-	
Composition ratio	86.8%	85.3%	84.4%	83.8%	81.6%	79.1%	82.2%	-	
Electronic device	22,811	20,073	29,832	24,887	25,506	32,456	38,913		9.3%
YoY	-	*-12.0%*	*48.6%*	*-16.6%*	*2.5%*	*27.2%*	*19.9%*	-	
Composition ratio	5.6%	5.0%	5.9%	4.7%	4.9%	5.9%	5.1%	-	
Other	3,532	5,721	9,646	6,090	9,168	10,316	13,566		25.1%
YoY	-	*62.0%*	*68.6%*	*-36.9%*	*50.5%*	*12.5%*	*31.5%*	-	
Composition ratio	0.9%	1.4%	1.9%	1.2%	1.8%	1.9%	1.8%	-	
Domestic				-			-		
Overseas (local)				155,000			248,000		
Network Business	27,244	32,899	38,965	53,896	61,220	72,836	83,220	93,587	20.5%
YoY	-	*20.8%*	*18.4%*	*38.3%*	*13.6%*	*19.0%*	*14.3%*	*12.5%*	
Composition ratio	6.7%	8.3%	7.7%	10.3%	11.7%	13.1%	10.9%	10.1%	
Security				26,100			38,200		
Digital Solutions				3,100			6,100		
Global				12,000			21,800		
Other (network, etc.)				12,696			17,120		
Domestic				-			-		
Overseas (local)				12,000			21,800		
Gross profit	**44,287**	**46,269**	**56,094**	**61,061**	**59,891**	**64,835**	**90,718**	**104,300**	**12.7%**
YoY	-	*4.5%*	*21.2%*	*8.9%*	*-1.9%*	*8.3%*	*39.9%*	*15.0%*	
Gross profit margin	10.9%	11.6%	11.1%	11.6%	11.5%	11.7%	11.9%	11.2%	
Integrated circuits and electronic devices and others	35,869	34,808	44,338	46,533	43,125	45,160	69,497	-	11.7%
YoY	-	*-3.0%*	*27.4%*	*5.0%*	*-7.3%*	*4.7%*	*53.9%*	-	
Gross profit margin	9.5%	9.5%	9.5%	9.9%	9.4%	9.4%	10.2%	-	
Composition ratio	81.0%	75.2%	79.0%	76.2%	72.0%	69.7%	76.6%	-	
Integrated-circuit	33,518	32,345	41,240	43,463	38,171	39,095	62,389		10.9%
YoY	-	*-3.5%*	*27.5%*	*5.4%*	*-12.2%*	*2.4%*	*59.6%*	-	
Gross profit margin	9.5%	9.5%	9.7%	9.9%	9.0%	8.9%	10.0%	-	
Composition ratio	75.7%	69.9%	73.5%	71.2%	63.7%	60.3%	68.8%	-	
Electronic device	1,821	1,681	2,103	2,148	3,461	4,163	4,830		17.7%
YoY	-	*-7.7%*	*25.1%*	*2.1%*	*61.1%*	*20.3%*	*16.0%*	-	
Gross profit margin	8.0%	8.4%	7.0%	8.6%	13.6%	12.8%	12.4%	-	
Composition ratio	4.1%	3.6%	3.7%	3.5%	5.8%	6.4%	5.3%	-	
Other	530	782	995	922	1,493	1,902	2,278		27.5%
YoY	-	*47.5%*	*27.2%*	*-7.3%*	*61.9%*	*27.4%*	*19.8%*	-	
Gross profit margin	15.0%	13.7%	10.3%	15.1%	16.3%	18.4%	16.8%	-	
Composition ratio	1.2%	1.7%	1.8%	1.5%	2.5%	2.9%	2.5%	-	
Network Business	8,417	11,460	11,756	14,528	16,766	19,674	21,219		16.7%
YoY	-	*36.2%*	*2.6%*	*23.6%*	*15.4%*	*17.3%*	*7.9%*		
Gross profit margin	30.9%	34.8%	30.2%	27.0%	27.4%	27.0%	25.5%		
Composition ratio	19.0%	24.8%	21.0%	23.8%	28.0%	30.3%	23.4%	-	

	FY3/2016	FY3/2017	FY3/2018	FY3/2019	FY3/2020	FY3/2021	FY3/2022	FY3/2023	CAGR
				Consolidated				CE	3/16 – 3/22
Operating profit	**9,729**	**10,473**	**15,163**	**15,324**	**14,447**	**18,769**	**36,707**	**44,000**	**24.8%**
YoY	-	*7.6%*	*44.8%*	*1.1%*	*-5.7%*	*29.9%*	*95.6%*	*19.9%*	
Operating profit margin	2.4%	2.6%	3.0%	2.9%	2.8%	3.4%	4.8%	4.7%	
Integrated circuits and electronic devices and others	6,448	4,632	10,769	9,459	6,996	9,658	27,499	-	27.3%
YoY	-	*-28.2%*	*132.5%*	*-12.2%*	*-26.0%*	*38.1%*	*184.7%*	-	
Operating profit margin	1.7%	1.3%	2.3%	2.0%	1.5%	2.0%	4.1%	-	
Composition ratio	66.3%	44.2%	71.0%	61.7%	48.4%	51.5%	74.9%	-	
Network Business	3,145	5,684	4,225	5,726	7,224	8,879	9,082		19.3%
YoY	-	*80.7%*	*-25.7%*	*35.5%*	*26.2%*	*22.9%*	*2.3%*	-	
Operating profit margin	11.5%	17.3%	10.8%	10.6%	11.8%	12.2%	10.9%	-	
Composition ratio	32.3%	54.3%	27.9%	37.4%	50.0%	47.3%	24.7%	-	
Corporate and elimination	136	157	169	139	227	232	126	-	

Source: Prepared by Global IR, Inc. based on company data

Note: CE=Company Estimate. Rounded under JPY mn. Rounded to one dicimal place. Caluculated by Global IR, Inc.

Business

Semiconductor Business

Summary

High-mix/small quantities or rewritable products that meet user needs

The company handles a broad lineup of products, including logic ICs (PLD, ASIC, ASSP), analog ICs, other standard ICs, memory, electronic devices, and others. The company also handles a large number of PLD products that can be customized by the user and meet the needs for small-lot, high-variety production. The company also handles a wide range of memory products, including DRAM and FLASH (NOR type), and has one of the largest PLD programming (writing) centers in Japan. The company also provides support for defect analysis for foreign-made semiconductors.

Analog ICs are widely used for industrial equipment and automotive applications.

Analog ICs are widely used in semiconductors for industrial equipment and automotive applications because of their excellent durability in harsh operating environments. Industrial equipment and automobiles have long development periods and product life cycles of up to 10 years, requiring flexible response to specification changes and stable quality.

Analog IC makers manufacture with legacy technology

Many of the products handled by the company are manufactured with mature legacy technologies (a few microns, 200 mm wafers or smaller) that are two to three generations old. Analog ICs must be designed/manufactured using legacy processes to maintain product accuracy, and the company does not invest in cutting-edge manufacturing equipment. Semiconductor equipment manufacturers themselves are concentrating on cutting-edge 300 mm wafer manufacturing equipment, and manufacturing and sales of equipment for 200 mm wafers and smaller are limited.

Supply rate for 200mm or smaller silicon wafers

Silicon wafer manufacturers (Shin-Etsu Chemical and SUMCO, which together account for 60% of the market share) are also limiting production of 200mm and smaller wafers, for which price increases are not expected to their existing facilities, and production volume remains at the current rate of supply. The main production capacity increase is for 300mm, for which a price increase is possible. Because of this situation, oversupply of analog ICs and other ICs for industrial equipment and automotive applications is unlikely to occur and is less likely to be affected by the silicon cycle. (See FAQ).

Leading-edge technology DRAM and MPUs are susceptible to silicon cycles.

DRAM/FLASH/MPUs, which use state-of-the-art microfabrication technology (submicron) and large-diameter silicon wafers (300 mm diameter), are used in mass-produced products such as PCs and smartphones and are mainly sold directly by manufacturers. Memory and MPU makers invest huge amounts of capital to build new state-of-the-art factories and set up mass production systems, which incur a heavy depreciation burden. The business model is one of continuous full-scale operation even with thin profit margins, making it susceptible to the silicon cycle. The company's sales to PCs and smartphones are small, so it is less susceptible to these effects.

Silicon cycle

A term used to describe the structural business cycle unique to the semiconductor industry, which repeats boom and bust cycles in approximately four-year cycles. During a boom, orders are concentrated in large quantities and supply is in short supply, while during a recession, demand declines sharply and there is an oversupply. In recent years, the speed of technological innovation has been rapid, and the balance between supply and demand is easily disrupted at times when product generations change.

By Product

High growth in ASIC, analog, memory, and other standard ICs

Of the 89.1% of sales in the semiconductor business (FY3/2022, companywide sales), by product, integrated circuits accounted for 82.2% (PLD 9.5%, ASIC 2.0%, ASSP 11.7%, analog 23.7%, memory 15.4%, other standard ICs 19.9%), electronic devices 5.1%, and others 1.8%. Electronic devices: 5.1%, Others: 1.8%. For the most recent six years (~FY3/2022), the sales CAGR for semiconductors 10.2%, integrated circuits 10.1% (PLD 3.3%, ASIC 17.6%, ASSP 2.6%, analog 9.5%, memory 12.8%, other standard ICs 21.1%), electronic devices 9.3%, and other 25.1%. ASIC, analog, memory, and other standard ICs showed relatively high growth. In terms of operating profit margin, in descending order, analog, PLD, ASSP, ASIC, memory, and other standard ICs were accounted.

Integrated Circuit

PLD (Programmable Logic Device)

An IC (Integrated Circuit) that can be rewritten many times, allowing the user to customize the internal logic circuits. While the internal circuit structure of an ordinary IC chip cannot be changed after manufacturing, PLDs can be rewritten by transmitting circuit design information externally. When shipped from the factory, no specific circuit structure is built inside the chip, and when design data written in a specific data format is sent from the outside by the user (e.g., the developer of a device in which the chip is embedded), the chip is able to perform a specific function.

Circuit information can be erased and rewritten many times. Because PLDs are more expensive than mass-produced fixed-circuit semiconductor chips, they are used to make prototypes for operation verification during the development of semiconductor products. Another common use of PLDs is to incorporate them into the control devices of communication equipment, and rewrite the circuitry when new communication methods or standards are developed.

PAL (Programmable Array Logic) and GAL (Generic Array Logic) with a circuit size of a few hundred gates or less are called SPLD (Simple PLD), those with a complex structure up to a few thousand gates are called CPLD (Complex PLD), and a large scale one with several tens of thousands of gates or more is called an FPGA (Field Programmable Gate Array). In a broad sense, PLD is a generic term for all of these, but in a narrower sense, PLD is sometimes used to refer to SPLDs alone, or to SPLDs and CPLDs together.

ASIC (Application Specific Integrated Circuit)

A custom IC designed and manufactured by combining necessary functions for a specific device or application. The initial cost is higher, but the unit cost of components is lower because they are produced in large quantities. Therefore, the applications are suitable for mass-produced products such as TVs and smartphones.

ASSP (Application Specific Standard Product)

Within ASIC that is an application-specific IC that are designed and developed for a specific application at the initiative of a semiconductor manufacturer and sold to general customers. Application-specific ICs are mainly used in specific applications such as power management, image processing, and voice processing for cell phones and digital cameras, which are used in large volumes.

Analog

A semiconductor for processing and controlling continuous electrical signals (analog signals) for changes in physical phenomena such as light, sound, temperature, and pressure. They convert

analog signals such as light, heat (temperature), sound, and vibration captured by sensors into digital signals and vice versa. Examples include signal amplifiers (OP Amp) and A/D converters that convert analog signals to digital signals. Most modern electronic devices consist of analog and digital circuits. In the past, communication devices and home appliances were all composed of analog circuits, but today digital circuits are at the height of their popularity in PCs, smartphones, servers, and smart home appliances. However, there are many applications where analog circuits play an important role, such as industrial equipment and in-vehicle devices. Texas Instruments and Analog Devices are the two strongest companies in the U.S.

Memory

Large Scale Integration (LSI) is a semiconductor circuit electrically controlled to store and retain data. There are two types of RAM: read/write RAM and read-only ROM. RAM is used to start up a personal computer, browse the Web, and so on. FALSH Memory (FLASH) is a non-volatile memory that uses a semiconductor device called a floating gate MOSFET to store data by storing electrons in the floating gate. The stored data remains intact even when the power is turned off, and data can be erased in an instant. It is used as a flash memory card or SSD (Solid State Drive) to store photos and videos. South Korea's Samsung and Hynix, and the U.S.-based Micron are the top three manufacturers of both FLASH and DRAM. Japan's Kioxia, for example, specializes in FLASH.

Other standard IC

Logic ICs, power semiconductors (MOS FETs, IGBTs, etc.), and discretes (individual semiconductors), which are often used for general purposes. Logic ICs: Microcomponents such as MCUs and MPUs (commonly known as microcontrollers). Power : MOSFETs, IGBTs (Insulated Gate Bipolar Transistors), transistors. Discrete: Capacitors and diodes.

Electronic device

Optical modules (high profit margin, large weight), power supply modules, passive elements (resistors, capacitors, inductors, reactors, memristors, transformers, piezoelectric elements, quartz crystals, etc.), LCD panels, and others.

Other

FA system boards, NVIDIA image processing boards, connectors, etc.

By Use

Driven by industrial equipment, automotive, and telecom infrastructure

Of the 89.1% of the semiconductor business's sales composition (FY3/2022, company-wide sales), by application, telecommunications accounted for 16.5% (telecom terminals 2.9%, telecom infrastructure 13.6%), office automation and peripheral equipment 4.0%, computers 10.6%, consumer equipment 7.4%, automotive 13.2%, and industrial equipment 37.4%. Over the last six years (~FY3/2022), the CAGR for sales is 10.2% for integrated circuits, 5.9% for telecommunications (telecom terminals 2.2%, telecom infrastructure 8.4%), 3.7% for office automation and peripheral equipment, 3.4% for computers, 4.2% for consumer products, 12.5% for automotive, and 18.1% for industrial equipment. While industrial equipment, vehicle-mounted equipment, and telecommunications infrastructure led the way, telecommunications terminals declined.

Supplier

90% by top 20 suppliers

The top 20 suppliers account for 90% of the company's semiconductor sales (USD 5,377 million) for calendar year (CY) 2021. Major suppliers are listed below (in alphabetical order).

- FPGA, memory, ASP (smartphone, PC, server applications): Broadcom, Intel (formerly Altera), Marvell Technology, Micron, NVIDIA, Qualcomm, Skyworks
- Analog, Power Devices, Others (industrial equipment, automotive applications): Analog Devices (ADI), Infineon, Renesas Electronics, Microchip, NXP, ON Semiconductor, Sony, Texas Instruments (TI)

Effects of consolidation between Macnica and Fuji Electronics

The company has benefited from the consolidation of Macnica and Fuji Electronics, which has been a major force in securing suppliers. Fuji Electronics has consistently handled mainly foreign semiconductors since its establishment in 1970, and signed a distributor agreement with ADI in 1971. The company also handled other manufacturers, including TI, mainly of analog ICs, while focusing on small and medium-sized companies in the industrial equipment market. It handled ADI, TI, Infineon, ON Semiconductor, Micron, and Broadcom, and has an abundance of handling lines in common with Macnica. In addition, from its inception, Macnica had handled foreign semiconductors, and its corporate culture as a technology trading company was similar to that of Macnica.

