

Interface to the Future - Solution by Smart Connectivity -

Thine Electronics, Inc. (TSE: 6769) FY2024Q2 Business Results and Opportunities

August 2, 2024

Mid-term Strategy from 2022 to 2024 5G&Beyond-NE





TODAY'S AGENDA

- Corporate outline
- Business results in FY2024Q2
- Future opportunities under mid-term strategy, "5G&Beyond-NE"





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Corporate outline

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Yoichiro Minami

Interface to the Future - Solution by Smart Connectivity -

Provider of unique value to the world, de facto standard technology of high-speed interface, etc.

THine

Company Name

Corporate outline

THine Electronics, Inc.

(listed on Tokyo Stock Exchange, code@6769)

Tetsuya lizuka, Ph.D

Yoichiro Minami

1,175 million yen

May, 1991

Interface to the Future

- Solution by Smart Connectivity -

June, 1992

Planning, Designing and Sales of Mixed Signal LSI,
Providing AI & IoT devices/Solutions,
Planning, Designing and Sales of AI/Data Server
132, *consolidated as of June 30, 2024*

Tetsuya lizuka



- Capital
- Founded
- Incorporated
- Business Area



THine Electronics, Inc.



THin



AI01

THine team



Korea

THine Electronics Korea, Inc. Seoul, Korea Established in Mar. 2010

China

賽恩電子香港股份有限公司 Thine Electronics Hong Kong, Co., Ltd. Established in Nov.2012 前海赛恩电子(深圳)有限公司

THine Electronics Shenzhen, Co., Ltd. Established in May 2013 上海分公司

Shanghai-Branch Established in Oct.2013

THine Electronics, Inc.



Taiwan

<mark>哉英電子股份有限公司</mark> THine Electronics Taiwan, Inc. Taipei, Taiwan Established in Sep. 2000

LSI Tokyo – Headquarters –

Tokyo, Japan Start-up in May 1991

Cathay Tri-Tech, Inc.

United States

THine Solutions, Inc.

Established in Feb. 2018

Santa Clara, CA USA

Yokohama, Japan Acquired in Dec., 2018

Server THine HyperData, Inc.

Yokohama, Japan Establish in June 2024

THine value

Interface to the Future

- Solution by Smart Connectivity -

LSI as smart interface, AIOT as smart IoT solution, and AI/Data Server providing computational resources



THine Electronics, Inc.



Business Area

Product and solution

<High-speed interface LSI>

V-by-One[®] HS plus V-by-One[®] HS LVDS

<Wireless modules>

IoT Gateway / Router

5G/LTE/NB-IoT

AI & IoT Solution

< AI Server >

< Data Server >

General Server

Smart NIC/Switch



Serial Transceiver IOHA:B <Image signal processing> Image Signal Processor Camera Development Kit

< Al&IoT devices and solution >

AI Server with NVIDIA H100 GPU

Application market

- Camera solution: automotive cameras, security cameras, AR/VR, recognition camera, medical cameras, etc.
- Display solution: high-resolution displays such as 8K / 4K, gaming monitors with high refresh rate
- Drive recorders, automotive CID, exp. for EVs
- Mobile, PC, and single board computers
- OA (multi-function printers), amusement
- Industrial equipment such as inspection equipment for semiconductors and LCD displays

<AI/IoT Solution>

- Drive recorders with wireless modules
- AED monitoring modules
- IP transceivers
- Remote monitoring module for vending machines and elevators
- GPS tracker
- AI thermography with facial recognition
- IoT monitoring system

<Server>

•AI servers and data servers for companies and AI research institutes though ODM/OEM

AI & IoT Biz.

LSI

Biz.

THine Electronics, Inc.





