

Innovations Through Technology

# **Corporate Introduction**



### **Corporate Data**

# Quality is our top priority at all times.

Our objective is to contribute to the advancement and progress of our culture through a consistent supply,

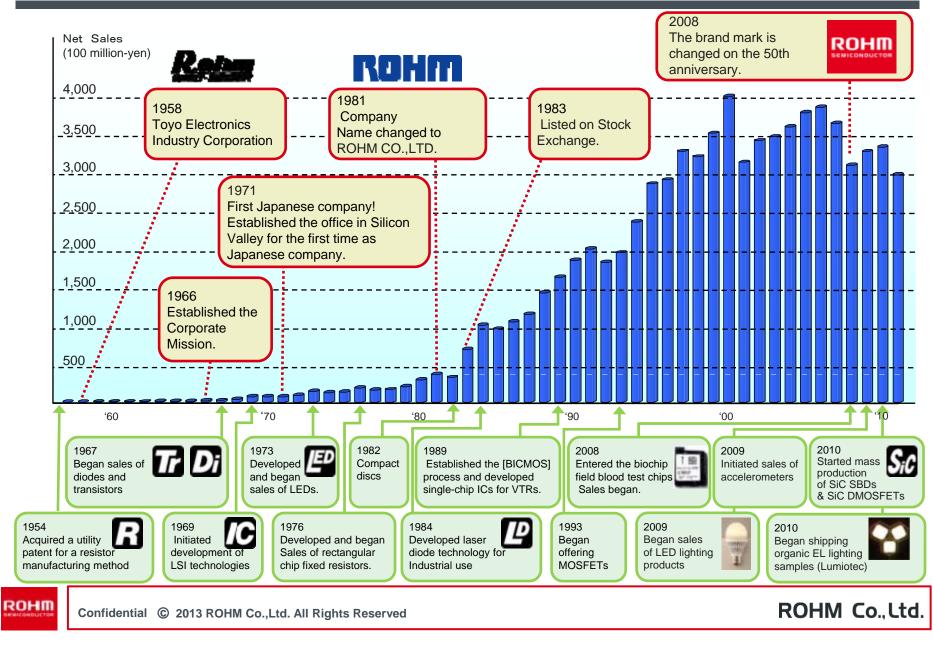
under all circumstances, of high quality products in large volumes to the global market.





ROHM Co., Ltd.

## **Company History**



### **Next 50 Continue to face new challenges**



Miyagi / Miyazaki / Shinyokohama Japan

#### LAPIS Semiconductor Co., Ltd.

Industry leader in communication ICs, low power microcontrollers, voice synthesis ICs, and other digital products. New products and applications are being developed by utilizing ROHM technologies as well.

From 10/2008



Nürnberg Germany



SiCrystal

**∕**IGLED



A global SiC wafer manufacturer that utilizes an intergrated production system from material preparation and fuses fundamental technologies with the latest advancements to provide high quality IC power devices.

From 7/2009





Ithaca NY U.S.A.

Kionix, Inc.



The industry's 3rd largest manufacturer of compact accelerometers that incorporates MEMS technology in order to provide market-leading sensors.

From 11/2009



AGLED Co., Ltd.

Supplier of lighting equipment since 1921. ROHM's semiconductor expertise is reflected in its lighting products, which are garnering increased attention.