Largest number of semiconductor manufacturers and customer base in Japan

In 2015, Macnica, which handles common foreign semiconductors and covers large and medium-sized customers, and Fuji Electronics, which covers small and medium-sized customers, merged (to be absorbed in 2020). As a result, Macnica now has the broadest and strongest position in the Japanese market in terms of the number of semiconductor manufacturers it handles and its customer base. Semiconductor manufacturers have come to choose Macnica because of its technological superiority and broad customer base.

Advantageous position in acquiring new clients

Even today, the company is often chosen by semiconducotr companies when they consider changes in commercial rights or customer business distribution through M&A. Recently, ADI's agency reorganization took place in 2017 consolidated most of its Japanese business with the company. In 2020, TI consolidated its agency structure to two companies Tokyo Electron Device (TED) and Macnica. The company is in the best position to take advantage of such reorganization, as when Renesas Electronics consolidated from 16 to 6 distributors, it removed its original affiliated distributor and selected Macnica.

Client

Expansion of customer base

The company has more than 22,000 customers, and its top 10 largest customers accounted for 41% of sales in FY3/2016, down to just under 30% in FY3/2022. The company is working to expand its customer base. Four foreign companies (in China and Taiwan) are among the top 15, and H3C is the company's top customer. Major customers categorized by application are as follows. The largest number of Japanese companies are in industrial equipment. The four foreign companies include

server companies, which are customers of the Chinese subsidiary Cytech.

Figure 3. Main Clients

Clients (titles omitted, in alphabetical order)	
Industrial Equipment	Advantest, Anritsu, Brother Industries, Canon, Fanuc, Fuji Electric, Fujifilm, Fujitsu, Glory, Hitachi, Ikegami Tsushinki, Japan Radio, Makita, Mitsubishi Electric, Murata, NEC, Nihon Kohden, Nikon, Oki Electric Industry, Olympus Omron, Panasonic, Shimadzu, Sony, Toshiba, Yaskawa Electric, Yokogawa Electric
In-vehicle	Alps Alpine, Aisin, Denso, Volusia Clarion Electronics, Hitachi, JDI, Japan Radio, Minebea, Mitsubishi Electric, Murata Manufacturing, NIDEC, Panasonic, Pioneer, Sharp, Sony, Sumitomo Electric Industries
Communications Infrastructure	ALIBABA, Fujitsu, NEC, H3C, NTT, Oki Electric Industry, Rakuten, Sumitomo Electric Industries
Communication Terminal	JDI, JVC Kenwood, Kyocera, Murata Manufacturing, Sharp
Computer	ALIBABA, Fujitsu, NEC, Hitachi, INSPUR ELECTRONIC, QUANTA COMPUTER, Toshiba
Consumer Products	Canon, Casio, Funai Electric, JDI, JVC Kenwood, Nikon, Panasonic, Sharp, Sony, Yamaha
OA and Peripheral Equipment	Canon, Konica Minolta, Seiko Epson, Fujifilm, Brother Industries, Ricoh

Source: Prepared by Global IR, Inc. based on company data
Note: Blue = Chinese and Taiwanese companies

Network Business

Summary

High growth in software and services

Network-related products accounted for 10.9% of total sales (FY3/2022, companywide sales) , of which 2.3% were hardware, 5.4% software, and 3.2% services . The CAGR of sales for the last 6 years (~FY3/2022) is 20.5% (2.9% hardware, 64.2% software, 15.9% services) for network-related products. Software and services are showing higher growth than hardware.

Major Customers

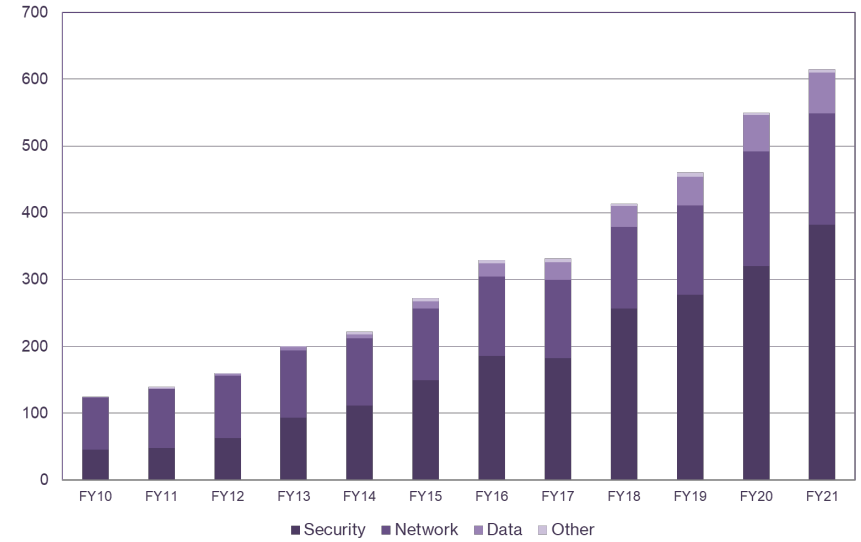
Customer Attributes

Customers in Japan range from large to medium-sized companies in all industries, including finance, securities, and insurance; public offices, local governments, and public organizations; the information and telecommunications industry (information system services/SI); the manufacturing industry (electrical, mechanical, and precision equipment); and the information and telecommunications industry (telecommunications carriers). Overseas, they include government and municipal offices, telecommunications carriers/telecom, financial institutions, information and IT, and manufacturing companies. The company has more than 6,700 end users (domestic only, as of March 2022).

Three Foundations for Growth

The company's network business growth platform consists of (1) security, (2) digital solutions, (3) global, and (4) others (network and others) The network business sales composition for FY3/2022 is (1) 45.9%, (2) 7.3%, (3) 26.2%, and (4) 20.6%. from FY3/09. Sales growth rates for FY3/2022 are (1) 46.4%, (2) 96.8%, (3) 81.7%, and (4) 34.8% (54.4% for the entire network business).

Figure 4. Domestic Network Business Sales by Category Unit: JPY 100 mn



Source: Prepared by Global IR, Inc. based on company data

Security

Security is the common ground

The company's network business spans network infrastructure, software, system integration, and telecom domains. The network infrastructure business has been in existence for more than 30 years, starting with Ethernet equipment sales in 1983. The company provides a variety of products and services in these business areas, with security as the common foundation.

Strengths in countermeasures against targeted server attacks

The company has partnered with the world's leading security companies and its strength is in countermeasures against extremely sophisticated targeted server attacks. In software, the company focuses on cloud security using big data and AI, and in system integration, it provides total solutions specialized in security. In telecom, the company provides everything from security consulting to implementation and operational support, adapted to the special communication technologies of telecom carriers' core networks.

Supplier

Top 10 Suppliers

Major suppliers (FY3/2022) include Box, CrowdStrike, Trellix (formerly FireEye), Symantec, Splunk, Menlo Security, Imperva, CyberArk, and Exabeam. The top three suppliers are Box, CrowdStrike, and Trellix (in alphabetical order). CrowdStrike's sales have grown rapidly in recent years, with a 57% increase in FY3/2022 sales over the previous year.

EU Regulations

GDPR (General Data Protection Regulation) in EU

GDPR (General Data Protection Regulation) came into effect in the EU in May 2018. GDPR is a law applicable to countries in the EU that sets out in detail the protection of personal data and its handling. The GDPR is characterized by the imposition of significant fines for non-compliance with the regulation. GDPR is not only for companies operating in the EU, but also applies for many Japanese companies,

regardless of size, when handling personal data of EU residents. The company provides cloud-based security (Menlo Security) and endpoint security (CrowdStrike) products and services as GDPR compliant security.

Positioning (Security)

Cyber Risk Response

The company's strength in the security market is detection and control of external threats (cyber attacks). The company is expanding its business domain from EDR (Endpoint Detection and Response) to UEBA (User and Entity Behavior Analytics) and CASB (Cloud Access Security Broker), which cover insider threats and governance. The company is expanding its business domain. The company is also focusing on SOAR (Security Orchestration, Automation and Response), which utilizes AI for management and automation.

Establish a dominant position in the security market

Security measures and protections against attackers are becoming more sophisticated, making all kinds of countermeasures essential for companies. The company aims to establish a dominant position in the security market by providing a full range of tools necessary to counter cyber attacks.

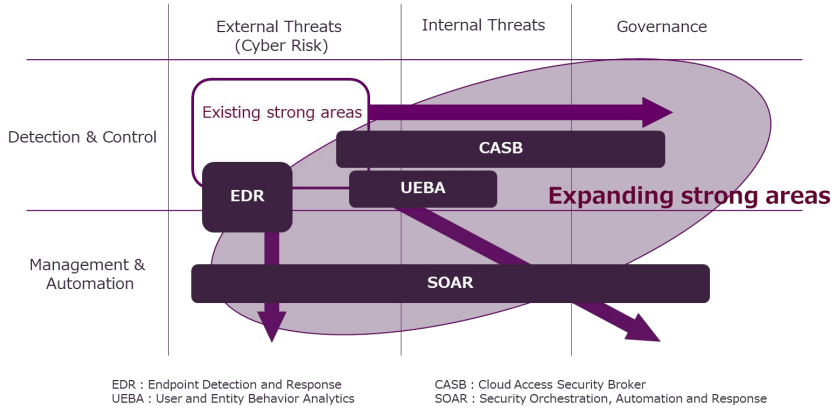
EDR: On-premise or cloud-based software that sits between cloud service users and cloud applications, monitoring all activity and enforcing security policies.

UEBA: A new field security solution that uses machine learning and deep learning to learn the normal behavior of users and other entities on an internal network, detect anomalous behavior, and estimate whether that behavior has security implications.

CASB: A security measure concept proposed by Gartner Inc. of the United States in 2012. By installing a CASB between a company and a cloud service, the use of cloud services can be visualized, and uploads can be monitored and controlled.

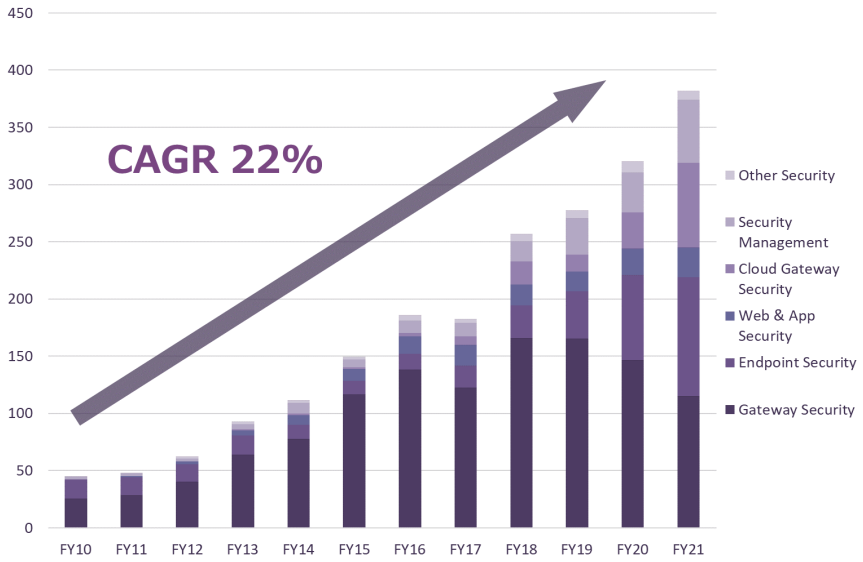
SOAR: Technologies and solutions for streamlining and automating security operations. Specific capabilities include the aggregation of information from various products, platforms, and external sources and its analysis, the streamlining and standardization of operations according to predefined processes, and the management of incidents as they occur and the notification of relevant personnel.

Figure 5. Security Market Positioning



Source: Prepared by Global IR, Inc. based on company data

Figure 6. Domestic Security-Related Sales by Category Unit: JPY 100 mn



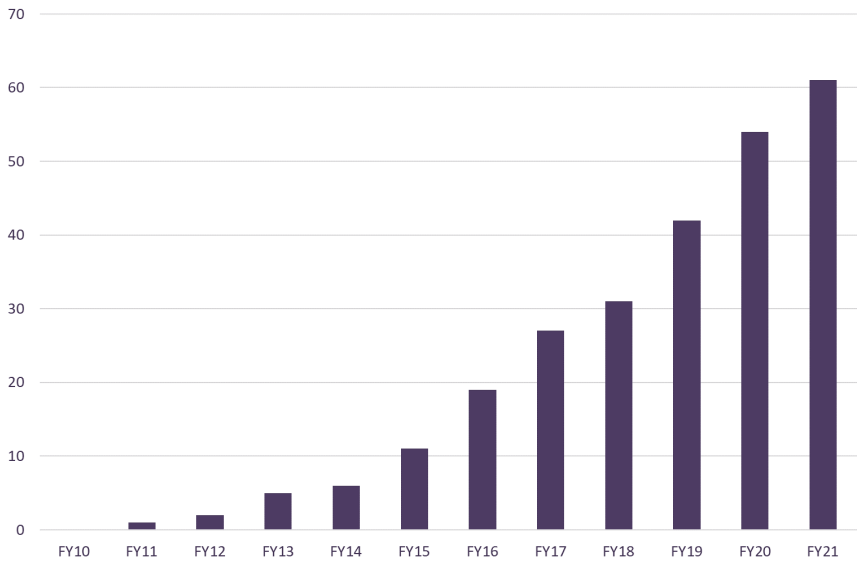
Source: Prepared by Global IR, Inc. based on company data

Digital Solutions

Splunk: Integrated log management platform

The company has launched a big data analysis platform and DX solutions including AI. For example, Splunk, which the company handles, provides an integrated log management platform that collects log data from various machines, including servers, network devices, business systems, and sensors, and enables real-time search, analysis, and visualization. The company has a Managed Service Provider agreement with Splunk and has a cooperative relationship with Splunk, enabling it to incorporate Splunk technology as the foundation of its digital solutions.

Figure 7. Digital Solution Sales in Japan Unit: JPY 100 mn



Source: Prepared by Global IR, Inc. based on company data

Global

M&A of Netpoleon

To strengthen its global business, on August 1, 2017, the company acquired a 56.5% stake in Netpoleon Solutions Pte Ltd, a Singapore-based VAD (Value Added Distributor), making it a consolidated subsidiary. Netpoleon is a leading provider of cyber security solutions, with several global system integrators as its distribution partners. It has built up a customer base in the financial, telecommunications, and government industries. Netpoleon's sales grew from 71.4 million USD in FY12/2016 to 170 million USD in FY12/2020. to USD 170 million. During the same period, the number of suppliers increased from 25 to 59, the number of countries of presence increased from 7 (ASEAN) to 11 (expanded to India and Australia), and the number of employees increased from 242 to 391.