TODAY'S AGENDA

Corporate outline

Business results in FY2024Q2

Future opportunities under mid-term strategy, "5G&Beyond-NE"



(yen in million)

Financial performance in FY2024Q2(6M)

Consolidated financial results

FY2024Q2 (6M) FY2023Q2 (6M) Portion% YoY Portion% Revenues 2,047 100.0 83.5 2,450 100.0 **Gross Profit** 1,086 1,272 85.4 53.1 51.9 1,188 SG&A 1,148 58.1 103.5 46.9 (R&D expenses) 108.6 21.2 564 27.6 519 △102 **Operating Income** $\triangle 5.0$ 124 5.1 $\wedge 2.7$ $\triangle 54$ (EBITDA) 227 9.3 **Ordinary Income** 156 273 57.2 7.7 11.2 (Reference purpose only) \wedge 93 \wedge 4.6 5.2 126 Ordinary Income without FX effects Net Income Attributable to 159 170 7.8 93.3 7.0Owners of the Parent

THine Electronics, Inc.

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Financial performance in FY2024Q2(6M) by region and segment





- LSI Biz added approx.20% sales to planned revenues, because of market recovery in China and US in spite of continuous inventory-level adjustment in Japanese customers.
- AIOT Biz achieved healthy delivery of wireless communication modules, resulted in planned revenue level with revenue increase by 9%.
- AIOT Biz is in its profitable stage, completing its goodwill amortization in FY2023.



Financial performance in FY2024Q2(6M) LSI Business by application markets

Revenues of LSI business by application





Financial performance in FY2024Q2(6M) AIOT Business by segment

Revenues of AIOT business segments



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Financial performance in FY2024Q2(6M) SGA compared to FY2023Q2-6M

- Reasons of changes in operating income
- > Gross profit decreased by 15% with the same level of gross profit rate
- Made intensive investment in research and development (R&D) with JPY564M, increased by 9%: eveloping new V-by-One[®] HS products for displays and cameras for EV markets, new power anagement products, low power and low latency optical chipset for advanced PCI Express 6.0/7.0, modules for edge AI, gateway products with voice communication, smart IoT router products, etc.

* Also continued government-contracted R&D project using 300GHz communication mostly at the cost of MIAC

Soodwill amortization by acquiring AIOT business has been completed in FY2023.





Financial performance in FY2024Q2(6M) R&D investment

- Intensive investment in R&D
- R&D investment plan in FY2024: totally JPY1,220M (increased by 11%)





LSI Biz 97%

Focused development to achieve the 5 goals of the mid-term strategy, "5G&Beyond-NE"

- New V-by-One[®]HS products for display panels and cameras of EVs
- New power management products
- Low power and low latency optical chipset for advanced PCI Express 6.0/7.0
- Modules for edge AI processing
- > Voice-communication-support gateway products
- Smart IoT router products
- > High-speed wireless communication technology applicable to 1000Gbps data transmission (Beyond 5G), etc.



Financial performance in FY2024Q2(6M)

► Outline of Balance Sheet as of the end of June, 2024

(unit: yen in million)

Assets			Liabilities and Net Assets			
	End/June/2024	End 2023		End/June/2024	End 2023	
Cash and Cash Equivalent	7,456	7,377	Account Payable	357	270	
Account Receivables	680	937	Other Current Liabilities	290	401	
Inventories	940	846	Non-current Liabilities	144	137	
Other Current Assets	308	303	Shareholders' Equity	9,128	9,139	
Property, Plant and Equipment	207	212	Accumulated Other Comprehensive Income	62	73	
Intangible Assets	61	69	Deferred Stock-based Compensation	62	150	
Investments and others	505	504	Non-controlling Interests	113	77	
Total Assets	10,160	10,250	Total Liabilities and Net Assets	10,160	10,250	

> US-dollar-based cash as of the end of FY2024Q2 is approximately US\$8M.

> The amortization of goodwill by acquisition of Cathay Tri-Tech (AIOT business) has been completed in FY2023.

> THine HyperData, Inc. has been established in June 2024 with its capital of JPY100M.