Hyogo Japan

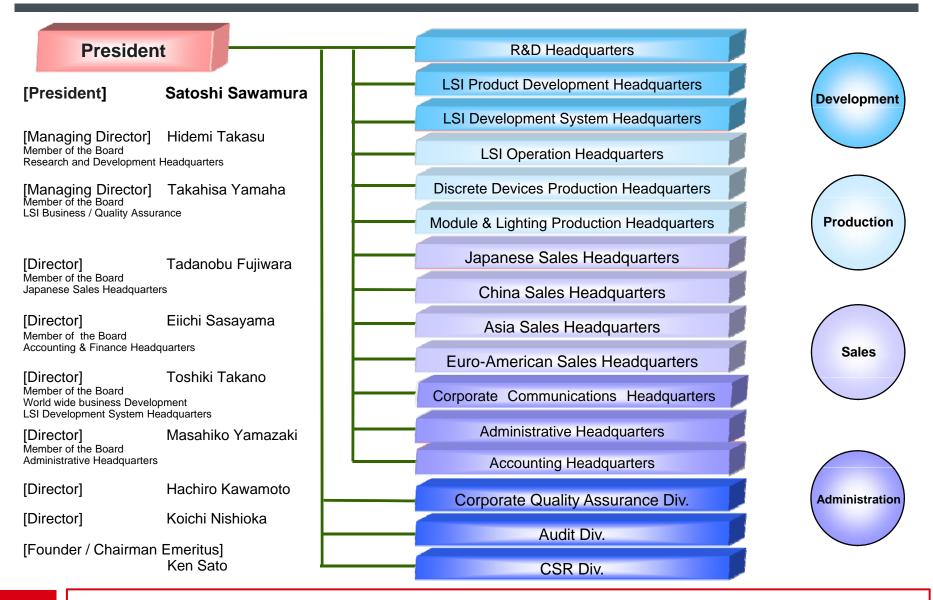
From 10/2010



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### Organization chart



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### R&D HQ

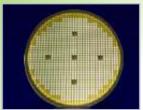
#### Developing novel devices

ROHM pursues constant innovation in its quest to cultivate new technologies, open up new markets, and develop superior products. R&D is performed in a variety of areas utilizing disparate technologies and expertise from multiple disciplines for unmatched synergy.

#### **R&D Project Examples**

#### SiC Power Devices / AlGaN GaN Hetero

New materials are used for higher efficiency, greater performance, and improved functionality in a smaller size.





#### **Biochips**

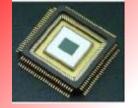
The industry's first trace blood analyzer using a uTAS measurement chip with liquid reagents was developed.





#### **CIGS Image Sensors**

CIGS, which is garnering increased attention as a next-generation material for solar batteries, is used as a photoconversion element in the development of high sensitivity, wide-range image sensors.







Si-CMOS Sensor

CIGS Image Sensor

#### Flexible Organic EL

Organic EL technology features lower power consumption and greater transport efficiency for improved energy savings, enabling the development of thinner displays than plasma or LCD technologies.





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### **LSI Product Development Headquarters**

#### The entire organization is structured by market and application

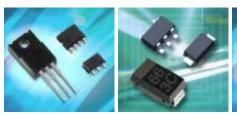
B Bluetooth WiFi HGW router processors Wireless communication ICs Digital ITU Receiver ICs DSRC-RF-ICs ZigBee <sup>®</sup> DSRC	IPM © SiC / IGBT ( Drivers © LED drivers © Motor driver Power suppl © Series regul © SW regulato © System pow © Charge prot © ACDC	ies lators ors ver supplies	Monitor System Single-chip Cor Data Recorders R Isolators	y LDO Regulators for Automotive for Automotive ers Supply for Rear View with CCD Camera atroller IC for Event	& Fog era © Video dec Voice Proc @ Class D p © Low power @ Sound pro	mage enhancers sing correction oders / encorders essing ower amp voice microcontrollers ocessor,	<ul> <li>R Temperature sensor</li> <li>X-ray sensor</li> <li>X-celeration sensor</li> <li>CIGS sensor</li> <li>Pyroelectric sensor (Backend)</li> <li>Far-infrared radiation sensor</li> <li>Ambient light sensor</li> <li>Hall sensor</li> <li>Hall sensor</li> <li>UV sensor</li> <li>Proximity sensor</li> <li>Infrared sensor (IrDA)</li> <li>Gyroscope</li> </ul>
(Dedi cated Short Range Communication): Bidirectional wireless communication technology for ETC and so on Wireless • Communication	Li-ion batter     Pow     Green e	ver	Isolated Gate     4 Diversity De     Auton	emodulation IC	Voice syn USB deco		Motion sensor Sensing Technology
			Enviro	onment			
	levices hnologies	Microcor CPUs	trollers • • DSPs	General and Mer	Purpose nory ICs	Disp	lay
<ul> <li>High-speed coupler</li> <li>Nonvolatile logic ICs</li> <li>CIGS image sensors</li> <li>MEMS</li> <li>Optical communication</li> <li>Vector control motor drivers</li> <li>SiC power devices</li> <li>Micro Display</li> </ul>		<ul> <li>Low power microcontrollers</li> <li>Teak (DSP)</li> <li>Original DSP</li> <li>ARM7™</li> <li>ARM9™</li> <li>Teak Lite (DSP)</li> <li>ARM10™</li> <li>8051</li> <li>ARM<sup>®</sup> Cortex™-MO</li> </ul>		<ul> <li>② Operational amplifier</li> <li>③ Power supplies</li> <li>③ EEPROM</li> <li>③ Voltage detectors</li> <li>④ DRAM</li> <li>③ Comparators</li> <li>● P2ROM™</li> </ul>		<ul> <li>CD drivers</li> <li>Timing controllers</li> <li>FL inverter ICs</li> <li>LED backlight driver</li> <li>CV touch sensor ICs</li> <li>Gradation reference regulators</li> <li>VFD drivers</li> <li>Organic EL divers</li> </ul>	



