

# MegaChips

MegaChips Corporation

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MegaChips Corporation

## Interim Review 2014

Six Months Ended September 30, 2014





# Financial Highlight

For the First Half of the Fiscal Year Ending in March 2015

Net sales **¥30.4 billion** [Down 2.7% year-on-year]

Operating income **¥1.7 billion** [Down 28.1% year-on-year]

Net income **¥0.6 billion** [Down 82.3% year-on-year]

POINT 1

While the demand of LSIs for office equipment and communication stayed steady, the demand of game software storage LSI (custom memory) was partially shifted to the second half.

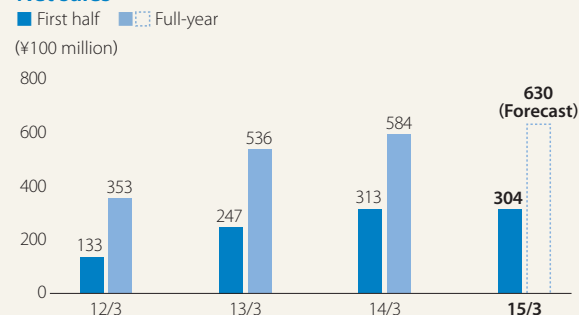
POINT 2

The Company made positive investments in setting up overseas customer bases. The investments include expenses for R&D and for enhancing overseas offices.

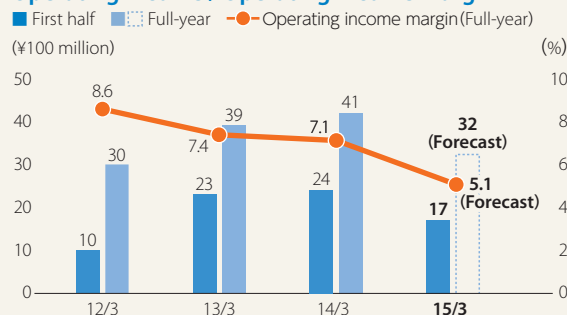
POINT 3

Net income in the same period a year earlier included ¥2,374 million worth of gain on tax adjustment in connection with the recording of deferred tax assets following a merger.

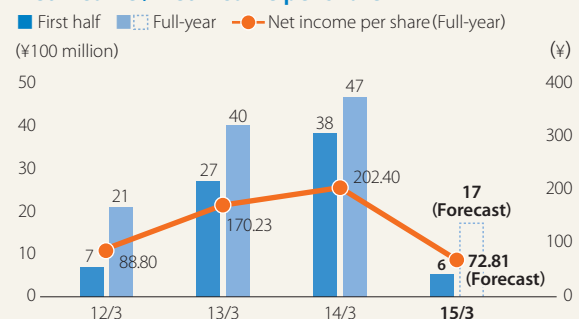
### Net sales



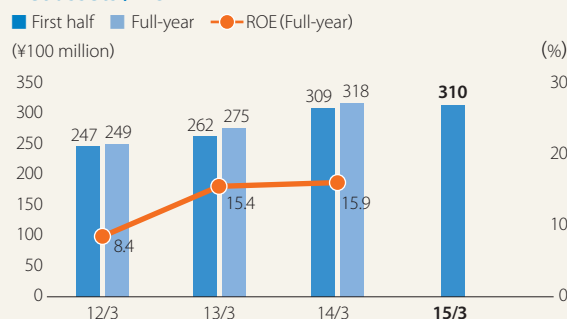
### Operating income / Operating income margin



### Net income / Net income per share



### Net assets / ROE



## Contents

- 1 Financial Highlight
- 2 MegaChips President Speaks on the Growth Strategy
- 6 Learning from MegaChips!
- 7 Special Topic: MegaChips in Your Life
- 9 Corporate Data / Directors and Auditors

### Note on forecast:

In this report, non-historical statements are future forecasts based on future expectations and plans. These future forecasts include risks, uncertainties and other factors, and actual performance and results may differ from the forecasts presented in the report.