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Financial performance in FY2024Q2(6M)

Outline of Cash Flow Statements

		(unit: yen in million)	
	FY2024Q2(6M)	FY2023Q2(6M)	
CF from Operating Activity	111	687	decrease in net income before tax, account receivables and increase in inventories and account payable, etc.
CF from Investing Activity	△68	2	investment in fixed asset, etc.
CF from Financing Activity	△161	△160	payment of dividend for FY2023, acquisition of treasury stock, exercise of stock options, establishing Thine HyperData Inc., etc.
Effect of Exchange Rate Changes	197	129	 Exchange rate JPY142 as of the end of FY2023 IPV161 as of the end of FY2024Q2
CCE at the beginning of the FY	7,377	7,302	JF I TOT AS OF THE END OF T 2024Q2
CCE at the end of the QTR	7,456	7,960	

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Outline of "5G&Beyond-NE"

<Basic Strategy>

Thine provides differentiated values for customers based on the prior mid-term strategy, "5G&Beyond," corresponding to business environment, and contribute to customers' innovation.



Beyond5G/8K

Ultra-High-Speed Data Transmission 8K Video Solution



5G/AI·IoT Solution

5G Wireless Communication Face Recognition, Smart Infrastructure



Mobility High Resolution / Multiple Automotive Cameras and Displays





Hyper Automation Serial Transceiver for IoT Platform Medical Medical Cameras(ex. Endoscope) High Resolution Monitor



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- ► Action in FY2024
 - ①Enhance growing business in *automotive and industrial markets*, contributing to support new use cases of autonomous, unmanned, and remoted situation
 - ②Continuously launch new LSI products for *automotive cameras and displays,* targeting automotive markets in China
 - ③Promote products and solutions for *smart IoT communication, including drive recorders and smart meters*
 - (4) Cultivate future growing opportunities in 5G, Al&loT, medical
 - ⑤Positively invest in research and development as well as talented HR to create value from new products, making developing projects more efficient within shorten periods
 - 6 Entering the server business as the third portfolio following to LSI and AIOT
 - ⑦Provide effective solutions with THine's interface technology, seeking alliance and collaboration opportunities aggressively

LSI Biz

5G&Beyond-NE, the mid-term strategy from 2022 to 2024

Enhancing user experience – simplifying cable wiring solution for in-vehicle touch panels for EVs

Start volume production shipping of new V-by-One[®]HS products for EVs and industrial equipment

> Enabling to transmit and receive fullHD60fps images, controlling signals, and voice signals only with 1 chip

Capable to handle approximately +28% more data volume, compared to similar-class products in automotive industry the world-fastest class SerDes support OpenLDI(LVDS)





Hyper Automation

Mobility

LSI Biz



5G&Beyond-NE, the mid-term strategy from 2022 to 2024

- Contribution to envolving medical cameras
 V-by-One[®]HS product supports 4K medical cameras
- Contributing to achieve 4K high-resolution endoscope cameras
- The world smallest V-by-One[®] HS product enables to transmit images from 4K cameras to operating equipment for several meters through just one cable
- Thine's image signal processor applicable simultaneously
- Contributing for users to apply AI-based machine learning with 4K images for higher detection rates for earlystage cancers

Medical



Operating host board of an endoscope

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5G&Beyond-NE, the mid-term strategy from 2022 to 2024

- **Mobility** Contribution to high-speed video data transmission **Providing "V-by-One®HS plus Standard" since June, 2023**
- Double-speed interface technology of today's *de facto* standard V-by-One[®] HS for 4K/8K TVs and displays
- Contributing to enhanced eco-design requirements in Europe, US, etc. \succ

Comparison of video data transmission systems in case of 8K60fps or 4K240fps





Medical







Beyond 5G/8K

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LSI Biz

5G&Beyond-NE, the mid-term strategy from 2022 to 2024

Contribution to simplifying sensing & control systems

Launching the industry-first unique serial transceiver that enables to achieve IoT platform