Peer Comparison

Double-digit growth for the company and TechMatrix, operating margin close to SCSK

We compared the company's network business with that of major companies that handle network-related equipment. In terms of business scale, the company is more than twice the size of TechMatrix, and both companies are experiencing double-digit growth rates. SCSK, Itochu Techno-Solutions, Net One Systems, and Daiwabo Holdings have large sales due to their SI business, but their growth rates are in single-digit percentage or in negative (FY3/2022). The company and SCSK are close in terms of operating profit margin at around 11%, followed by TechMatrix.

Figure 8. Comparison of Major Network-Related Companies — Unit: JPY mn, %

Company Name	Net sales (mn)	YoY (%)	Operating profit (mn)	Operating profit margin (%)
Macnica Holdings (network business)	83,220	14.3%	9,082	10.9%
SCSK	414,150	4.4%	47,555	11.5%
TechMatrix	36,513	18.1%	3,734	10.2%
ITOCHU Techno-Solutions Corporation	522,356	8.9%	50,482	9.7%
Net One Systems	188,520	-6.7%	16,790	8.9%
Daiwabo Holdings Co.	763,838	-21.6%	24,059	3.1%

Source: Prepared by Global IR, Inc. based on company data

Service and solution model (new value-added business)

The company promoted new value-added businesses in its previous medium-term management plan. Although the initial plan was not achieved in terms of business performance, the new value-added business model provided the foundation for the high-value-added business in existing businesses (semiconductors and networks) and the service and solution model expected for the third pillar in the Vision 2030 plan.

A summary of the new value-added business is as follows

Summary of new value-added business

Value-added solutions applying semiconductors grew above target, but new value-added businesses fell short in terms of performance. The original four themes: (1) IoT solutions, (2) automated driving solutions, (3) service robots, and (4) macnica.ai, were repositioned as elements of business development. Six business themes were established based on the backcasting of social issues to be solved. The company

entered the market as a high value-added distributer. The company also shifted to a strategy of acquiring the necessary expertise and partners in each market to develop its own products and services. Although its track record is still small, it has acquired many partners and released more than 10 in-house services.

Evolution to a service and solution model

The service and solution model includes the following

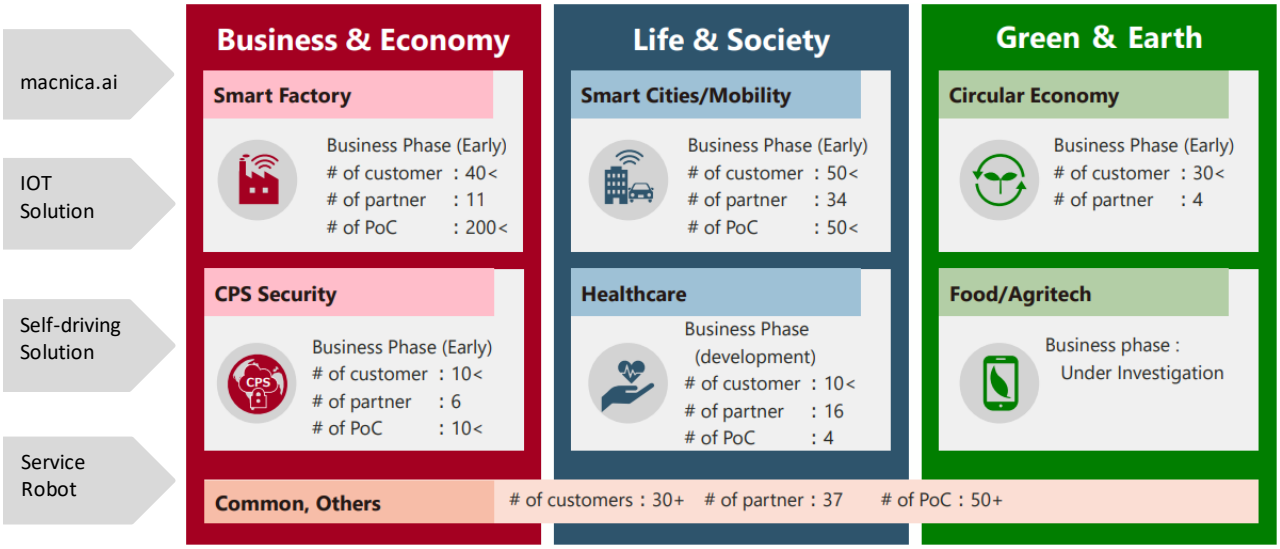
- Business development to solve social issues: Focusing on six business themes (Smart Factory, Cyber Physical System (CPS) Security, Smart City/Mobility, Healthcare, Circular Economy, and Food & Agri-Tech), we will develop businesses that address the materiality defined in the Basic Sustainability Policy. Promote business development in response to materiality.

CPS (Cyber-Physical System)

Physical System = Information collected by sensor systems in the real world is analyzed in cyberspace using computer technology. This is an effort to utilize quantitative analysis, rather than experience and intuition, for the benefit of all industries.

- Expansion of CPS platform: (1)Expand CPS platform to strengthen collaboration with in-house services and eco-partners, and (2) Strengthen in-house services and solutions that combine cyber and physical strengths.
- Strengthening Capabilities for Long-term Growth: Strengthen market expertise and capabilities needed to develop services and solutions.

Figure 9. Six Business Themes in the Long-Term Perspective



Source: Transcribed from company data

Figure 10. Details of Sales by Product Category and Application Unit: JPY mn, %

Details of % by Item (Millions of yen, %)	FY03/2016	FY03/2017	FY03/2018	FY03/2019 Consolidated	FY03/2020	FY03/2021	FY03/2022	CAGR 03/2016-03/2022
ICs	351,726	339,808	425,642	439,361	425,297	438,352	626,122	10.1%
PLD	59,796	53,337	56,892	51,196	52,195	53,107	72,521	3.3%
ASIC	5,888	7,088	6,858	14,405	11,712	13,614	15,614	17.6%
ASSP	76,555	67,791	75,444	81,785	74,076	71,177	89,075	2.6%
Analog	104,674	103,472	117,771	112,183	114,045	121,427	180,440	9.5%
Memory	56,962	44,642	92,117	84,025	86,418	85,226	117,206	12.8%
Other standard IC	47,850	63,475	76,557	95,767	86,849	93,799	151,265	21.1%
Electronic device	22,811	20,073	29,832	24,887	25,506	32,456	38,913	9.3%
Other	3,532	5,721	9,646	6,090	9,168	10,316	13,566	25.1%
Network Related Products	27,244	32,899	38,965	53,896	61,220	72,836	83,220	20.5%
Hardware	15,064	16,472	13,983	17,116	18,749	20,107	17,869	2.9%
Software	2,090	4,203	8,562	17,031	19,824	29,252	40,945	64.2%
Service	10,089	12,223	16,419	19,749	22,647	23,476	24,406	15.9%
Total amount	405,315	398,503	504,085	524,235	521,193	553,962	761,823	11.1%

Sales composition by product category (%)	FY03/2016	FY03/2017	FY03/2018	FY30/2019	FY03/2020	FY03/2021	FY03/2022
ICs	86.8%	85.3%	84.4%	83.8%	81.6%	79.1%	82.2%
PLD	14.8%	13.4%	11.3%	9.8%	10.0%	9.6%	9.5%
ASIC	1.5%	1.8%	1.4%	2.7%	2.2%	2.5%	2.0%
ASSP	18.9%	17.0%	15.0%	15.6%	14.2%	12.8%	11.7%
Analog	25.8%	26.0%	23.4%	21.4%	21.9%	21.9%	23.7%
Memory	14.1%	11.2%	18.3%	16.0%	16.6%	15.4%	15.4%
Other standard IC	11.8%	15.9%	15.2%	18.3%	16.7%	16.9%	19.9%
Electronic device	5.6%	5.0%	5.9%	4.7%	4.9%	5.9%	5.1%
Other	0.9%	1.4%	1.9%	1.2%	1.8%	1.9%	1.8%
Network Related Products	6.7%	8.3%	7.7%	10.3%	11.7%	13.1%	10.9%
Hardware	3.7%	4.1%	2.8%	3.3%	3.6%	3.6%	2.3%
Software	0.5%	1.1%	1.7%	3.2%	3.8%	5.3%	5.4%
Service	2.5%	3.1%	3.3%	3.8%	4.3%	4.2%	3.2%
Total amount	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sales by Application (JPY mn, %)	FY03/2016	FY03/2017	FY03/2018	FY03/2019 Consolidated	FY03/2020	FY03/2021	FY03/2022	CAGR 03/2016-03/2022
ICs, electronic devices, and others	378,070	365,600	465,130	470,340	459,970	481,120	678,600	10.2%
Communication	88,700	77,880	76,260	76,440	94,200	98,180	125,450	5.9%
Communication terminal	24,940	17,280	16,290	21,870	22,950	19,540	21,890	-2.2%
Communications infrastructure	63,760	60,600	59,970	54,570	71,250	78,640	103,560	8.4%
OA and peripheral equipment	24,780	24,470	27,970	25,970	23,000	22,530	30,790	3.7%
Computer	66,100	48,300	90,020	75,710	61,440	60,560	80,650	3.4%
Consumer Products	44,170	42,470	47,020	43,210	39,560	46,320	56,600	4.2%
In-vehicle	49,660	64,830	76,500	81,220	83,040	80,310	100,440	12.5%
Industrial Equipment	104,660	107,650	147,360	167,790	158,730	173,220	284,670	18.1%
Network Business	27,250	32,900	38,960	53,900	61,220	72,836	83,220	20.5%
Total amount	405,320	398,500	504,090	524,240	521,190	553,962	761,820	11.1%

Sales composition by application (%)	FY03/2016	FY03/2017	FY03/2018	FY03/2019	FY03/2020	FY03/2021	FY03/2022
ICs, electronic devices, and others	93.3%	91.7%	92.3%	89.7%	88.3%	86.9%	89.1%
Communication	21.9%	19.5%	15.1%	14.6%	18.1%	17.7%	16.5%
Communication terminal	6.2%	4.3%	3.2%	4.2%	4.4%	3.5%	2.9%
Communications infrastructure	15.7%	15.2%	11.9%	10.4%	13.7%	14.2%	13.6%
OA and peripheral equipment	6.1%	6.1%	5.5%	5.0%	4.4%	4.1%	4.0%
Computer	16.3%	12.1%	17.9%	14.4%	11.8%	10.9%	10.6%
Consumer Products	10.9%	10.7%	9.3%	8.2%	7.6%	8.4%	7.4%
In-vehicle	12.3%	16.3%	15.2%	15.5%	15.9%	14.5%	13.2%
Industrial Equipment	25.8%	27.0%	29.2%	32.0%	30.5%	31.3%	37.4%
Network Business	6.7%	8.3%	7.7%	10.3%	11.7%	13.1%	10.9%
Total amount	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Prepared by Global IR, Inc. based on company data
Note: Rounded under JPY mn. Rounded to one dicimal place.

Purchases, Orders, Backlog, and Sales

Growing orders and order backlogs

The company's sales volume has been around 10% point higher than its purchase volume. On the other hand, orders received were slightly higher than sales, but have diverged significantly from 1.26x in FY3/2021 and 1.72x in FY3/2022. As a result, the backlog of orders has grown to 1.12x sales (as of FY3/2022). The company used to place anticipated orders in advance based on customer demand forecasts, but since FY3/2021, suppliers no longer accept anticipated orders without formal purchase orders due to longer lead times (about 1 year as of August 2022) on a zero basis. For this reason, customers issue formal purchase orders with lead times that match or exceed the zero-based lead time, and place long-term orders with suppliers. This is a direct cause of the apparent increase in order backlogs.

While a transition from easing supply-demand to oversupply is already expected for digital ICs such as memory and general-purpose logic, tight supply-demand is expected to continue for analog ICs for industrial equipment and automotive applications for the foreseeable future. (See FAQ)

Figure 11. Purchases, Orders, Backlog, and Sales — Unit: JPY mn, %

Consolidated	FY03/2016	FY03/2017	FY03/2018	FY03/2019	FY03/2020	FY03/2021	FY03/2022	CAGR FY3/16-FY3/22
Purchases	367,156	363,204	469,755	477,875	432,070	480,941	719,407	11.9%
ICs, electronic devices, and others	345,869	339,856	437,627	431,120	379,123	418,094	646,459	11.0%
Network Business	21,287	23,348	32,128	46,755	52,947	62,847	72,948	22.8%
Orders received	422,474	432,631	552,002	498,422	545,364	699,921	1,312,606	20.8%
ICs, electronic devices, and others	392,185	396,931	512,224	438,717	481,227	624,205	1,223,315	20.9%
Network Business	30,289	35,700	39,778	59,705	64,137	75,716	89,291	19.7%
Order backlog	73,749	107,877	155,794	129,981	154,152	300,111	850,894	50.3%
ICs, electronic devices, and others	60,924	92,251	139,355	107,733	128,987	272,067	816,780	54.1%
Network Business	12,825	15,626	16,439	22,248	25,164	28,044	34,114	17.7%
Sales	405,315	398,503	504,085	524,235	521,193	553,962	761,823	11.1%
ICs, electronic devices, and others	378,069	365,602	465,120	470,338	459,971	481,125	678,601	10.2%
Network Business	27,246	32,901	38,965	53,897	61,222	72,837	83,222	20.5%
Sales / Purchases	1.10	1.10	1.07	1.10	1.21	1.15	1.06	
Orders received / Sales	1.04	1.09	1.10	0.95	1.05	1.26	1.72	
Order backlog / Sales	0.18	0.27	0.31	0.25	0.30	0.54	1.12	

Source: Prepared by Global IR, Inc. based on company data
Note: Rounded under JPY mn. Rounded to one dicimal place.

Sales by Region

Overseas sales exceed domestic sales

The company has built up overseas bases, mainly in China and Hong Kong, and developed overseas markets. Since FY3/2021, overseas sales have exceeded domestic sales, and the ratio of overseas sales has increased (42.8% in FY3/2016 to 52.6% in FY3/2022). The sales CAGR for the last 6 years (~FY3/2022) is 14.9% overseas, compared to 7.7% in Japan. Sales breakdown by region, mainland China accounts for 25%, Taiwan and Hong Kong for 15%, and ASEAN and others for 12.6% (of which Europe, the US, and others account for 2-3%) (52.6% breakdown for FY3/2022). Overseas sales by segment are 56% for the semiconductor business and 26% for the network business (FY3/2022, GIR estimate based on company disclosed data).

Sales to overseas local companies increased due to M&A of overseas companies

The company's overseas business began by supporting the overseas expansion of Japanese-affiliated companies, but sales to local overseas companies increased as a result of M&A of overseas companies. Compared to FY3/2009, when most of the company's overseas sales were to Japanese companies, sales to local companies overseas accounted for over 50% in FY3/2016 and are still increasing (67.4%, FY3/2022). We estimate that overseas sales in the network business are almost exclusively aimed at local companies.