President's Message

## MegaChips President Speaks on the Growth Strategy



# We make strategic investments to aggressively develop the global markets.

Akira Takata, President and CEO

MegaChips set its policy of "implementing the business structure reform through the growth of both ASSP and ASIC businesses" in its Medium-Term Management Plan for the fiscal year ending March 31, 2015. Looking back on the six-month period from the start of the fiscal year, Takata reports on the first-half results and explains the background and objectives behind the Medium-Term Management Plan as well as the future strategy.

**Q** What were the results for the first half of the fiscal year ending March 31, 2015 and what is the full-year forecast?

**A** For the first half, net income was higher than original forecast. We maintain our full-year earnings forecast as we will make active investments looking ahead to the future.

year-on-year. Ordinary income reached ¥1,406 million yen, 56.2% higher than forecast and down 46.3% year-on-year. Net income for the half-year period was ¥674 million, 68.6% higher than forecast and down 82.3% year-on-year.

Our full-year earnings forecast for the fiscal year ending March 31, 2015 remains unchanged from the previously announced forecast, including the predicted foreign exchange rate, given that revision of the results would be due mainly to foreign exchange fluctuations and that it is difficult to forecast trends in exchange rates and the impacts caused by the fluctuations. In accordance with our Medium-Term Management Plan, we will aggressively invest in research and development for expanding the ASSP business (Application-Specific LSIs), as well as in cultivation of new markets and customers.

\* Net income in the same period a year earlier included ¥2,374 million worth of gain on tax adjustment in connection with the recording of deferred tax assets following a merger.

For the first half of the fiscal year ending March 31, 2015, the demand of LSIs for office equipment and communication remained steady while the demand of game software storage LSI (custom memory) was partially shifted to the second half. Net sales hence stood at ¥30,492 million, decreased by 3.2% than original forecast and down 2.7% from the same period last year. Operating income was higher than initially forecasted, as a result of growth in sales of products with high profit rates, reduction of R&D expenses and the exchange gain through the consolidated accounting with overseas subsidiaries by the bigger-than-expected depreciation of the Yen. The income setoff portion derived from the exchange rate gap has been adjusted with a non-operating foreign exchange loss.

Consequently, operating income stood at ¥1,786 million, which is 78.7% higher than forecast and down 28.1%

### Results for the First Half of the Fiscal Year Ending March 2015 and Full-Year Forecast

(¥ Millions)

	Results for First Half of Fiscal Year Ending March 2015	Forecast for Fiscal Year Ending March 2015	Results for Fiscal Year Ended March 2014
Net Sales	30,492	63,000	58,469
Operating Income	1,786	3,200	4,173
Ordinary Income	1,406	3,100	4,277
Net Income	674	1,700	4,725



**Q** What are the background and aim of the new growth strategy including the business structure reform?

**A** As we move towards a society in which all devices are connected to the network, the semiconductor demand is expanding around the world. Our strategy is aimed at benefiting from this trend as an opportunity for growth.

We have set in our Medium-Term Business Plan that we will strive to develop the ASSP (LSIs for specific purposes) business for the growing device markets on the basis of the strength of the stable business foundation of the ASIC (LSIs for specific customers) business.

We have so far focused on the ASIC business, which is intended to closely respond to the needs of leading companies in Japan, as our business base. In order to achieve medium to long-term growth, we will aggressively

pursue business targeting major global customers in the growing device markets. We will swiftly introduce competitive ASSP products and establish a firm position as a global company.

Now, we have the Internet of Things (IoT) sector including mobile and wearable devices as our target to focus on. In the future, not only computers and mobile terminals but also wearable devices, automotive devices, medical devices, industrial equipment and all other electronic items will be connected to the network. There are variety of applications of our strong low-power design technologies, image- and signal-processing and communication applications and we anticipate the growing demand for our technologies. We must therefore further press ahead with the effort to construct global systems for marketing, development, applied technologies, support and operations.