### **Discrete Production Headquarters / Module & Lighting Production Headquarters**

#### Discretes · Passives

Completely in-house processing ensures consistent, stable supply of high quality products that meet market needs, including high reliability, high power components.



Diodes



Resistors



• SiC Capacitors

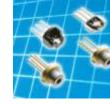
### **Optoelectronics**

Advanced compound technology is utilized to develop a wide array of optical semiconductor products.



Transistors

•LEDs



Laser Diodes



•Tantalum

 Photolink Modules

Power Modules



 Optical Sensors

#### Modules & Lighting Modules

A wide range of market-tested modules is offered featuring ROHM's renowned reliability, created using expertise and experience garnered through 50 years as a manufacturer of semiconductor products of all types.



 LED Lighting Modules



- Contact Image Sensors
- Thermal printheads





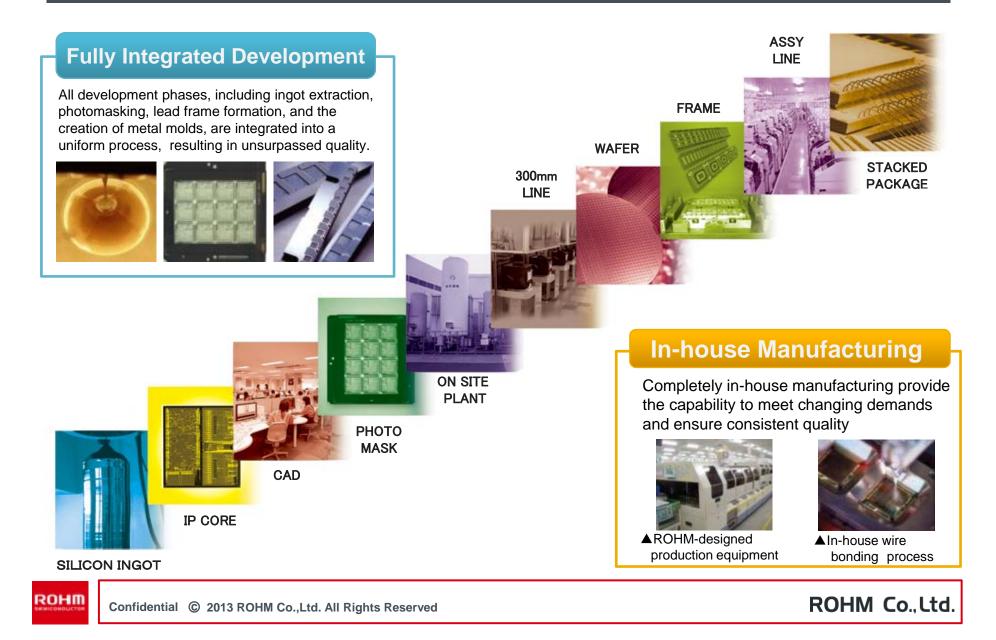
LED Displays



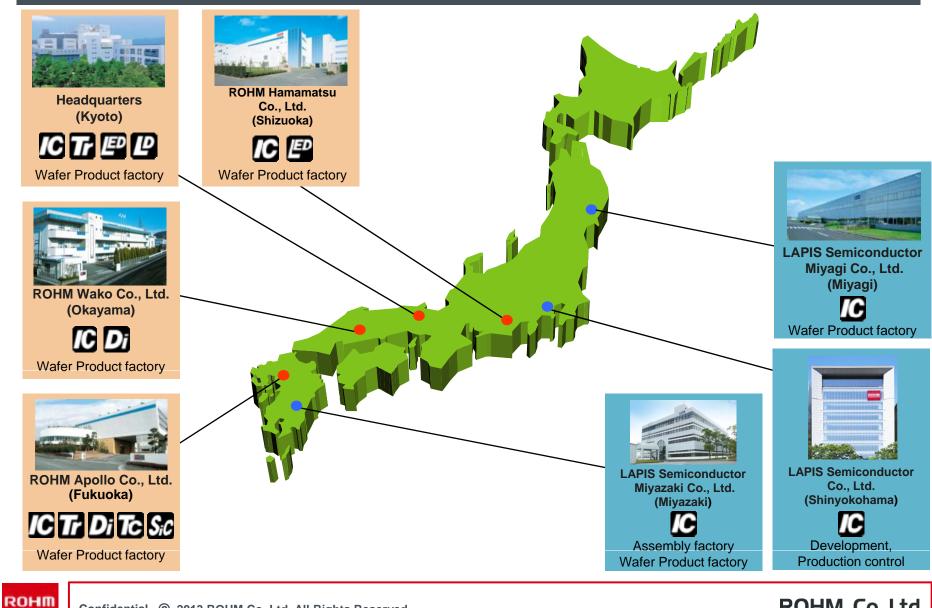




### **Integrated Streamlined Production System**

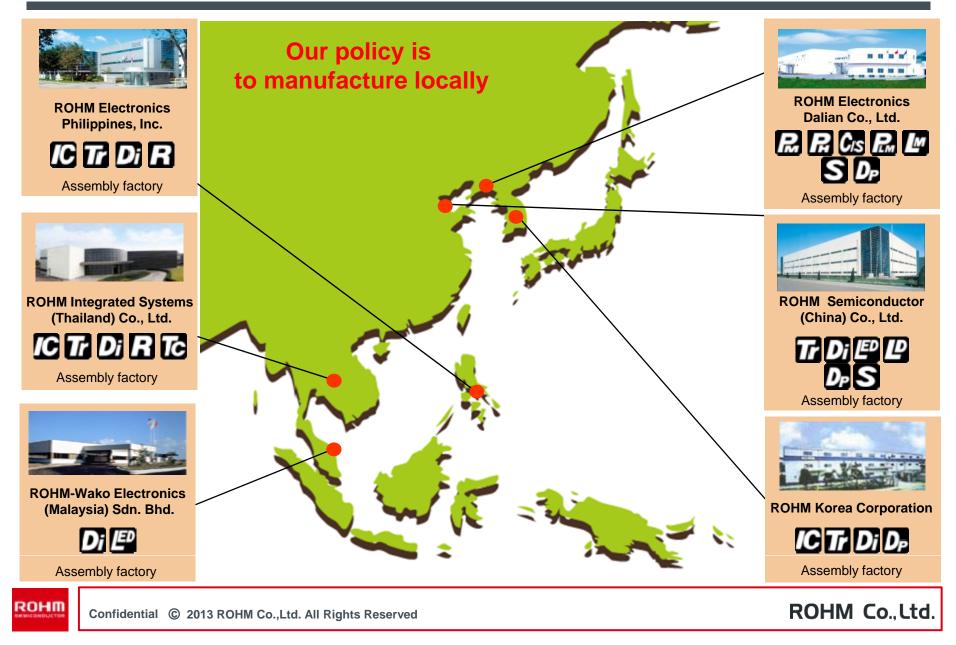


### **Manufacturing Factories in Japan**



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### **Manufacturing Factories in Asia**