Figure 12. Sales by Region — Unit: JPY mn, %

Sales by Region	FY3/2016	FY3/2017	FY3/2018	FY3/2019 Consolidated	FY3/2020	FY3/2021	FY3/2022
Japan	231,740	222,322	270,448	267,380	263,401	267,114	361,450
Overseas	173,575	176,181	233,637	256,855	257,792	286,848	400,373
China	85,576	81,454	97,194	111,513	108,916	131,535	165,326
Hong Kong		30,275	55,488				
Others (Hong Kong, etc.)	87,999	64,452	80,955	145,342	148,876	155,313	235,047
Total amount	405,315	398,503	504,085	524,235	521,193	553,962	761,823
Overseas Local				167,000			269,800
Semiconductor Business				155,000			248,000
Network Business				12,000			21,800
Sales composition by region (%)	**FY3/2016**	**FY3/2017**	**FY3/2018**	**FY3/2019**	**FY3/2020**	**FY3/2021**	**FY3/2022**
Japan	57.2%	55.8%	53.7%	51.0%	50.5%	48.2%	47.4%
Overseas	42.8%	44.2%	46.3%	49.0%	49.5%	51.8%	52.6%
China	21.1%	20.4%	19.3%	21.3%	20.9%	23.7%	21.7%
Hong Kong	-	7.6%	11.0%	-	-	-	-
Others (Hong Kong, etc.)	21.7%	16.2%	16.1%	27.7%	28.6%	28.0%	30.9%
Total amount	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Local ratio to overseas sales	Over 50%			65.0%			67.4%

Source: Prepared by Global IR, Inc. based on company data
Note: Rounded under JPY mn. Rounded to one dicimal place.
Hong Kong is included in "Others" from FY3/2019.

R&D, capital expenditures, depreciation and amortization

Developing its own products and services

The company's strategy is to develop its own products and services in new value-added businesses, and R&D and capital expenditures are on the rise.

Figure 13. R&D Expenses, Capital Expenditures, Depreciation and Amortization Unit: JPY mn, %

	FY3/2016	FY3/2017	FY3/2018	FY3/2019	FY3/2020	FY3/2021	FY3/2022	CAGR
	Consolidated							FY3/16 – FY3/22
R&D expenses	34	157	279	407	403	281	333	46.3%
R&D expenses ratio to sales	0.01%	0.04%	0.06%	0.08%	0.08%	0.05%	0.04%	
Capital expenditures	1,093	1,436	1,536	2,380	1,734	3,106	3,757	22.8%
Depreciation and amortization	1,143	1,274	1,500	1,660	1,976	1,986	2,804	16.1%

Source: Prepared by Global IR, Inc. based on company data
Note: Rounded under JPY mn. Rounded to two dicimal place.

Growth Strategy

Mid-term Management Plan

Long-term management goal (Vision 2030) and mid-term management plan

The company is in the process of formulating its third medium-term management plan to achieve its long-term management goal (Vision 2030). The numerical targets of the current medium-term management plan (FY3/2023-FY3/2025) are net sales of 970 billion yen or more, operating profit of 48 billion yen or more, operating margin of 5.0% or more, net profit of 30 billion yen or more, ROE of 15.0% or more, and working capital turnover (= annual sales / working capital (trade receivables + inventories - accounts payable)) of 3.8 or more. In addition, the company's total return ratio (dividends, share buybacks, etc.) is set at 30-50% as a measure to return profits to investors.

Semiconductor Business

In the semiconductor business, the company will expand its share in growth markets, particularly in industrial equipment and in-vehicle equipment. In addition, the company will further strengthen value-added solutions that apply semiconductors and enhance the development of advanced commercial products, particularly in environment-related, IoT-related, telecommunications, and mobility-related fields. In addition, the company will further strengthen its global franchise, consider overseas M&A, and respond to the Chinese semiconductor market. For FY3/2025, the company targets sales of 835,000 million yen and operating profit of 33,000 million yen (operating profit margin of 4.0%) at semiconductor business segment.

Network Business

In the network business, the company will expand its market share in existing areas (cyber security), expand into new areas, and strengthen its own services. In addition, the company will expand its big data business and application business. In its global strategy, the company will strengthen synergies with its domestic network division and aggressively invest in developing countries. For FY3/2025, the company targets sales of 119,000 million yen and operating profit of 14,000 million yen (operating profit margin of 11.8%) at network business segment.

Service and Solution Model

In the services and solutions model, business objectives are to develop businesses that solve social issues, expand the CPS platform, and strengthen capabilities for

long-term growth. While upfront investments will continue for a while, the company aims to achieve sales of 16,000 million yen and operating income in the black (1,000 million yen) in FY3/2025 at services and solutions segment.

Long-term Management Plan

Transformation into a Service and Solution Company

The company aims to achieve sales of over 1.3 trillion yen, operating profit of over 100 billion yen, operating margin of over 7.5%, and ROE of over 15% by FY3/2031, the final year of its long-term management goal (Vision 2030). The company will formulate a medium-term management plan that divides the three steps of the transformation into (1) a management resource integration phase (FY3/2023-25), (2) a specialization enhancement phase (FY3/2026-28), and (3) a management resource integration phase (FY3/2029-31). The company's earnings base is based on its semiconductor and network businesses, but it intends to transform itself into a services and solutions company through its services and solutions model.

Figure14. Medium-Term Management Plan and Long-Term Targets Unit: JPY mn, %

	FY3/2021 Actual	FY3/2022 Actual	FY3/2023 CE	FY3/2023 Mid-term target	Changes FY3/2022~FY3/2025	CAGR	FY3/2031 Long-term goal
Sales	553,962	761,823	930,000	970,000	208,177	8.4%	1,300,000
Semiconductor Business	481,125	678,601	836,413	835,000	156,399	7.2%	910,000
Sales composition	86.9%	89.1%	89.9%	86.1%			70.0%
Network Business	72,836	83,220	93,587	119,000	35,780	12.7%	260,000
Sales composition	13.1%	10.9%	10.1%	12.3%			20.0%
(Services and Solutions Business)	1,000	4,000		16,000	12,000	58.7%	130,000
Sales composition	0.2%	0.5%		1.6%			10.0%
Domestic sales	267,114	361,450		436,500			
Domestic sales ratio	48.2%	47.4%		45.0%			
Overseas sales	286,848	400,373		533,500			
Overseas sales ratio	51.8%	52.6%		55.0%			
Operating profit	18,769	36,707	44,000	48,000	11,293	9.4%	100,000
Operating profit margin	3.4%	4.8%	4.7%	4.9%			7.7%
Semiconductor Business	9,658	27,499		33,000	5,501	6.3%	39,000
Operating profit margin	2.0%	4.1%		4.0%			4.3%
Network Business	8,879	9,082		14,000	4,918	15.5%	31,000
Operating profit margin	12.2%	10.9%		11.8%			11.9%
(Services and Solutions Business)	-1,100	-2,000		1,000	3,000	-	30,000
Operating profit margin	-	-		6.3%			23.1%
Corporate and elimination	232	126		0			0
Net profit attributable to owners of the parent	10,875	25,798	28,000	30,000	4,202	5.2%	
Net profit margin	2.0%	3.4%	3.0%	3.1%			
ROE	7.9%	15.2%		15.0%			15.0%
Working capital turnover	3.4	3.2		3.8			
DOE	2.3%	4.0%		4.0%			
(actual is dividend payout ratio)	28.5%	24.1%		30 - 50%			

Source: Prepared by Global IR, Inc. based on company data

Note: Note: CE=Company Estimate. Rounded under JPY mn. Rounded to one dicimal place. Caluculated by Global IR, Inc.
Actual results and FY03/2023 forecast for the Services and Solutions segment are included in the semiconductor and network businesses, but the target figures are separate. Figures in light font (FY03/2025 domestic and overseas sales forecast and long-term target breakdown) are GIR estimates based on interviews with the company.

Financial Strategy and Dividend Policy

Working capital turnover, interest-bearing debt

The company's policy is to continuously return profits to shareholders while prioritizing investments for growth in order to sustainably increase corporate value. While generating profit from its business activities, the company aims to generate cash by improving its working capital (accounts receivable + inventory - accounts payable) turnover ratio (from 3.2 to 3.8). The company will simultaneously secure cash and deposits and raise funds through interest-bearing debt to invest in M&A, intangible assets, and other growth investments. However, due to the recent rise in overseas interest rates, the company intends to use excess cash and cash equivalents to repay interest-bearing debt. The company's dividend policy is to pay a stable and sustainable dividend with a target dividend on equity ratio (DOE) of 4%.

Cost of Capital Awareness: ROWC Management

Since the previous mid-term management plan, the company has introduced management with an awareness of the cost of capital. The management control indicators include ROIC (numerator: operating income after tax, denominator: interest-bearing debt + shareholders' equity) as a financial approach and ROWC (numerator: operating income after tax, denominator: working capital (accounts receivable + inventories - accounts payable)) as a business approach. Hurdle rates for ROWC are set for each major line of semiconductor business and monitored in each month. In order to reduce working capital, the company has strengthened its control of inventory and trade receivables. (See FAQ)

Cash Cycle, Measures to Improve Cash Flow Deterioration in China and Taiwan

The company's cash cycle (accounts receivable turnover + inventory turnover - accounts payable turnover) has been 100-130 days (99.9 days in FY3/2022). The company's accounts receivable turnover is 60-70 days (65.4 days in FY3/2022), inventory turnover is 60-90 days (60.8 days in FY3/2022), and accounts payable turnover is 20-30 days (26.4 days in FY3/2022). The company liquidates its accounts receivable and accounts payable in financial instruments. The company believes that this approach (using financial instruments to liquidate accounts receivable and accounts payable) will reduce interest-bearing debt. Note that accounts payable excludes cash back from ship-and-build transactions. In some cases, delays in the collection of accounts receivable in transactions in China and Taiwan have become the norm, and this is a factor in deteriorating operating cash flow, so the company intends to take drastic measures to improve this situation.

Figure 15. Profitability Analysis — Unit: JPY mn, %, days, x

Profitability (Millions of yen, %)	FY2/2014 Fuji Elec	FY2/2015 Fuji Elec	FY3/2014 Macnica	FY3/2015 Macnica	FY3/2016 Consolidated	FY3/2017 Consolidated	FY3/2018 Consolidated	FY3/2019 Consolidated	FY3/2020 Consolidated	FY3/2021 Consolidated	FY3/2022 Consolidated
Gross profit	6,617	7,382	33,744	36,182	44,287	46,269	56,094	61,061	59,891	64,835	90,718
Gross profit margin	14.0%	12.9%	13.2%	12.7%	10.9%	11.6%	11.1%	11.6%	11.5%	11.7%	11.9%
Operating profit	1,148	1,820	8,456	9,195	9,729	10,473	15,163	15,324	14,447	18,769	36,707
Operating profit margin	2.4%	3.2%	3.3%	3.2%	2.4%	2.6%	3.0%	2.9%	2.8%	3.4%	4.8%
EBITDA	1,249	1,863	9,575	10,324	10,872	11,747	16,663	16,984	16,423	20,755	39,511
EBITDA margin	2.6%	3.2%	3.7%	3.6%	2.7%	2.9%	3.3%	3.2%	3.2%	3.7%	5.2%
Net profit margin	3.1%	2.8%	2.5%	1.4%	1.8%	1.6%	2.3%	1.7%	1.1%	2.0%	3.4%
Financial index											
Return on Assets (ROA)	5.6%	6.7%	11.9%	4.9%	5.7%	4.6%	6.2%	4.6%	3.9%	6.2%	11.2%
Return on Equity (ROE)	6.3%	6.8%	13.4%	5.6%	8.3%	6.5%	10.3%	7.1%	4.4%	8.2%	17.5%
Total assets turnover	2.60	1.52	2.87	1.93	2.27	1.91	2.09	1.85	1.85	2.08	2.41
Working capital	16,999	20,577	65,020	83,834	114,873	130,097	170,023	193,213	174,994	163,224	236,487
Working capital turnover	2.8	2.8	3.9	3.4	3.5	3.1	3.0	2.7	3.0	3.4	3.2
Current ratio	354.6%	357.6%	209.6%	223.8%	235.3%	201.5%	200.8%	185.2%	202.1%	224.6%	207.8%
Quick ratio	259.6%	249.7%	112.6%	111.9%	126.6%	101.1%	104.1%	77.8%	103.4%	131.7%	111.7%
CF from operating activities/Current liabilities	-0.27	-0.21	0.11	-0.13	-0.02	0.04	-0.25	-0.22	0.34	0.34	-0.12
CF from operating activities/Total liabilities	-0.20	-0.15	0.06	-0.11	-0.01	0.03	-0.21	-0.18	0.36	0.31	-0.08
Cash Cycle(days)	106.4	122.3	63.3	99.6	93.0	117.1	113.9	133.9	136.2	116.4	99.9
Increase/decrease in working capital	16,999	3,578	44,443	18,814	31,039	15,224	39,926	23,190	-18,219	-11,770	73,263
(x, days)	**FY2/2014**	**FY2/2015**	**FY3/2014**	**FY3/2015**	**FY3/2016**	**FY3/2017**	**FY3/2018**	**FY3/2019**	**FY3/2020**	**FY3/2021**	**FY3/2022**
Accounts receivable turnover	3.2	3.6	7.9	5.5	6.0	4.9	5.5	5.2	5.0	4.9	5.6
Accounts receivable turnover days	114.6	101.1	46.1	66.9	61.0	74.5	66.4	70.3	73.2	73.9	65.4
(x, days)	**FY2/2014**	**FY2/2015**	**FY3/2014**	**FY3/2015**	**FY3/2016**	**FY3/2017**	**FY3/2018**	**FY3/2019**	**FY3/2020**	**FY3/2021**	**FY3/2022**
Inventory turnover	13.4	6.8	7.8	4.6	5.4	4.4	4.6	4.0	4.3	5.5	6.0
Inventory turnover days	27.2	53.7	47.0	80.0	67.7	82.6	78.8	90.7	85.5	66.5	60.8
(x, days)	**FY2/2014**	**FY2/2015**	**FY3/2014**	**FY3/2015**	**FY3/2016**	**FY3/2017**	**FY3/2018**	**FY3/2019**	**FY3/2020**	**FY3/2021**	**FY3/2022**
Accounts payable turnover	10.3	11.3	12.3	7.7	10.2	9.1	11.7	13.4	16.2	15.2	13.8
Accounts payable turnover days	35.5	32.4	29.7	47.3	35.7	39.9	31.2	27.2	22.5	24.0	26.4
(x, days)	**FY2/2014**	**FY2/2015**	**FY3/2014**	**FY3/2015**	**FY3/2016**	**FY3/2017**	**FY3/2018**	**FY3/2019**	**FY3/2020**	**FY3/2021**	**FY3/2022**
Tangible fixed assets turnover	693.7	869.7	67.2	40.5	62.2	60.6	75.1	73.1	69.3	74.1	98.9
Tangible fixed assets turnover days	0.5	0.4	5.4	9.0	5.9	6.0	4.9	5.0	5.3	4.9	3.7

Source: Prepared by Global IR, Inc. based on company data

Note: Rounded under JPY mn. Rounded to one dicimal place. Caluculated by Global IR, Inc.

Market and Competitive Landscape

Semiconductor trading company

Market share

The company's domestic market share is 12.8%, ranking in the top 2 along with Toyota Tsusho

Among Japan's major semiconductor trading companies, the company has a market share of 12.8%, ranking in the top two along with Toyota Tsusho (which owns three companies including NEXTY Electronics). Globally, the company ranks 7th with a 2.6% market share, following Toyota Tsusho with a 2.7% market share (source: Gartner, based on 2021 sales). The company's operating profit margin of 4.8% (segment profit margin (before deducting corporate wide and unallocated expenses): 4.1% for semiconductors and 10.9% for the network business) is higher than Toyota Tsusho's 3.7% (in the most recent fiscal year).