We will take these actions to enhance our visibility among leading companies around the world and to increase contacts with customers.

**Q** How is the progress of the new growth strategy and what are the future prospects?

**A** We focus on new product development chiefly in the ASSP and on enhancement of our global structure to achieve growth through new businesses in the next three years.

We have positively invested in mergers and acquisitions in Asia as well as Europe and America, and in new product development in the areas of mobile, IoT, automotive and healthcare devices and worked on globalization in various forms up to now.

First, we have acquired Kawasaki Microelectronics, Inc. two years ago in order to increase global human resources and bases. It was our first step towards globalization. Kawasaki Microelectronics had great experience in trading with overseas customers and held overseas bases in the

United States, India, Taiwan and China. This acquisition expanded our human resources and business bases at the same time.

In February 2014, we purchased the DisplayPort operations from STMicroelectronics. DisplayPort refers to a standard for high speed serial communication of video sources from computers and smartphones to the display monitors. One major purpose of this acquisition was to gain the initiative to lead standard specifications, which are hard to obtain. Now one of our staff member acts as chair of the committee that proposes, discusses and institutes these standards. It means that we are able to lead DisplayPort standard specifications. In addition, this allowed us to acquire DisplayPort customers and to start trading with overseas leading IT firms.

Next, in April, we invested in U.S.-based Vidatronic, Inc. and gained a technology for designing high performance LDO regulators, the power management IC. In the same month, we also acquired Taiwan-based Modiotek Co., Ltd. to construct a system for marketing, technical support for customers and the creation of reference designs in the Asian market including China and Taiwan.

## Market | Market Circumstances Surrounding MegaChips

### 1 Diversification of semiconductor applications and global demand expansion

- Spread of smartphones
- Emergence of wearable devices
- Increasing use of electronics in automobiles
- Networking of industrial equipment and social infrastructure

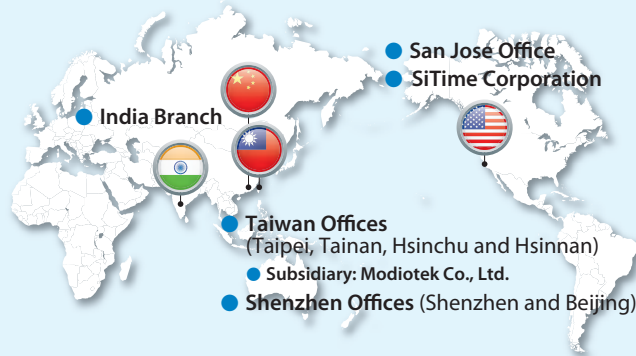
### → Expansion of business activity areas for MegaChips

### 2 Progress in worldwide horizontal regional specialization

- Generalize short-term development and collaboration
- Shift the manufacturing center to China and Asia (transferring development as well as manufacturing)
- Accelerate the division of labor and collaboration in the semiconductor industry

### → Establishment of a strong position in global market

#### MegaChips' global network



## Glossary

**IoT** ▶ Stands for the *Internet of Things* and refers to a mechanism or technology in which computers, information and communication devices, daily necessities, home appliances, buildings, automobiles and all other things in the world are connected to the network for mutual communication and control.

**Wearable devices** ▶ Refers to devices worn on the arm, head or other part of the human body to record and transmit various data. Products in different forms, such as wristwatches, wristbands and glasses, can already be found in the market.

## Action | Progress So Far

### Strengthen the foundation for global expansion through aggressive M&A as well as investment in research and development

#### Business integration with Kawasaki Microelectronics, Inc.

Gain overseas bases in the United States, China, Taiwan and India. Work actively to reinforce the system for securing human resources and establish solid base for overseas business by accumulating experiences in global businesses.