### **Quality Assurance**

### **Quality is Our No. 1 Priority**

Quality has been the guiding principle since day one and continues to provide the basis for management practices at all ROHM companies and facilities worldwide





In 2007 ROHM was awarded certificates of compliance with ISO/IEC17025 (an international testing standard) for both the ICP-AES (Inductively Coupled Plasma-Atomic Emission Spectroscopy) and XRF (X-Ray Fluorescence) analysis methods.



•ROHM is the first company in Japan to be certified for two testing methodologies\_\_\_\_\_



ROHM

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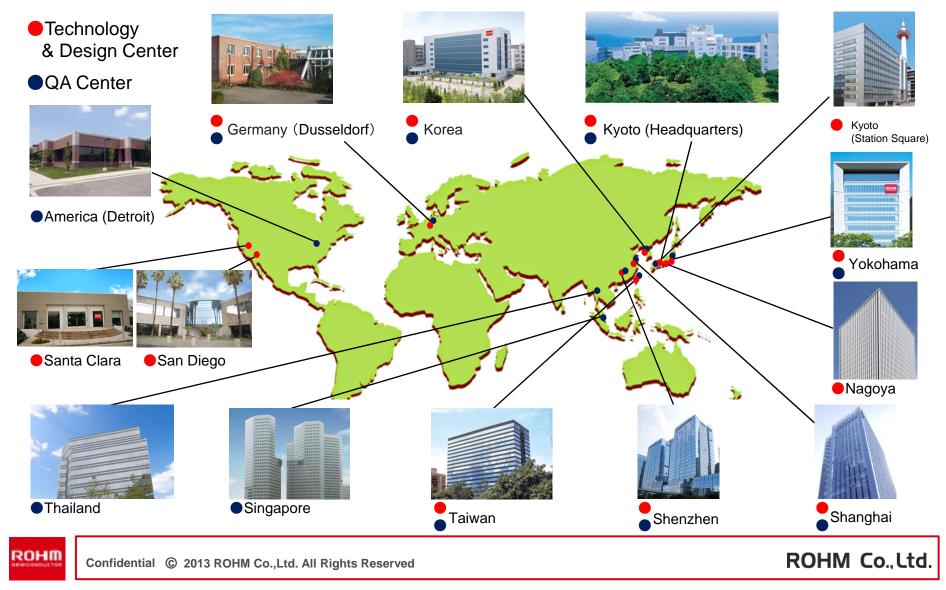
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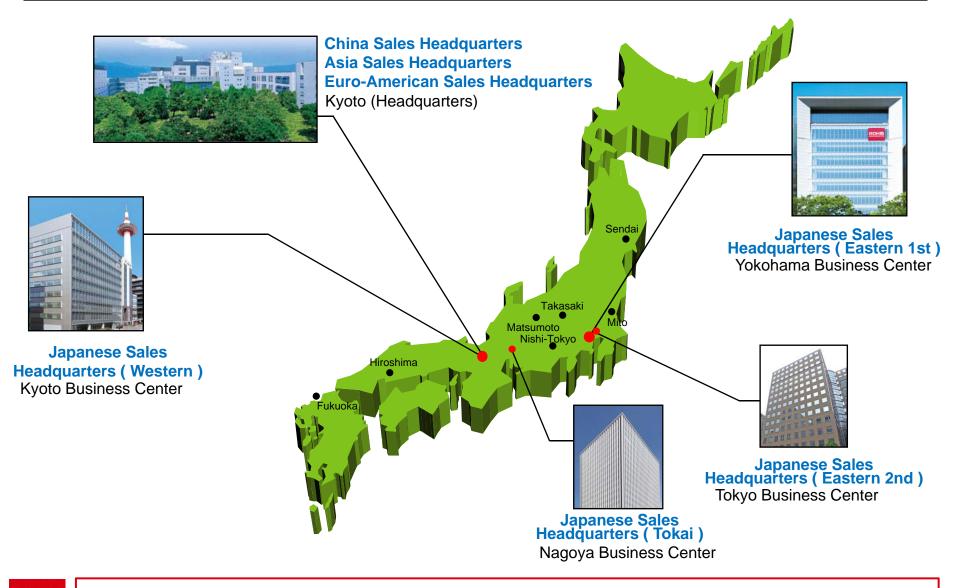