> Flexible I/O pattern of sensors and controlling signals up to 4.3-billion different configuration degrees of freedom

Hyper Automation







- Contribution to use cases with contactless communication Medical Automation
 Collaboration with STMicroelectronics's near field communiation technology
 - To support for new use cases in high-speed contact connectivity, combining THine's high-speed interface technology and ST's 60GHz RF millimeter-wave
 - THine's V-by-One[®] and other interface technologies, together with ST's ST60A2 contactless 60GHz transceiver, enables high-speed data transmitting solutions of board-to-board contactless connections.



LSI Biz



5G&Beyond-NE, the mid-term strategy from 2022 to 2024

Contribution to AI camera use cases	Mobility	Medical	Hyper Automation	5G Al/loT	
13MP PDAF Camera Kit for NVIDIA Jestson (10				

> Users can easily integrate advanced imaging capabilities with NVIDIA Jetson Orin into their systems.



- ✓ Ultra-quick phase detection autofocus (PDAF)
- Perfect unit-to-unit image quality for high volume production
- ✓ Selectable high-resolution: e.g.,13MP at 20fps, 4K2K at 30fps, and 1080p at 60fps, etc.

LSI Biz



5G&Beyond-NE, the mid-term strategy from 2022 to 2024

Contribution to reducing power consumption in data centers, while generative AI requires more power consumption

 5G AI/IoT
 Beyond 5G/8K

Low power and low latency optical chipset for advanced PCI Express

- Developed the world first optical chipset without digital signal processors (DSPs) for PCI express 6.0, supporting VCSEL as well as developing chipset for PCI express 7.0
- Reducing power consumption in data transmission by more than 50% and reducing latency by approximately 90%, resulting in faster response in faster computational response in AI use cases



- Hyper Automation 5G Al/loT Real-time-based AI image diagnosis from remoted video cameras Collaboration with VAAK by **EdgeAl-Link®**, a cloud-linked Edge-Al cameras
 - Collaboration with VAAK, a company with strengths in AI-based video analysis in crime prevention, industrial automation
 - Combining VAAK's highly-accurate analysis technology in detection and recognition with THine's cutting edges in video data transmission technology
 - Cooperation in providing a video analysis starter kit that enables easy application of AI services



Interface to the Future

LSI Biz

AIOT Biz

AIOT Biz

Contribution to com	putational resources including AI server	Hyper Automation	5G Al/loT			
Entering the server business, establishing "THine HyperData, Inc."						
 Contribution to further utilization of generative AI and AI research in Japan Starting sales with 7 models, including AI servers equipped with NVIDIA's GPUs, H100. 						
Al server model with NVIDIA's GPU H100						
Name	THine HyperData, Inc.					
Address	3-24-11, Shin-yokohama, Kohoku-ku, Yokohama, Japan					
Representatives	Chairman and CEO:Takashi Nakahara (Director for AIOT Biz, THine Electronics, Inc.)President:Kenji Mizuno (the former president of Fujitsu Isotec Limited)					
Business	Planning, development, manufacturing, sales and maintenance of AI server and data server products, storage products, switch products, etc., and development, provision and construction of related software, systems and solutions, etc.					
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5G&Beyond-NE, the mid-term strategy from 2022 to 2024

THine

AIOT Biz



5G&Beyond-NE, the mid-term strategy from 2022 to 2024



- size:80.2x68.8x28.7mm, weight approx.108g
- 6) Easy setup with Web GUI

Users can keep network connection in case of communication failure by SIM card connection through connecting to Cloud SIM as back up line.

*Connecting Cloud SIM requires additional contracts with its service providers.