#### Investment in U.S.-based Vidatronic

Acquire technologies in the field of LDO

#### Acquire shares of Taiwan-based Modiotek Co., Ltd. (to make it a subsidiary)

Enhance technical support for Chinese and Taiwanese customers, marketing and development

Apr. 2013

Acquire DisplayPort operations from Europe-based STMicroelectronics

Step into the video device interface market and acquire overseas leading companies as customers

Feb. 2014

Development completion of "frizz", sensor hub LSI and the "BlueChip Wireless", LSI for sub-GHz band wireless communication

Widen the array of ASSP products for the IoT sector

#### Acquire U.S.-based SiTime Corporation and make it a wholly owned subsidiary

Stand as a leading manufacturer of MEMS timing devices  
Platform completion of the IoT sector  
Horizontal expansion of MEMS technologies in the IoT sector

Oct.

Nov.

**DisplayPort** ▶ One of the standards for connecting computers, smartphones and audiovisual devices to display monitors. The standard was drawn up by the Video Electronics Standards Association (VESA), a U.S.-based organization for standardization concerning video signal interfaces. It has attracted attention as a next-generation interface standard.

**LDO Regulator** ▶ A kind of IC for power source control. LDO stands for *Low Drop Out* and the LDO regulator refers to a regulator with a minor difference between input and output voltage. As it stably operates even when the input voltage, such as battery voltage, falls, it is commonly used in many different areas including smartphones, digital cameras and other electronic devices.





In October, the development of our new ASSP products, "Sensor Hub" and "Low-power LSI for sub-GHz band wireless communication" reached completion. With respect to Sensor Hub, business talks with major Chinese manufacturers for smartphones and wearable devices are already underway.

In November, we acquired U.S.-based SiTime Corporation and made it a wholly owned subsidiary to enhance the lineup of ASSP products in the IoT sector. SiTime develops MEMS timing devices that replace existing quartz oscillators. They have already been used in the digital cameras of major manufacturers, tablets, wearable devices and infrastructure equipment for server communication networks. SiTime is a leading company with a market share of over 85% in the MEMS timing devices market.

Two or more timing devices are contained in all communication devices, consumer devices and industrial equipment without exception. Currently, Quartz-based devices are the mainstream, but SiTime's MEMS timing



devices achieve outstanding precision, stability, low power, anti-shock performance, and low cost, and will be essential to mobile and wearable devices as well as the IoT sector in the future.

With these actions, we now have the prospect of acquiring business that serves major global customers in the growing device market that we are aiming to cultivate. In the future, we will steadily develop new businesses to boost the revenue base in accordance with the growth strategy.

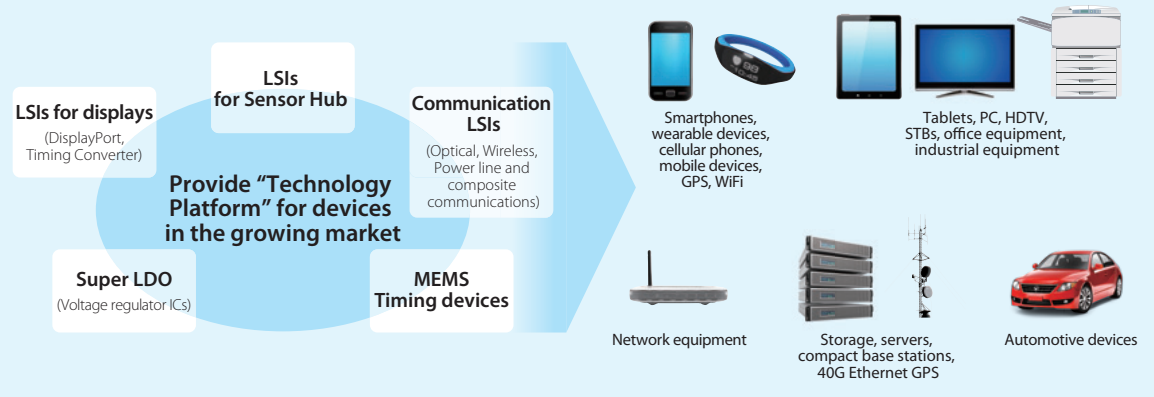
Established in 1990, we will celebrate the 25th anniversary of the foundation in April 2015. I am convinced that it is time to carry out a reform in order to achieve further evolution into a global company recognized around the world. We will continue to make progress so that the world will see a new MegaChips.