Compared to Ryosan (established in 1957) and Ryoyo Electro (established in 1961), both long-established semiconductor trading companies, the company established in 1972 (formerly Macnica) has focused on overseas markets from the beginning, "providing the latest technologies from around the world." While Ryosan and Ryoyo Electro earnings have been stagnant due to the rise and fall of the Japanese semiconductor industry, the company has been able to ride the growth wave of the overseas semiconductor industry and focus on industrial equipment and automotive applications, resulting in rapid growth (11.1% six-year sales CAGR up until FY3/2022) even as overseas semiconductor manufacturers have shifted to direct sales and have done mergers and acquisitions.

Formation of alliances

Reorganization of independent semiconductor trading companies

As the semiconductor industry consolidation has proceeded, semiconductor trading companies, mainly independent companies, also have started reorganization. In October 2009, USC and Kyoshin Techno Sonic established a joint holding company, UKC Holdings. Also in October of the same year, Takachiho Electric and Onishi Electric merged and changed their names to Elematic, and in August 2011, Elematic signed a capital and business alliance agreement with Toyota Tsusho. In April 2015, Macnica and Fuji Electronics merged and established a joint holding company (now the company). In April 2019, UKC Holdings and Vitec Holdings merged and established a joint holding company, Restar Holdings, and in June 2021, Restar Holdings made PALTEK a wholly owned subsidiary.

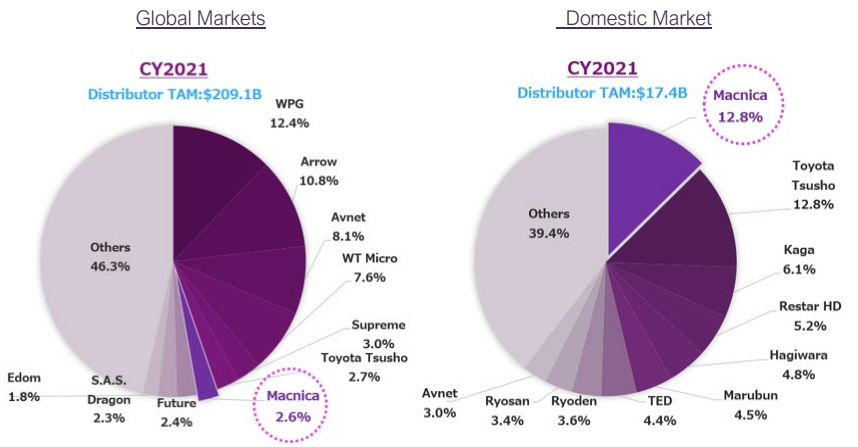
ICAC5 (IoT, Cloud, AI, Car, 5G)

Diverse growth drivers and demand creation

The key for semiconductor trading companies will be how they respond to issues such as business integration, globalization of business, expansion of EMS business, and enhancement of technological capabilities based on IoT and AI. In the semiconductor market, it is said that ICAC5 (IoT, Cloud, AI, Car, 5G) will create demand in addition to the existing cell phone and PC markets. How the company incorporates these diverse growth drivers into its business strategy will determine the growth of semiconductor trading companies. The company is strengthening its support system by expanding its domestic and overseas bases and the products it

handles. In addition, the company is focusing on "Demand Creation," and as a service and solution company, it aims to develop business areas beyond the conventional boundaries of a semiconductor trading company.

Figure 16. Market Share of Major Semiconductor Trading Companies
Units: USD bn, %



Source: Transcribed from company data (based on Gartner data, prepared by the company)

Competition

Taiwanese

WPG Holdings (Dalian Grand Investment Holding Company (TPE, 3702)) is a Taiwanese company mainly engaged in the sale of semiconductor components; established on November 9, 2005; in 2014, it became the world leader in electronic component sales, especially semiconductors, but has been reluctant to explore the low-growth Japanese market.

WT-Microelectronics (Wenye Technology CO., LTD (TPE, 3036)) is a Taiwanese company that mainly sells semiconductor components.

American descent

Arrow Electronics, Inc. (NYSE, ARW) is an electronic components distributor headquartered in Centennial, Colorado, USA, founded in 1935. Through its global network of more than 345 locations in 80 countries, the company serves more than 120,000 OEM and EMS businesses. In Japan, the company is small in size with few distributorships.

Avnet, Inc. (NYSE, AVT) is an electronic components distributor headquartered in Phoenix, Arizona, USA, and was founded in 1921. The Japanese subsidiary, formerly Okura Corporation, has fewer distributorships in Japan.

Trading company handling foreign semiconductors

Tokyo Electron Device (TED): TED has a long history of business with overseas manufacturers as an affiliate of Tokyo Electron, but currently focuses mainly on TI; has high technological capabilities as it used to deal with FPGAs. Focusing on computer network system-related business.

Marubun: Because it was oriented toward major customers, the company's technological capabilities declined along the way; TI's agency was dissolved and human resources were lost, and the company has become a logistics trading company.

	Hakuto: Strong in the consumer market, but recently focusing on automotive as well. Lacks comprehensive strength.
Semiconductor trading company + EMS	Rester Holdings: The former companies (USC and Kyoshin Techno Sonic) were originally mainly Sony's distributors and did well during the digital camera heyday. As the AV and digital camera boom faded and Sony's performance became more difficult, USC and Kyoshin Techno Sonic merged in 2009 to form UKC. In 2019, Vitec Holdings, which mainly dealt with NXP and ST Micro, joined to form Rester Holdings. In 2021, it acquired PALTEK to gain FPGA engineers. PALTEK was in a difficult business environment as Xilinx's main customers were converted to direct sales. Rester Holdings' segments are divided into semiconductor and electronic components (devices, EMS), procurement, electronics, and environmental energy businesses.
	Kaga Electronics: Segments are divided into electronic components (semiconductors, general electronic components, and EMS), information equipment, software, and other businesses.
Domestic semiconductor manufacturer affiliate	Ryosan (Mitsubishi, Hitachi, Toshiba, etc.), Ryoden, Ryoyo Electro, Glosel
	Because the company is affiliated with a domestic semiconductor manufacturer, it cannot handle many semiconductor manufacturers. They are only in charge of logistics because the domestic manufacturers do the technical PR. They are an industrial equipment trading company that sells not only semiconductors but also factory automation equipment from domestic manufacturers. Therefore, when dealing with foreign semiconductors, it is difficult to meet the demands of the manufacturers.
Affiliates of Toyota Tsusho (aimed for Toyota)	NEXTY Electronics (wholly owned subsidiary): Trading company specializing in cars and Toyota
	Tomen Devices (58.6% subsidiary), Elematic (50.1% subsidiary)

Figure 17. Comparison of Sales, Operating Profit, and Operating Profit Margin of Major Semiconductor Trading Companies
Unit: JPY mn, %

Ranking	Company Name	Net sales (JPY mn)	Share (%)	Operating income (JPY mn)	Operating profit ratio (%)
1	Macnica Holdings, Inc.	761,823	14.9%	36,707	4.8%
	Macnica Holdings, Inc. (Semiconductor Business)	678,601	13.4%	27,499	4.1%
2	Toyota Tsusho Corporation (NEXTY + Tomen + Elematec)	707,200	13.8%	21,345	3.0%
3	Kaga Electronics Co.	495,827	9.7%	20,915	4.2%
4	Tomen Devices (50.1% subsidiary)	462,822	9.0%	10,629	2.3%
5	Rester Holdings, Inc.	399,590	7.8%	7,485	1.9%
6	NEXTY Electronics Corporation (Wholly owned subsidiary)	357,748	7.0%	11,129	3.1%
7	Ryosan	272,647	5.3%	8,085	3.0%
8	Ryoden	229,126	4.5%	7,062	3.1%
9	Elematec (58.6% subsidiary)	200,646	3.9%	8,346	4.2%
10	Hakuto	191,495	3.7%	7,304	3.8%
11	Tachibana Eletech	193,431	3.8%	6,710	3.5%
12	Tokyo Electron Device	179,907	3.5%	8,131	4.5%
13	Marubun	167,794	3.3%	5,994	3.6%
14	Hagiwara Electric Holdings	158,427	3.1%	4,356	2.7%
15	SAN-WA TECHNOS	154,414	3.0%	4,804	3.1%
16	Shinko Shoji	135,205	2.6%	4,163	3.1%
17	Satori Electric	125,850	2.5%	2,602	2.1%
18	Sanshin Electric	123,583	2.4%	4,209	3.4%
19	Ryoyo Electro	112,099	2.2%	2,258	2.0%
20	Kanaden	100,834	2.0%	2,846	2.8%
21	Takebishi	81,603	1.6%	3,020	3.7%
22	Glosel	67,259	1.3%	953	1.4%
23	Kyoei Sangyo	56,978	1.1%	1,386	2.4%
24	Mitachi	42,519	0.8%	2,018	4.7%
25	Innotech	37,238	0.7%	2,585	6.9%
26	Takachiho Koheki	20,784	0.4%	1,024	4.9%
	Total amount	5,129,649	100.0%	196,066	3.8%

Source: Prepared by Global IR, Inc. based on company data

Note: Rounded under JPY mn. Rounded to one dicimal place.

Net sales and operating income are the latest results (FY03/2022). Including sales and operating profit other than semiconductors. Toyota Tsusho's sales and operating income are calculated by multiplying the sales and operating income of the three subsidiaries by their respective shareholding ratios (GIR's calculations).

Global Semiconductor Market

WSTS (World Semiconductor Trade Statistics) Forecast

Record high for two consecutive years in 2022, growth slows in 2023

The global semiconductor market is expected to reach $646.4 billion in 2022 (16.3%YoY), a record high for the second consecutive year (WSTS 2022 Spring Forecast). By region, the U.S., Europe, Asia Pacific, and Japan are expected to grow 22.6%, 20.8%, 13.9%, and 12.76% YoY, respectively. 2023 growth is projected to

slow to 5.1% YoY. The company expects the Japanese market to grow at a slower rate than the U.S. market (WSTS 2022 Spring Forecast). The company's growth rate will remain above the Japanese market.

Figure 18. WSTS Forecast Unit: M$, JPY bn, %

Calendar year, WSTS member companies: 40	Actual						Forecast		CAGR
Semiconductor Market by Region	2016	2017	2018	2019	2020	2021	2022E	2023E	16~22E
World (M$)	338,931	412,221	468,778	412,307	440,389	555,893	633,238	662,360	11.0%
USA	65,537	88,494	102,997	78,619	95,366	121,481	150,064	157,302	14.8%
Europe	32,707	38,311	42,957	39,816	37,520	47,757	54,451	56,203	8.9%
Japan	32,292	36,595	39,961	35,993	36,471	43,687	49,880	52,374	7.5%
Asia-Pacific	208,395	248,821	282,863	257,879	271,032	342,967	378,843	396,481	10.5%
Japan, in billions of yen	3,506.8	4,104.1	4,412.6	3,918.7	3,893.4	4,803.8	5,720.6	5,994.2	8.5%
YoY	-6.9%	17.0%	7.5%	-11.2%	-0.6%	23.4%	19.1%	4.8%	
Macnica Holdings, Inc.	365.6	465.1	470.3	460.0	481.1	678.6	836.4		14.8%
YoY	-3.3%	27.2%	1.1%	-2.2%	4.6%	41.0%	23.3%		
Share	10.4%	11.3%	10.7%	11.7%	12.4%	14.1%	14.6%		
Yen Dollar Rate	108.6	112.1	110.4	108.9	106.8	110.0	116.3	116.3	
YoY									
World (M$)	1.1%	21.6%	13.7%	-12.0%	6.8%	26.2%	13.9%	4.6%	
USA	-4.7%	35.0%	16.4%	-23.7%	21.3%	27.4%	23.5%	4.8%	
Europe	-4.5%	17.1%	12.1%	-7.3%	-5.8%	27.3%	14.0%	3.2%	
Japan	3.8%	13.3%	9.2%	-9.9%	1.3%	19.8%	14.2%	5.0%	
Asia-Pacific	3.6%	19.4%	13.7%	-8.8%	5.1%	26.5%	10.5%	4.7%	
Semiconductor Market (by product)	2016	2017	2018	2019	2020	2021	2022E	2023E	CAGR
Total Semiconductors (M$)	338,931	412,221	468,778	412,307	440,389	555,893	633,238	662,360	11.0%
Discrete element	19,418	21,651	24,102	23,881	23,804	30,337	33,408	34,662	9.5%
Optical Devices	31,994	34,813	38,032	41,561	40,397	43,404	43,500	45,120	5.3%
Sensor	10,821	12,571	13,356	13,511	14,962	19,149	22,319	23,184	12.8%
Total IC	276,698	343,186	393,288	333,354	361,226	463,002	534,010	559,393	11.6%
YoY									
Semiconductor Total	1.1%	21.6%	13.7%	-12.0%	6.8%	26.2%	13.9%	4.6%	
Discrete element	4.3%	11.5%	11.3%	-0.9%	-0.3%	27.4%	10.1%	3.8%	
Optical Devices	-3.8%	8.8%	9.2%	9.3%	-2.8%	7.4%	0.2%	3.7%	
Sensor	22.7%	16.2%	6.2%	1.2%	10.7%	28.0%	16.6%	3.9%	
Total IC	0.8%	24.0%	14.6%	-15.2%	8.4%	28.2%	15.3%	4.8%	
IC Market (by product)	2016	2017	2018	2019	2020	2021	2022E	2023E	CAGR
Total IC (M$)	276,698	343,186	393,288	333,354	361,226	463,002	534,010	559,393	11.6%
analog	47,848	53,070	58,785	53,939	55,658	74,105	90,338	96,116	11.2%
micro	60,585	63,934	67,233	66,440	69,678	80,221	84,974	87,993	5.8%
logic	91,498	102,209	109,303	106,535	118,408	154,837	192,182	207,791	13.2%
memory	76,767	123,974	157,967	106,440	117,482	153,838	166,517	167,494	13.8%
YoY									
Total IC	0.8%	24.0%	14.6%	-15.2%	8.4%	28.2%	15.3%	4.8%	
analog	5.8%	10.9%	10.8%	-8.2%	3.2%	33.1%	21.9%	6.4%	
micro	-1.2%	5.5%	5.2%	-1.2%	4.9%	15.1%	5.9%	3.6%	
logic	0.8%	11.7%	6.9%	-2.5%	11.1%	30.8%	24.1%	8.1%	
memory	-0.6%	61.5%	27.4%	-32.6	10.4%	30.9%	8.2%	0.6%	

Source: Prepared by Global IR, Inc. based on WSTS data (published August 22, 2022)

Note: Rounded under JPY mn. Rounded to one dicimal place. Caluculated by Global IR, Inc. Figures for Macnica Holdings semiconductor sales are for the fiscal year ended March 31.Macnica Holdings' market share is calculated by dividingFigures including overseas sales by the Japanese market (GIR calculations).

Security Market

Domestic Information Security Market

The information security market consists of security software, security appliances, and security services. IDC Japan estimates and forecasts the domestic market size for each market as follows.