LSI Biz



5G&Beyond-NE, the mid-term strategy from 2022 to 2024

Innovating solution of beyond 5G and 8K, obtaining beyond growth advantages

Beyond 5G/8K

R&D toward 1000Gbps ultra-high-speed data transmission

Successfully developed the World's First Mixed-Signal Baseband Demodulator Technology

The National Institute of Information and Communications Technology (NICT)



Ministry of Internal Affairs and Communications (MIAC)

Hiroshima University Nagoya Institute of Technology



THine Electronics, Inc.

Phase detector DAC+LF +VCO Phase interpolator ADC+T/H MUX & output drivers Wide application
remote medical diagnosis,
eSports,

• 8K TV, etc.





Contribution to SDGs

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- ✓ V-by-One[®] HS plus contributes to reduce energy consumption in high-resolution displays
- $\checkmark\,$ Smarter data transmission in automotive sensing
- Reducing number of cables
 by high-speed data transmission technology
- Reducing energy consumptions
 by achieving low power consumption and
 by achieving heat efficiency in power system
- Reducing energy consumptions in transporting and delivering through AI and IoT technology



Focusing on growing markets, achieving strategic 5 Goals, aiming to achieve <u>3x operating</u> income in FY2024 (compared to FY2021)



THine Electronics, Inc.



▶ Forecast in FY2024

FY2024 is the last year of "5G&Beyond-NE." THine makes its best efforts to achieve the goal.

►LSI : plans to recover to the level of FY2022 from domestic/overseas customers' inventory adjustment.

AIOT: plans to grow business by successful shipments of wireless modules, etc., supporting expansion of smart infrastructure.
(yen in million)

	Forecast in FY2024		FY2023		FY2022		
		Portion%	ΥοΥ		Portion%		Portion%
Revenues	7,207	100.0	143.6	5,018	100.0	5,456	100.0
Gross Profit	3,617	50.2	148.5	2,435	48.5	2,987	54.8
SG&A	2,592	36.0	104.7	2,476	49.3	2,386	43.7
(R&D expenses)	1,220	16.9	110.7	1,102	22.0	1,009	18.5
Operating Income	1,024	14.2	—	△40	△0.8	601	11.0
EBITDA	1,090	15.1	627.5	173	3.5	775	14.2
Ordinary Income	1,026	14.2		71	1.4	906	16.6
(Ordinary Income [*] without foreign currency exchange gain or loss)	1,026	14.2	_	∆32	△0.7	636	11.7
Net income attributable to Owner of the Parent	744	10.3		△69	△1.4	820	15.0







- In FY2024 LSI Biz plans to recover especially in Japanese OA market and China automotive market and to achieve increase in revenues and profits.
- In FY2024 AIOT Biz plans to achieve continuous growth in wireless modules. In addition to drive recorders, remote monitoring to elevators and vending machines, IoT solutions for infrastructure markets are expected to grow as well.



Measures to increase corporate value of THine

Making our best effort to achieve the Mid-term Strategy "5G&Beyond-NE"



(2022 - 2024) Operating income: JPY1,024M* (FY2024 forecast) * 2.1x of FY2021 The Next Mid-term Strategy

> (2025 - 202x) **ROIC more than 10%** Cf. FY2021 4.0% FY2022 4.5% FY2023 -0.3%

[Measures toward increasing corporate value]

- 1) Further enhancing earning capability: <u>enhancing profitability of AIOT Biz (achieved in 2023)</u>, <u>strengthening overseas Biz</u>, and <u>accelerating investment in growing Biz</u>
- 2) Appropriate shareholders return: taking measurements to improve capital efficiency, including *implementation of stable dividend*, and *implementation of flexible acquisition of treasury stock*
- 3) Enhancing our IR activities: *proactively disclosing information* including new products and SDGs as well as enhancing IR information



Shareholder return policy

The entire team will work together to realize our growth strategy and implement shareholder returns based on performance growth.
Despite the loss,





Interface to the Future - Solution by Smart Connectivity -

URL https://www.thine.co.jp/corporate/investors/

Please inquire through the inquiry form in the URL.

Contact: IR Team, General Dept.

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