I am looking forward to shareholders' continued supports and guidance.



Strategy New Growth Strategy

Promote strategy to acquire major global customers in the IoT market



Glossary KEY WORD

**Sensor Hub** ▶ An LSI that constantly receives signals from several sensors, such as acceleration sensors and gyro sensors incorporated in smartphones and wearable devices to perform data processing. Carrying out complicated processing with very low power consumption is required.

**MEMS** ▶ Stands for *Micro-Electro-Mechanical Systems*. It is a very small electric and mechanical system produced with the use of fine processing technology for semiconductor manufacturing. It has been applied not only in timing devices acquired by MegaChips but also in sensors, filters and display devices.

**Sub-GHz band wireless communication** ▶ Radio waves in the 920 MHz (sub-GHz) band may now be used without license in the IoT sector, which is expected to become widespread. MegaChips has developed LSIs for wireless communication in this sub-GHz band, which is used for sending and receiving sensor data and commands that operate equipment and other IoT communications.

**Timing device** ▶ A device that generates a specified frequency by means of the piezoelectric phenomenon. It sends data to electronic devices in an accurate time and speed.

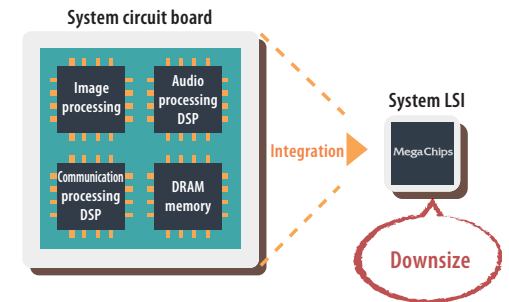
# Learning from MegaChips!

MegaChips answers questions from shareholders.

**Q What is the system LSI?**

It is a single chip that integrates multiple functions and acts as sort of a brain for electronic devices.

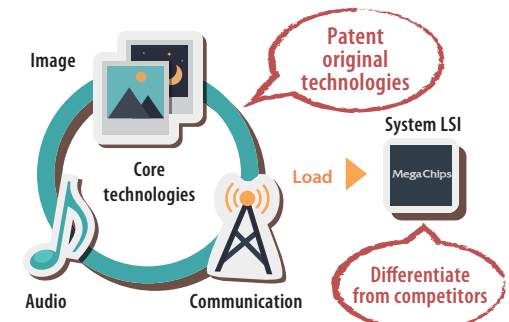
LSI is a kind of integrated circuit (IC) that functions as image processing, audio processing, communication processing, and acts as memory inside game consoles, digital cameras, LCD televisions and other electronic devices. Especially, MegaChips is strong in system LSIs, which integrate multiple functions into a single chip. It is sort of "brain" for electronic devices and it contributes to the downsizing and functional enhancement of equipment.



**Q What are the strengths of MegaChips?**

It is the original technologies that we have constantly been improved in the areas of image, audio and communication.

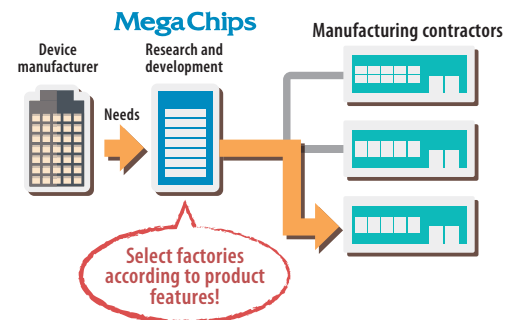
MegaChips has created various technologies in the fields of image, audio and communication that are excellent in originality and indispensable to the evolution of digital equipment. Through the ideas and the expertise in research and development, we enhanced the competitiveness, filed and acquired patents for the technologies we have developed.