Figure 19. Domestic Information Security Market Unit: JPY bn, %

By Market, Calendar Year	2021	YoY	2026	CAGR
Security Software Market	370	17.2%	464	4.6%
Security Appliance Market	66	9.5%	68	0.7%
Security Services Market	296	6.9%	345	3.1%
Total amount	732		876	3.7%

Source: Prepared by Global IR, Inc. based on IDC Japan press release (May 26, 2022)

Background of changes in the domestic security market in 2021

As background to the above changes, IDC Japan points out the following three points.

1. That the acceleration of hybridization of commerce and communication (real and digital space) due to changes in the way people work has resulted in numerous reports of phishing and malware infection of endpoint devices, security breaches to corporate systems, and identity fraud in 2021.

2. Increased security vigilance on the part of both businesses and consumers due to the darkening of hackers and cybercrime groups in the wake of large-scale domestic and international events such as the Olympics and the war in Russia and Ukraine.

3. The government's promotion of digitization and privacy protection regulations for digital information, such as the revised Personal Information Protection Law, Europe's GDPR, and China's Personal Information Protection Law, have increased momentum for information governance and compliance.

Information Security and Risk Management Market Forecast in Japan and APAC

Meanwhile, Gartner forecasts the information security and risk management market in Japan and Asia Pacific (excluding Japan and China) to grow as shown below. CAGR (2021~2024) is expected to be 8% in Japan and 11% in Asia Pacific, a growth of more than 3% points. Both of these rates exceed the global IT investment CAGR of 6%.

Figure 20. Information Security and Risk Management Market Unit: USD mn, %

Information Security and Risk Management Market	2021 Millions of USD	CAGR (24/21)
Japan	12,078	8%
APAC (excluding Japan and China)	11,817	11%

Source: Prepared by Global IR, Inc. based on the company data

Management Indicators

Statements of Income							(Millions of yen)
Fiscal year	FY03/2017	FY03/2018	FY03/2019	FY03/2020	FY03/2021	FY03/2022	FY03/2023 CE
Sales	398,503	504,085	524,235	521,193	553,962	761,823	930,000
YoY	*-1.7%*	*26.5%*	*4.0%*	*-0.6%*	*6.3%*	*37.5%*	*22.1%*
Gross profit	46,269	56,094	61,061	59,891	64,835	90,718	104,300
YoY	*4.5%*	*21.2%*	*8.9%*	*-1.9%.*	*8.3%*	*39.9%*	*15.0%*
Gross profit margin	11.6%	11.1%	11.6%	11.5%	11.7%	11.9%	11.2%
Operating profit	10,473	15,163	15,324	14,447	18,769	36,707	44,000
YoY	*7.6%*	*44.8%*	*1.1%*	*-5.7%*	*29.9%*	*95.6%*	*19.9%*
Operating profit margin	2.6%	3.0%	2.9%	2.8%	3.4%	4.8%	4.7%
Recurring profit	9,635	14,937	13,101	11,072	16,399	35,487	41,600
YoY	*-5.3%*	*55.0%*	*-12.3%*	*-15.5%*	*48.1%*	*116.4%*	*17.2%*
Net profit	6,534	11,412	8,883	5,633	10,875	25,798	28,000
YoY	*-10.3%*	*74.7%*	*-22.2%*	*-36.6%*	*93.1%*	*137.2%*	*8.5%*
Net profit margin	1.6%	2.3%	1.7%	1.1%	2.0%	3.4%	3.0%

Per Share Data							(Yen)
Fiscal year	FY03/2017	FY03/2018	FY30/2019	FY03/2020	FY03/2021	FY03/2022	FY03/2023 CE
Total number of shares issued and outstanding (thousand shares)	58,793	62,813	62,813	63,031	63,031	63,031	-
EPS	114.3	206.1	142.0	90.1	175.4	414.9	450.1
EPS Adjusted	114.0	-	-	-	-	-	-
BPS	1,879	2,010	2,116	2,142	2,290	2,735	-
DPS	35.0	50.0	50.0	50.0	50.0	100.0	120.0

Balance Sheet							(Millions of yen)
Fiscal year	FY03/2017	FY03/2018	FY03/2019	FY03/2020	FY03/2021	FY03/2022	FY03/2023 CE
Current assets	200,543	251,399	276,885	236,384	243,400	335,032	-
Cash, deposits, and investment securities	15,552	28,789	14,217	14,715	25,443	25,174	-
Property, plant and equipment	6,626	6,807	7,530	7,501	7,449	7,951	-
Intangible fixed assets	1,448	1,597	2,821	2,515	2,332	3,426	-
Investments and other assets	6,391	6,113	12,328	17,029	15,314	10,454	-
Total fixed assets	14,615	15,742	22,374	26,863	26,190	27,551	-
Total assets	215,158	267,142	299,259	263,247	269,590	362,584	-
Total current liabilities	99,535	125,197	149,540	116,987	108,351	161,249	-
Total long-term liabilities	10,854	13,731	14,319	10,707	15,229	21,570	-
Total liabilities	93,551	110,389	138,928	163,860	127,695	123,580	-
Total net assets	104,769	128,210	135,399	135,551	146,010	179,762	-
Interest-Bearing Debt* (*)	27,546	58,262	84,685	53,961	32,047	59,158	-

Cash flows from operating activities							(Millions of yen)
Fiscal year	FY03/2017	FY03/2018	FY03/2019	FY03/2020	FY03/2021	FY03/2022	FY03/2023 CE
Depreciation and amortization	1,274	1,500	1,660	1,976	1,986	2,804	-
Cash flows from operating activities	3,169	-28,595	-30,173	45,770	38,076	-15,534	-
Cash flows from investing activities	-1,083	-1,804	-7,251	-8,919	-2,181	-1,653	-
Cash flows from financing activities	-8,322	43,699	21,916	-35,797	-26,189	14,368	-

Financial Data							(%)
Fiscal year	FY03/2017	FY03/2018	FY03/2019	FY03/2020	FY03/2021	FY03/2022	FY03/2023 CE
Return on Assets (ROA)	4.6%	6.2%	4.6%	3.9%	6.2%	11.2%	-
Return on Equity (ROE)	6.3%	10.0%	6.9%	4.3%	7.9%	16.5%	-
Capital adequacy ratio	47.9%	47.0%	44.2%	50.2%	52.7%	46.9%	-

Source: Prepared by Global IR, Inc. based on company securities reports
Note: Rounded to the nearest million yen, rounded to one decimal place. Calculated by Globl IR, Inc.

Appendix

Figure 21. Balance Sheet — Unit: JPY mn, %

	FY2/2014	FY2/2015	FY3/2014	FY3/2015	FY3/2016	FY3/2017	FY3/2018	FY3/2019	FY3/2020	FY3/2021	FY3/2022
	Fuji Elec	Fuji Elec	Macnica	Macnica	Consolidated						
Assets											
Cash on hand and in banks	9,363	8,809	18,637	13,473	20,847	15,552	28,789	14,217	14,715	25,443	25,174
Bills receivable										1,886	640
Electronically recorded Monetary claim										2,104	3,068
Accounts receivable										115,893	151,707
Notes and accounts receivable-trade	14,878	16,882	47,710	56,600	78,860	83,800	99,653	102,340	106,614	117,779	155,415
Goods	6,082	8,610	48,576	60,356	73,474	85,881	107,440	122,771	93,296	84,882	138,764
Inventories	6,082	8,610	48,576	60,356	73,474	85,881	107,440	122,771	93,296	84,882	138,764
Deferred tax asset	177	206	1,503	1,539	1,269	1,456	1,973				
Other	2,850	2,585	9,584	10,991	12,859	13,986	13,676	37,712	22,090	15,818	16,201
Allowance for doubtful accounts	-3	-3	-314	-262	-414	-132	-132	-155	-331	-522	-522
Total current assets	**33,348**	**37,089**	**125,696**	**142,697**	**186,895**	**200,543**	**251,399**	**276,885**	**236,384**	**243,400**	**335,032**
Buildings and structures	31	27	2,518	1,865	1,826	1,767	1,751	2,130	2,072	2,210	2,128
Tools, furniture and fixtures	24	22			1,267	1,339	1,477	1,680	1,558	1,402	1,432
Machinery, equipment and vehicles	0	6	13	35	20	19	53	101	95	124	138
Lot			3,558	3,061	3,061	3,061	3,061	3,061	3,061	3,062	3,062
Leased assets	13	9	467	366	354	438	462	555	712	647	1,187
Construction in progress										1	2
Other	0	0	999	1,168	-	-	-	-	-	-	-
Total property, plant and equipment	**68**	**64**	**7,558**	**6,497**	**6,530**	**6,626**	**6,807**	**7,530**	**7,501**	**7,449**	**7,951**
Goodwill			1,083	855	627	399	1,024	762	617	484	2,107
Other	54	66	778	807	821	1,198	1,797	1,753	1,715	2,942	7,038
Total intangible fixed assets	**54**	**66**	**1,861**	**1,662**	**1,448**	**1,597**	**2,821**	**2,515**	**2,332**	**3,426**	**9,145**
Investments in securities	2,524	1,200	2,788	2,747	3,578	3,583	3,492	7,557	12,264	10,169	4,872
Long-term loans					157	183	140				
Deferred tax asset	242	289	1,290	1,292	1,851	1,924	1,859	3,851	3,794	4,186	4,483
Assets related to retirement benefits		59			80	93	103				
Other	222	163	575	890	935	827	669	931	1,020	965	1,101
Allowance for doubtful accounts	-4	-3	-54	-335	-305	-219	-150	-11	-49	-6	-2
Total investments and other assets	**2,984**	**1,708**	**4,599**	**4,594**	**6,296**	**6,391**	**6,113**	**12,328**	**17,029**	**15,314**	**10,454**
Total fixed assets	**3,106**	**1,838**	**14,018**	**12,754**	**14,275**	**14,615**	**15,742**	**22,374**	**26,863**	**26,190**	**27,551**
Total assets	**36,454**	**38,926**	**139,715**	**155,451**	**201,171**	**215,158**	**267,142**	**299,259**	**263,247**	**269,590**	**362,584**
Liabilities											
Notes and accounts payable-trade	3,961	4,915	31,266	33,122	37,461	39,584	37,070	31,898	24,916	39,437	57,692
Short-term interest-bearing debt	4,447	4,045	10,603	9,997	16,155	23,654	51,744	77,237	49,468	23,032	44,695
Short-term debt	1,486	2,100	10,552	9,946	16,095	23,579	51,658	77,097	49,223	22,715	44,119
Current portion of long-term debt	2,957	1,941									
Lease obligations	5	5	51	51	60	75	86	140	245	317	576
Arrears								13,595	13,776	12,826	19,573
Income taxes payable	308	632	3,126	845	1,258	2,541	1,667	1,972	1,724	2,939	7,245
Advance received			6,592	8,112	10,697	14,643	14,948	14,921	15,183		
Allowance for bonuses	198	201	2,203	2,590	2,285	2,343	3,714	3,948	3,035	5,516	7,202
Allowance for bonuses to directors and corporate auditors			14	15			22	32	60	106	108
Other	489	577	6,162	9,090	11,558	16,770	16,032	5,937	8,825	24,495	24,734
Total current liabilities	**9,404**	**10,371**	**59,971**	**63,775**	**79,414**	**99,535**	**125,197**	**149,540**	**116,987**	**108,351**	**161,249**
Long-term interest-bearing debt	2,605	2,980	377	4,743	7,068	3,892	6,518	7,448	4,493	9,015	14,463
Long-term debt	2,595	2,975		4,418	6,756	3,503	6,112	7,000	4,000	8,660	13,835
Lease obligations	9	5	377	325	312	389	406	448	493	355	628
Deferred tax liabilities	3	3			420	490	762	335	213	238	1,010
Allowance for retirement benefits to directors and corporate auditors			459	479	493	513	534				
Liabilities for retirement benefits		540	3,231	3,492	5,311	5,165	5,111	5,598	5,418	5,498	5,521
Other	1,090	648	421	515	844	794	806	938	583	478	576
Total long-term liabilities	**3,697**	**4,172**	**4,488**	**9,229**	**14,136**	**10,854**	**13,731**	**14,319**	**10,707**	**15,229**	**21,570**
Total liabilities	**13,101**	**14,543**	**64,459**	**73,004**	**93,551**	**110,389**	**138,928**	**163,860**	**127,695**	**123,580**	**182,819**

	FY2/2014	FY2/2015	FY3/2014	FY3/2015	FY3/2016	FY3/2017	FY3/2018	FY3/2019	FY3/2020	FY3/2021	FY3/2022
	Fuji Elec	Fuji Elec	Macnica	Macnica	Consolidated						
Net assets											
Capital stock	4,835	4,835	11,194	11,194	10,066	10,066	13,888	13,888	14,040	14,040	14,040
Capital surplus	4,726	4,726	19,476	19,476	42,673	42,641	47,468	47,398	47,550	46,762	45,996
Retained earnings	16,518	17,435	41,186	43,128	49,186	51,841	61,322	67,591	70,079	77,854	99,611
Treasury stock	-2,851	-2,851	-1,011		-328	-5,643	-349	-274	-2,152	-1,586	-1,389
Total shareholders' equity	23,228	24,145	70,845	73,798	101,597	98,905	122,329	128,603	129,517	137,070	158,258
Accumulated other comprehensive income	90	195	2,927	6,861	4,293	4,062	3,278	3,781	2,581	5,113	11,872
Net unrealized gains (losses) on available-for-sale securities, net of taxes	134	102	366	368	26	41	135	158	26	432	987
Deferred gains or losses on hedges				-67	78	27	355	-87	-29	-282	-503
Foreign currency translation adjustments	-44	133	2,561	6,560	4,233	4,024	2,819	3,764	2,684	4,963	11,388
Accumulated retirement benefit adjustments		-39			-44	-30	-31	-54	-100		
Subscription warrant			81	81	59	49					
Noncontrolling interest	35	43	1,399	1,704	1,669	1,749	2,603	3,013	3,452	3,826	9,632
Total net assets	**23,353**	**24,384**	**75,255**	**82,446**	**107,620**	**104,769**	**128,210**	**135,399**	**135,551**	**146,010**	**179,762**
Total liabilities and net assets	**36,454**	**38,926**	**139,715**	**155,451**	**201,171**	**215,158**	**267,138**	**299,259**	**263,247**	**269,590**	**362,581**
Working capital	16,999	20,577	65,020	83,834	114,873	130,097	170,023	193,213	174,994	163,224	236,487
Total interest-bearing debt	7,052	7,025	10,980	14,740	23,223	27,546	58,262	84,685	53,961	32,047	59,158
Net debt	-2,311	-1,784	-7,657	1,267	2,376	11,994	29,473	70,468	39,246	6,604	33,984

Source: Prepared by Global IR, Inc. based on company data

Note: Rounded to one dicimal place. Caluculated by Global IR, Inc.