**Q What does fables mean? What is its advantage?**

The fables company does not own any factories, but it can manufacture any kind of products.

As the name indicates, fables means "No (less) fabrication (fab)". MegaChips does not have own factory and outsources manufacturing to domestic and overseas companies. We select the optimal equipment and production technology based on the product specifications and performance. We have the great benefit not owing the factory as large capital investments are not needed.



# MegaChips in Your Life

MegaChips supports different aspects of your life with its original technologies and products.

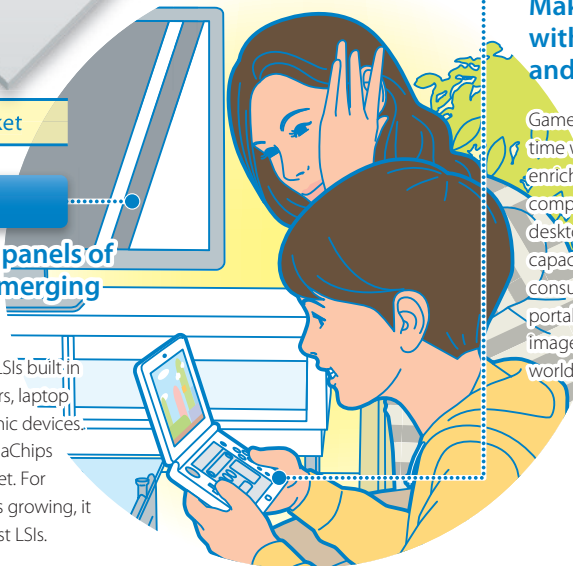
## In the Living Room

Top share in the world market

### LSIs for LCD panels

Provide LSIs for LCD TV panels of extending demand in emerging economies

MegaChips is strong in data transfer LSIs built in LCD panels for TVs, large-size monitors, laptop computers, tablets and other electronic devices. With respect to LSIs for LCD TVs, MegaChips holds a high share in the global market. For emerging countries where demand is growing, it offers high-performance and low-cost LSIs.



Used in global Japanese companies

### LSIs for game consoles

Make games more enjoyable with various LSIs of video and memory

Game consoles are tools for having a fun time with family members and friends to enrich your life. MegaChips provides image compression and decompression LSIs for desktop game consoles, and LSIs with high capacity, low cost and low power consumption for storing game software for portable game consoles to support beautiful images and smooth movement in the game world.

## In the Study

High share in the global market

### LSIs for home networking

Develop LSIs indispensable to home networking that make our lives convenient and comfortable

Home networking refers to connecting computers, televisions, game consoles, recorders and other digital equipment at home to the network and share videos and music, and also to operate home electric appliances. MegaChips is the leading company with the in-house wire communication technology and offers LSIs that achieve stability and high capacity in data communication.



## In town

Used in global Japanese and foreign companies

### LSIs for digital cameras

Develop LSIs that support functions anyone can take good photos

We often come across people, regardless age and gender, holding up their digital cameras to take photos around town. MegaChips has been developing LSIs and IPs that support image processing for digital cameras and smartphones, and contributing to the evolution of those devices.



High share in the global market

### LSIs for optical communication

Provide behind-the-scenes support for increasing high capacity data transfer following the expansion of Internet utilization

The spread of smartphones has resulted in constant increase of communication traffic. Therefore, research and development efforts are underway for optical fiber communication networks and systems that support ultra-high speed communication. Under these circumstances, MegaChips has developed LSIs for ultra-high speed data transfer on optical fiber communication networks called PON and secures leading industry position in the global market.

Used in global Japanese companies

### LSIs for office equipment

Offer data transmission LSIs for composite machines of business scene

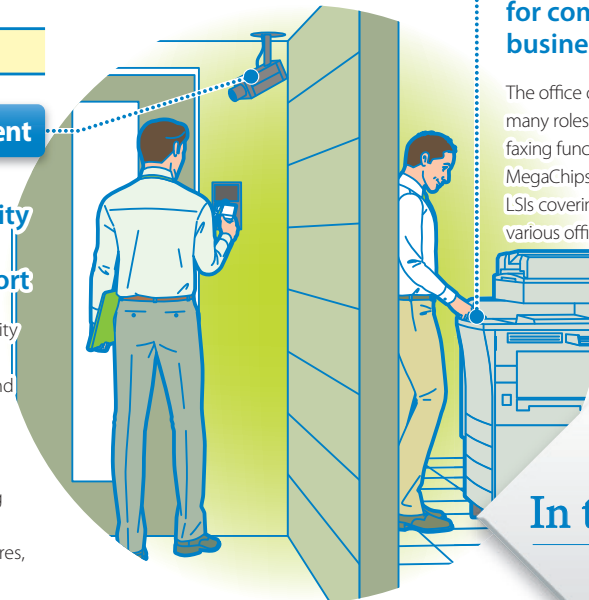
The office composite machines that play many roles like photocopying, printing and faxing functions are essential in the offices. MegaChips develops and offers large-scale LSIs covering data transfer functions for various office equipment.

Used in major domestic firms

### Security system equipment

Realize real-time image transmission in high quality and resolution to ensure safety, security and comfort

MegaChips develops customized security system products such as digital video recorders, video transmission servers and network cameras based on its unique technologies for image, audio and communication. MegaChips supports customers' service operations including security monitoring of factories, power plants, office buildings, apartments, stores, and elevators.



## In the office



## Corporate Data / Directors and Auditors

### Corporate Data (as of December 1, 2014)

<b>Company Name</b>	MegaChips Corporation	<b>Domestic bases</b>	
<b>Business Activities</b>	Design, development and sales of systems LSIs, and electronic devices and systems products with LSIs manufactured by the Company	<b>Tokyo Office</b>	17-6, Ichibancho, Chiyoda-ku, Tokyo 102-0082, Japan
<b>Establishment</b>	April 4, 1990	<b>Makuhari Office</b>	1-3 Nakase, Mihama-ku Chiba 261-8501
<b>Capital Stock</b>	¥4.84 billion	<b>Overseas bases</b>	
<b>Corporate Headquarters</b>	1-1-1, Miyahara, Yodogawa-ku, Osaka 532-0003, Japan Phone: +81-6-6399-2884 FAX: +81-6-6399-2886	<b>MegaChips Technology America Corporation</b>	
<b>Representative</b>	Akira Takata, President and CEO	<b>SiTime Corporation</b>	
<b>Number of Employees</b>	Consolidated: 843 employees (as of September 30, 2014)	<b>MegaChips Taiwan Corporation</b>	
		<b>Modiotek Co., Ltd.</b>	
		<b>MegaChips Corporation, China (Shenzhen Office)</b>	
		<b>India Branch</b>	

### Directors and Auditors



**Akira Takata**  
President and CEO



**Shigeki Matsuoka**  
Executive Vice President



**Masayuki Fujii**  
Senior Managing Director



**Kyoichi Kissei**  
Senior Managing Director



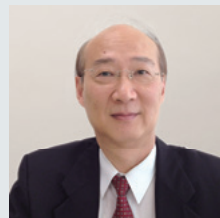
**Tetsuo Hikawa**  
Director



**Gen Sasaki**  
Director



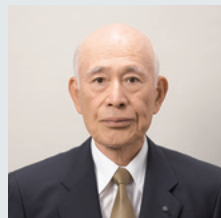
**Keiichiro Akahoshi**  
Outside Director



**Dang-Hsing Yiu**  
Outside Director



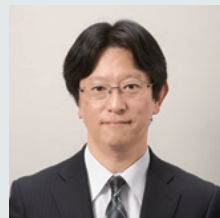
**Tadashi Sumi**  
Standing Statutory Auditor



**Hisakazu Nakanishi**  
Outside Auditor



**Nozomu Ohara**  
Outside Auditor



**Keiichi Kitano**  
Outside Auditor