Figure 22. Income Statement — Unit: JPY mn, %

	FY2/2014	FY2/2015	FY3/2014	FY3/2015	FY3/2016	FY3/2017	FY3/2018	FY3/2019	FY3/2020	FY3/2021	FY3/2022	FY3/2023
	Fuji Elec	Fuji Elec	Macnica	Macnica	Consolidated							CE
Sales	**47,387**	**57,331**	**255,967**	**284,673**	**405,315**	**398,503**	**504,085**	**524,235**	**521,193**	**553,962**	**761,823**	**930,000**
YoY	-	*21.0%*	*346.5%*	*11.2%*	-	*-1.7%*	*26.5%*	*4.0%*	*-0.6%*	*6.3%*	*37.5%*	*22.1%*
COGs	40,771	49,948	222,223	248,490	361,027	352,234	447,991	463,173	461,302	489,126	671,104	825,700
Gross profit	**6,617**	**7,382**	**33,744**	**36,182**	**44,287**	**46,269**	**56,094**	**61,061**	**59,891**	**64,835**	**90,718**	**104,300**
Gross profit margin ratio	14.0%	12.9%	13.2%	12.7%	10.9%	11.6%	11.1%	11.6%	11.5%	11.7%	11.9%	11.2%
SG&A	5,469	5,562	25,288	26,986	34,558	35,796	40,931	45,737	45,444	46,066	54,010	60,300
SG&A ratio to sales	11.5%	9.7%	9.9%	9.5%	8.5%	9.0%	8.1%	8.7%	8.7%	8.3%	7.1%	6.5%
Operating profit	**1,148**	**1,820**	**8,456**	**9,195**	**9,729**	**10,473**	**15,163**	**15,324**	**14,447**	**18,769**	**36,707**	**44,000**
YoY	-	*58.6%*	*364.5%*	*8.7%*	-	*7.6%*	*44.8%*	*1.1%*	*-5.7%*	*29.9%*	*95.6%*	*19.9%*
Operating profit margin	2.4%	3.2%	3.3%	3.2%	2.4%	2.6%	3.0%	2.9%	2.8%	3.4%	4.8%	4.7%
Non-operating income	949	797	2,473	336	1,150	526	990	711	605	1,257	844	760
Interest income	45	28	38	43	95	61	76	116	82	63	65	
Dividends received	61	50	48	55	251	218	401	191	151	339	155	
Purchase discount								100	68			
Rental income			33	29								
Profit on currency exchange	793	674	2,222		483		189			295		
Reimbursement for loss on goods			34	133								
Gain on investment in partnership			9									
Reversal of allowance for doubtful accounts			19	11						3	102	
Other	50	45	70	65	321	247	324	304	304	557	522	
Non-operating expenses	69	78	326	2,331	703	1,363	1,216	2,934	3,980	3,627	2,064	3,160
Interest expense	46	38	82	94	171	277	383	1,137	1,131	304	333	
Loss on transfer of a claim			171	195	283	340	619	704	699	337	432	
Equity in losses of affiliated companies									815	2,693	808	
Foreign exchange loss				1,808		605		1,011	670		347	
Initial expenses					73							
Product indemnity expenses			16	88	87			34	563			
Loss on sales of accounts receivable	13	19										
Fees and commissions	5	17										
Other	5	4	57	146	89	141	214	46	98	293	144	
Recurring profit	**2,028**	**2,539**	**10,603**	**7,200**	**10,176**	**9,635**	**14,937**	**13,101**	**11,072**	**16,399**	**35,487**	**41,600**
YoY	-	*25.2%*	*317.6%*	*-32.1%*	-	*-5.3%*	*55.0%*	*-12.3%*	*-15.5%*	*48.1%*	*116.4%*	*17.2%*
Recurring profit margin	4.3%	4.4%	4.1%	2.5%	2.5%	2.4%	3.0%	2.5%	2.1%	3.0%	4.7%	4.5%
Extraordinary income	369	432	160	45	2,024	197	125	40	128	206	1,928	580
Gain on sales of fixed assets		1	5	45								
Marginal gain on step acquisitions											1,918	
Gain on termination of ESOP trust										198		
Gain on sales of investment securities	369	431			337	95	121	38	118	3	8	
Reversal of allowance for doubtful accounts for affiliates						101						
Negative goodwill accrual					1,686							
Other	-	0	155	-	1	1	4	2	10	5	2	

	FY2/2014	FY2/2015	FY3/2014	FY3/2015	FY3/2016	FY3/2017	FY3/2018	FY3/2019	FY3/2020	FY3/2021	FY3/2022	FY3/2023
	Fuji Elec	Fuji Elec	Macnica	Macnica	Consolidated							CE
Extraordinary loss	29	345	531	809	1,566	55	53	360	1,492	328	334	810
Loss on sales of fixed assets							8	4				
Loss on disposal of fixed assets	1	1	33	6		22	7	12	22	33	26	
Loss on sales of investment securities	22	185				28	22	1	11			
Loss on valuation of investment securities	7					4	12	112	1,447	123	295	
Loss on valuation of stocks of subsidiaries and affiliates			201	650	240					166		
Loss on valuation of investments in affiliates			131									
Loss on liquidation of subsidiaries and affiliates				80								
Provision for doubtful accounts of subsidiaries and affiliates			164	72	214							
Loss on dissolution of employees' pension fund					993							
Other	0	159	2	1	119	1	4	231	12	6	13	
Income taxes	897	998	3,779	2,284	2,805	3,144	3,394	3,414	3,435	4,586	9,557	11,230
Tax rate	37.9%	38.0%	36.9%	35.5%	26.4%	32.2%	22.6%	26.7%	35.4%	28.2%	25.8%	27.1%
Net profit attributable to noncontrolling interests	8	11	70	134	243	97	201	483	639	815	1,725	2,140
Net profit attributable to owners of the parent	**1,463**	**1,618**	**6,382**	**4,018**	**7,285**	**6,534**	**11,412**	**8,883**	**5,633**	**10,875**	**25,798**	**28,000**
YoY	-	*10.5%*	-	*-37.0%*	-	*-10.3%*	*74.7%*	*-22.2%*	*-36.6%*	*93.1%*	*137.2%*	*8.5%*
Net profit margin (margin)	3.1%	2.8%	2.5%	1.4%	1.8%	1.6%	2.3%	1.7%	1.1%	2.0%	3.4%	3.0%

Source: Prepared by Global IR, Inc. based on company data

Note: CE=Company Estimate. Rounded under JPY mn. Rounded to one dicimal place.

1. The foreign exchange loss of 347 million yen is largely due to the mark-to-market valuation of receivables and payables denominated in foreign currencies. The large loss was due to accounts receivable in Shenzhen (FY2022).
2. Equity in losses of affiliates is due to cloud analytics (for the past 3 consecutive years).
3. 1,918 million yen in extraordinary gains on the acquisition of a subsidiary was due to the revaluation of the difference between the acquisition price and market value of a 2% increase in the ownership interest in a Taiwanese subsidiary from 49% to 51% as an extraordinary gain (FY03/2022). The difference between the acquisition price and market value of the 2% increase was revalued as extraordinary income (for the fiscal year ending March 31, 2022).

Figure 23. Selling, General and Administrative Expenses — Unit: JPY mn, %

	FY2/2014	FY2/2015	FY3/2014	FY3/2015	FY3/2016	FY3/2017	FY3/2018	FY3/2019	FY3/2020	FY3/2021	FY3/2022	FY3/2023
	Fuji elec	Fuji elec	Macnica	Macnica	Consolidated							CE
SG&A expenses	5,469	5,562	25,288	26,986	34,558	35,796	40,931	45,737	45,444	46,066	54,010	60,300
Selling expenses					551	585	860	1,362	1,343	1,187	1,451	1,350
Personnel expenses					21,494	22,523	25,855	28,438	27,665	30,856	35,596	39,920
Depreciation					822	918	1,109	1,301	1,542	1,567	2,397	2,850
Development cost					34	157	279	407	403	281	333	300
Other					11,657	11,613	12,828	14,229	14,491	12,175	14,233	15,880

Source: Prepared by Global IR, Inc. based on company data

Note: CE=Company Estimate. Rounded under JPY mn. Rounded to one dicimal place.

Figure 24. Forecasts for 1H and Full Year — Unit: JPY mn, %

	FY03/2021			FY03/2022			FY03/2023			YoY change		
	1H	2H	Full Year	1H	2H	Full Year	1H	2H	Full Year	1H	2H	Full Year
	Actual			Actual			CE			CE		
Net sales	**257,163**	**296,799**	**553,962**	**362,343**	**399,480**	**761,823**	**464,000**	**466,000**	**930,000**	**28.1%**	**16.7%**	**22.1%**
COGs	227,690	261,436	489,126	321,069	350,035	671,104	411,940	413,760	825,700	28.3%	18.2%	23.0%
Gross profit	**29,473**	**35,362**	**64,835**	**41,274**	**49,444**	**90,718**	**52,060**	**52,240**	**104,300**	**26.1%**	**5.7%**	**15.0%**
Gross profit margin	11.5%	11.9%	11.7%	11.4%	12.4%	11.9%	11.2%	11.2%	11.2%			
SG&A	21,875	24,191	46,066	25,837	28,173	54,010	30,060	30,240	60,300	16.3%	7.3%	11.6%
SG&A ratio to sales	8.5%	8.2%	8.3%	7.1%	7.1%	7.1%	6.5%	6.5%	6.5%			
Operating profit	**7,597**	**11,172**	**18,769**	**15,437**	**21,270**	**36,707**	**22,000**	**22,000**	**44,000**	**42.5%**	**3.4%**	**19.9%**
OP margin	3.0%	3.8%	3.4%	4.3%	5.3%	4.8%	4.7%	4.7%	4.7%			
Recurring profit	**7,518**	**8,881**	**16,399**	**15,343**	**20,144**	**35,487**	**20,500**	**21,100**	**41,600**	**33.6%**	**4.7%**	**17.2%**
RP margin	2.9%	3.0%	3.0%	4.2%	5.0%	4.7%	4.4%	4.5%	4.5%			
Net profit	**5,137**	**5,738**	**10,875**	**11,988**	**13,810**	**25,798**	**14,000**	**14,000**	**28,000**	**16.8%**	**1.4%**	**8.5%**
NP margin	2.0%	1.9%	2.0%	3.3%	3.5%	3.4%	3.0%	3.0%	3.0%			

Source: Prepared by Global IR, Inc. based on company data
Note: Rounded under JPY mn. Rounded to one dicimal place.

Figure 25. Quarterly Results — Unit: JPY mn, %

Quarterly Results (Cumulative)	FY03/2021				FY03/2022				FY03/2023
	1Q	1-2Q	1-3Q	1-4Q	1Q	1-2Q	1-3Q	1-4Q	1Q
Sales	125,147	257,163	396,737	553,962	178,064	362,343	557,145	761,823	241,320
YoY	*2.6%*	*1.1%*	*3.0%*	*6.3%*	*42.3%*	*40.9%*	*40.4%*	*37.5%*	*35.5%*
Gross profit	14,680	29,473	46,012	64,835	20,258	41,274	65,095	90,718	27,359
YoY	*2.0%*	*0.0%*	*4.5%*	*8.3%*	*38.0%*	*40.0%*	*41.5%*	*39.9%*	*35.1%*
Gross profit margin	11.7%	11.5%	11.6%	11.7%	11.4%	11.4%	11.7%	11.9%	11.3%
SG&A	10,831	21,875	33,882	46,066	12,951	25,837	39,719	54,010	15,093
YoY	*-5.4%*	*-3.9%*	*-0.2%*	*1.4%*	*19.6%*	*18.1%*	*17.2%*	*17.2%*	*16.5%*
SG&A ratio to sales	8.7%	8.5%	8.5%	8.3%	7.3%	7.1%	7.1%	7.1%	6.3%
Operating profit	3,847	7,597	12,129	18,769	7,306	15,437	25,375	36,707	12,265
YoY	*30.9%*	*13.0%*	*20.6%*	*29.9%*	*89.9%*	*103.2%*	*109.2%*	*95.6%*	*67.9%*
Operating profit margin	3.1%	3.0%	3.1%	3.4%	4.1%	4.3%	4.6%	4.8%	5.1%
Recurring profit	3,665	7,518	11,868	16,399	7,514	15,343	24,561	35,487	11,280
YoY	*75.9%*	*53.3%*	*52.0%*	*48.1%*	*105.0%*	*104.1%*	*107.0%*	*116.4%*	*50.1%*
Recurring profit margin	2.9%	2.9%	3.0%	3.0%	4.2%	4.2%	4.4%	4.7%	4.7%
Net profit	2,492	5,137	8,138	10,875	6,255	11,988	17,822	25,798	7,857
YoY	*104.1%*	*68.3%*	*75.2%*	*93.1%*	*151.0%*	*133.4%*	*119.0%*	*137.2%*	*25.6%*
Net profit margin	2.0%	2.0%	2.1%	2.0%	3.5%	3.3%	3.2%	3.4%	3.3%

Quarterly Results	FY03/2021				FY03/2022				FY03/2023
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q
Sales	125,147	132,016	139,574	157,225	178,064	184,279	194,802	204,678	241,320
YoY	*2.6%*	*-0.4%*	*6.8%*	*15.6%*	*42.3%*	*39.6%*	*39.6%*	*30.2%*	*35.5%*
Gross profit	14,680	14,793	16,539	18,823	20,258	21,016	23,821	25,623	27,359
YoY	*2.0%*	*-2.0%*	*13.8%*	*18.5%*	*38.0%*	*42.1%*	*44.0%*	*36.1%*	*35.1%*
Gross profit margin	11.7%	11.2%	11.8%	12.0%	11.4%	11.4%	12.2%	12.5%	11.3%
SG&A	10,831	11,044	12,007	12,184	12,951	12,886	13,882	14,291	15,093
YoY	*-5.4%*	*-2.3%*	*7.2%*	*6.0%*	*19.6%*	*16.7%*	*15.6%*	*17.3%*	*16.5%*
SG&A ratio to sales	8.7%	8.4%	8.6%	7.7%	7.3%	7.0%	7.1%	7.0%	6.3%
Operating profit	3,847	3,750	4,532	6,640	7,306	8,131	9,938	11,332	12,265
YoY	*30.9%*	*-0.9%*	*36.0%*	*51.2%*	*89.9%*	*116.8%*	*119.3%*	*70.7%*	*67.9%*
Operating profit margin	3.1%	2.8%	3.2%	4.2%	4.1%	4.4%	5.1%	5.5%	5.1%
Recurring profit	3,665	3,853	4,350	4,531	7,514	7,829	9,218	10,926	11,280
YoY	*75.9%*	*36.6%*	*49.9%*	*38.7%*	*105.0%*	*103.2%*	*111.9%*	*141.1%*	*50.1%*
Recurring profit margin	2.9%	2.9%	3.1%	2.9%	4.2%	4.2%	4.7%	5.3%	4.7%
Net profit	2,492	2,645	3,001	2,737	6,255	5,733	5,834	7,976	7,857
YoY	*104.1%*	*44.5%*	*88.5%*	*176.7%*	*151.0%*	*116.7%*	*94.4%*	*191.4%*	*25.6%*
Net profit margin	2.0%	2.0%	2.2%	1.7%	3.5%	3.1%	3.0%	3.9%	3.3%

Source: Prepared by Global IR, Inc. based on company data
Note: Rounded under JPY mn. Rounded to one dicimal place. .

Figure 26. Quarterly Business Segment Trends Unit: JPY mn, %

Business Segments (Cumulative)	FY03/2021				FY03/2022				FY03/2023
(JPY mn)	1Q	1-2Q	1-3Q	1-4Q	1Q	1-2Q	1-3Q	1-4Q	1Q
Sales	125,147	257,163	396,737	553,962	178,064	362,343	557,145	761,823	241,320
YoY	*2.6%*	*1.1%*	*3.0%*	*6.3%*	*42.3%*	*40.9%*	*40.4%*	*37.5%*	*35.5%*
ICs and electronic devices, others	108,547	223,285	345,602	481,125	159,465	324,768	498,120	678,602	219,303
YoY	*1.3%*	*-1.0%*	*1.4%*	*4.6%*	*46.9%*	*45.4%*	*44.1%*	*41.0%*	*37.5%*
Network Business	16,600	33,878	51,135	72,837	18,599	37,575	59,025	83,221	22,017
YoY	*12.3%*	*17.3%*	*15.7%*	*19.0%*	*12.0%*	*10.9%*	*15.4%*	*14.3%*	*18.4%*
Operating profit	3,847	7,597	12,129	18,769	7,306	15,437	25,375	36,707	12,265
YoY	*30.9%*	*13.0%*	*20.6%*	*29.9%*	*89.9%*	*103.2%*	*109.2%*	*95.6%*	*67.9%*
ICs and electronic devices, others	1,738	3,179	5,933	9,658	5,328	11,381	18,644	27,499	10,766
YoY	*35.7%*	*-0.7%*	*20.1%*	*38.1%*	*206.6%*	*258.0%*	*214.2%*	*184.7%*	*102.1%*
Network Business	2,060	4,302	6,023	8,879	1,915	3,930	6,605	9,082	1,498
YoY	*27.2%*	*25.0%*	*21.7%*	*22.9%*	*-7.0%*	*-8.6%*	*9.7%*	*2.3%*	*-21.8%*
Corporate and elimination	49	116	173	232	63	126	126	126	1

Business Segment (Quarter)	FY03/2021				FY03/2022				FY03/2023
(JPY mn)	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q
Sales	125,147	132,016	139,574	157,225	178,064	184,279	194,802	204,678	241,320
YoY	*2.6%*	*-0.4%*	*6.8%*	*15.6%*	*42.3%*	*39.6%*	*39.6%*	*30.2%*	*35.5%*
ICs and electronic devices, others	108,547	114,738	122,317	135,523	159,465	165,303	173,352	180,482	219,303
YoY	*1.3%*	*-3.1%*	*6.0%*	*13.9%*	*46.9%*	*44.1%*	*41.7%*	*33.2%*	*37.5%*
Network Business	16,600	17,278	17,257	21,702	18,599	18,976	21,450	24,196	22,017
YoY	*12.3%*	*22.6%*	*12.8%*	*27.4%*	*12.0%*	*9.8%*	*24.3%*	*11.5%*	*18.4%*
Operating profit	3,847	3,750	4,532	6,640	7,306	8,131	9,938	11,332	12,265
YoY	*30.9%*	*-0.9%*	*36.0%*	*51.2%*	*89.9%*	*116.8%*	*119.3%*	*70.7%*	*67.9%*
ICs and electronic devices, others	1,738	1,441	2,754	3,725	5,328	6,053	7,263	8,855	10,766
YoY	*35.7%*	*-25.0%*	*58.6%*	*81.1%*	*206.6%*	*320.1%*	*163.7%*	*137.7%*	*102.1%*
Network Business	2,060	2,242	1,721	2,856	1,915	2,015	2,675	2,477	1,498
YoY	*27.2%*	*23.0%*	*14.3%*	*25.5%*	*-7.0%*	*-10.1%*	*55.4%*	*-13.3%*	*-21.8%*
Corporate and elimination	49				63	63	-	-	1

Source: Prepared by Global IR, Inc. based on company data
Note: Rounded under JPY mn. Rounded to one dicimal place.

Figure 27. Quarterly Trends by Product and Application — Unit: JPY mn, %

By item	FY03/2021				FY03/2022				FY03/2023
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q
Sales	**125,147**	**132,016**	**139,574**	**157,225**	**178,064**	**184,279**	**194,802**	**204,678**	**241,320**
ICs	98,931	106,883	110,016	122,521	145,693	154,033	160,002	166,394	201,720
PLD	13,657	11,485	13,155	14,809	17,318	17,244	19,280	18,677	22,738
ASIC	3,478	5,065	2,243	2,827	2,808	4,908	4,142	3,755	6,130
ASSP	16,061	18,080	17,540	19,495	22,642	22,605	20,714	23,113	30,703
Analog	24,920	29,883	32,032	34,591	43,710	43,478	46,355	46,896	60,248
Memory	20,711	19,630	20,385	24,498	25,106	30,214	30,323	31,562	35,015
Other standard ICs	20,102	22,739	24,658	26,298	34,106	35,584	39,186	42,387	46,883
Electronic device	7,261	6,105	9,412	9,677	10,382	8,414	9,430	10,686	13,559
Other	2,354	1,750	2,888	3,324	3,389	2,857	3,918	3,401	4,023
Network Related Products	16,599	17,279	17,257	21,701	18,598	18,977	21,449	24,195	22,017
Hardware	4,250	4,797	5,242	5,817	4,285	4,438	4,560	4,585	4,847
Software	6,377	6,990	6,462	9,422	8,299	8,944	10,649	13,052	12,955
Service	5,970	5,492	5,552	6,461	6,013	5,595	6,239	6,558	4,214
Gross profit	**14,680**	**14,793**	**16,539**	**18,823**	**20,258**	**21,016**	**23,821**	**25,623**	**27,359**
ICs	8,832	8,748	10,247	11,268	13,676	14,544	16,307	17,861	19,924
Electronic device	986	862	1,193	1,121	1,417	1,057	1,133	1,222	1,692
Other	409	333	467	692	451	493	661	673	695
Network Related Products	4,449	4,852	4,630	5,741	4,712	4,922	5,718	5,867	5,046

Sales by Application	FY03/2021				FY03/2022				FY03/2023
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q
ICs and electronic devices, others	108,550	114,730	122,320	135,520	159,460	165,300	173,360	180,480	219,300
Communication	24,960	25,970	23,550	23,700	28,890	32,950	32,260	31,350	45,770
Communication terminal	5,050	4,890	4,600	5,000	5,240	5,390	6,020	5,240	6,700
Communications infrastructure	19,910	21,080	18,950	18,700	23,650	27,560	26,240	26,110	39,070
OA and Peripheral Equipment	5,550	5,000	5,710	6,270	7,180	7,440	8,090	8,080	9,460
Computer	15,140	13,260	13,510	18,650	18,840	18,090	20,860	22,860	19,860
Consumer Products	8,700	12,370	12,490	12,760	15,060	14,720	13,500	13,320	15,900
In-vehicle	15,030	18,690	22,690	23,900	23,580	23,870	25,280	27,710	35,040
Industrial Equipment	39,170	39,440	44,370	50,240	65,910	68,230	73,370	77,160	93,270
Network Business	16,600	17,280	17,260	21,700	18,600	18,980	21,450	24,190	22,020
Total amount	125,150	132,010	139,580	157,220	178,060	184,280	194,810	204,670	241,320

Composition by Item	FY03/2021				FY03/2022				FY03/2023
(%)	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q
Sales	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
ICs	79.1%	81.0%	78.8%	77.9%	81.8%	83.6%	82.1%	81.3%	83.6%
PLD	10.9%	8.7%	9.4%	9.4%	9.7%	9.4%	9.9%	9.1%	9.4%
ASIC	2.8%	3.8%	1.6%	1.8%	1.6%	2.7%	2.1%	1.8%	2.5%
ASSP	12.8%	13.7%	12.6%	12.4%	12.7%	12.3%	10.6%	11.3%	12.7%
Analog	19.9%	22.6%	22.9%	22.0%	24.5%	23.6%	23.8%	22.9%	25.0%
Memory	16.5%	14.9%	14.6%	15.6%	14.1%	16.4%	15.6%	15.4%	14.5%
Other standard IC	16.1%	17.2%	17.7%	16.7%	19.2%	19.3%	20.1%	20.7%	19.4%
Electronic device	5.8%	4.6%	6.7%	6.2%	5.8%	4.6%	4.8%	5.2%	5.6%
Other	1.9%	1.3%	2.1%	2.1%	1.9%	1.6%	2.0%	1.7%	1.7%
Network Related Products	13.3%	13.1%	12.4%	13.8%	10.4%	10.3%	11.0%	11.8%	9.1%
Hardware	3.4%	3.6%	3.8%	3.7%	2.4%	2.4%	2.3%	2.2%	2.0%
Software	5.1%	5.3%	4.6%	6.0%	4.7%	4.9%	5.5%	6.4%	5.4%
Service	4.8%	4.2%	4.0%	4.1%	3.4%	3.0%	3.2%	3.2%	1.7%
Gross profit	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
ICs	60.2%	59.1%	62.0%	59.9%	67.5%	69.2%	68.5%	69.7%	72.8%
Electronic device	6.7%	5.8%	7.2%	6.0%	7.0%	5.0%	4.8%	4.8%	6.2%
Other	2.8%	2.3%	2.8%	3.7%	2.2%	2.3%	2.8%	2.6%	2.5%
Network Related Products	30.3%	32.8%	28.0%	30.5%	23.3%	23.4%	24.0%	22.9%	18.4%

Sales composition by application	FY03/2021				FY03/2022				FY03/2023
(%)	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q
ICs and electronic devices, others	86.7%	86.9%	87.6%	86.2%	89.6%	89.7%	89.0%	88.2%	90.9%
Communication	19.9%	19.7%	16.9%	15.1%	16.2%	17.9%	16.6%	15.3%	19.0%
Communication terminal	4.0%	3.7%	3.3%	3.2%	2.9%	2.9%	3.1%	2.6%	2.8%
Communications infrastructure	15.9%	16.0%	13.6%	11.9%	13.3%	15.0%	13.5%	12.8%	16.2%
OA and peripheral equipment	4.4%	3.8%	4.1%	4.0%	4.0%	4.0%	4.2%	3.9%	3.9%
Computer	12.1%	10.0%	9.7%	11.9%	10.6%	9.8%	10.7%	11.2%	8.2%
Consumer Products	7.0%	9.4%	8.9%	8.1%	8.5%	8.0%	6.9%	6.5%	6.6%
In-vehicle	12.0%	14.2%	16.3%	15.2%	13.2%	13.0%	13.0%	13.5%	14.5%
Industrial Equipment	31.3%	29.9%	31.8%	32.0%	37.0%	37.0%	37.7%	37.7%	38.6%
Network Business	13.3%	13.1%	12.4%	13.8%	10.4%	10.3%	11.0%	11.8%	9.1%
Total amount	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Prepared by Global IR, Inc. based on company data
Note: Rounded under JPY mn. Rounded to one dicimal place.

Figure 28. Investor Returns Unit: Thousands of shares, JPY, %

Per Share Data	FY2/2014	FY2/2015	FY3/2014	FY3/2015	FY3/2016	FY3/2017	FY3/2018	FY3/2019	FY3/2020	FY3/2021	FY3/2022	FY3/2011
(Yen)	Fuji Elec	Fuji Elec	Macnica	Macnica	Consolidated							CE
# of shares issued and outstanding at FY-end	**16,321**	**16,321**	**18,110**	**17,732**	**58,793**	**58,793**	**62,813**	**62,813**	**63,031**	**63,031**	**63,031**	
Number of treasury stock	2,311	2,310	378		306	3,982	318	248	1,348	930	815	
EPS	104.5	115.5	360.4	226.6	124.7	114.3	206.1	142.0	90.1	175.4	414.9	450.1
EPS (Diluted)			359.2	225.4		114.0						
DPS	50.0	50.0	60.0	60.0	40.0	35.0	50.0	50.0	50.0	50.0	100.0	120.0
Dividend payout ratio	47.8%	43.3%	16.6%	26.5%	32.1%	30.6%	24.3%	35.2%	55.5%	28.5%	24.1%	26.7%
BPS	1,664.4	1,737.3	4,160.4	4,548.8	1,810.5	1,878.7	2,009.9	2,116.0	2,141.6	2,289.6	2,734.6	

Source: Prepared by Global IR, Inc. based on company data

Note: CE=Company Estimate. Rounded under JPY mn. Rounded to one dicimal place. Caluculated by Global IR, Inc.
The total return ratio (dividends, share buybacks, etc.) is set at 30-50%

Figure 29. Major Shareholders (as of March 31, 2022)

Shareholder	Number of shares held (Thousands of shares)	Percentage of Number of shares held
The Master Trust Bank of Japan, Ltd.	9,659	15.53%
Kamiyama Foundation (General incorporated foundation)	6,000	9.64%
The Custody Bank of Japan, Ltd.	4,749	7.63%
Haruki Kamiyama	3,500	5.63%
Seeds Technology, Inc.	3,500	5.63%
THE BANK OF NEW YORK - JASDECTREATY ACCOUNT (Standing proxy: Mizuho Bank, Ltd.)	1,078	1.73%
STATE STREET BANK ND TRUST COMPANY 505103 (Standing proxy: Mizuho Bank, Ltd.)	1,037	1.67%
Yuko Kamiyama	1,000	1.61%
STATE STREET BANK ND TRUST COMPANY 505103 (Standing proxy: The Hongkong and Shanghai Banking Corporation Limited, Tokyo Branch)	842	1.35%
GOVERNMENT OF NORWAY (Standing proxy: Citibank, N.A. Tokyo Branch)	827	1.33%
Total	**32,196**	**51.75%**

Source: Prepared by Global IR, Inc. based on company data

Note: Seeds Technology is an asset management company headed by founder Haruki Kamiyama.

Figure 30. Employee Indicators Unit: persons, JPY mn, %

	FY3/2016	FY3/2017	FY3/2018	FY3/2018	FY3/2020	FY3/2021	FY3/2022	CAGR
				Consolidated				3/16-3/22
Number of employees (persons)	2,555	2,711	3,114	3,363	3,453	3,513	3,925	7.4%
Number of temporary employees (annual average, persons)	284	313	316	346	381	384	426	7.0%
Sales per employee (¥mn)		135	156	146	138	143	184	
Operating profit per employee (¥mn)		3.6	4.7	4.3	3.8	4.9	8.9	
Integrated circuits and electronic devices and others								
Number of employees (persons)	2,067	2,218	2,290	2,482	2,487	2,466	2,777	
Number of temporary employees (annual average, persons)	168	174	155	161	170	155	178	
Net sales per employee (¥mn)		158	193	185	173	183	242	
Operating profit per employee ¥(mn)		2.0	4.5	3.7	2.6	3.7	9.8	
Network Business								
Number of employees (persons)	303	317	621	675	740	819	907	
Number of temporary employees (annual average, persons)	59	72	84	92	114	128	138	
Net sales per employee (¥mn)		86	70	73	75	80	83	
Operating profit per employee (¥mn)		14.9	7.6	7.7	8.8	9.8	9.1	
Corporate (common)								
Number of employees (persons)	185	176	203	206	226	228	241	
Number of temporary employees (annual average, persons)	57	67	77	93	97	101	110	

Source: Prepared by Global IR, Inc. based on company data.
Note: Sales and operating profit per employee are calculated by adding up the average number of employees at the beginning and end of the fiscal year and average temporary employees.

Disclaimer