### **Technology / Design / QA Centers**

### Same-day Response to Quality Complaints (First response within 24 hours)

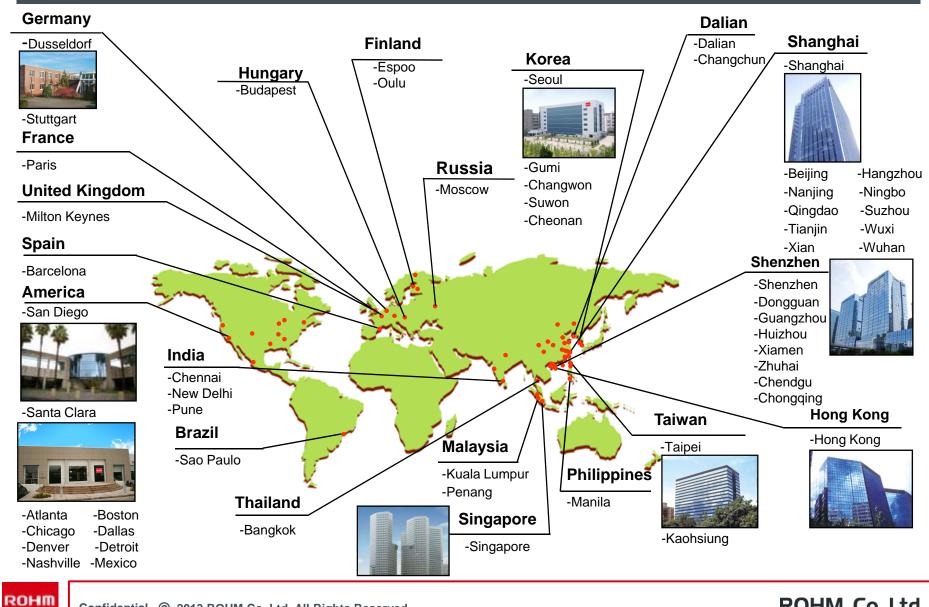


### **Japanese Sales Offices**





### **Overseas Sales Network**



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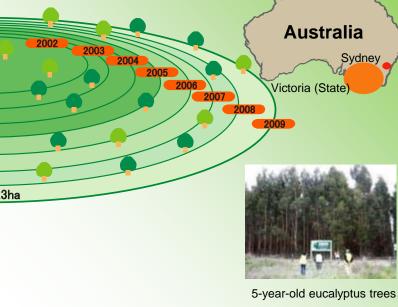
### **Coexisting with the Environment**



#### **Environmental Preservation Activities**

#### Reforestation Activity: The ROHM Forest

A total reforestation area of 923ha has been successfully achieved (190 times the area of the Tokyo Dome), offsetting yearly CO2 production due to manufacturing.







### **Industry-Academia Partnership**



#### Innovative products are currently being developed in collaboration with a number of research labs

Bio Sector	Organic EL	Photonics Devices
Kyushu University	Yamagata University	University of California
Tsinghua University	Kyushu University	Tsinghua University
Iwate University	Kanazawa Institute of Technology	Kyoto University
	Kyushu University Tsinghua University	Kyushu UniversityYamagata UniversityTsinghua UniversityKyushu University

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### **Contributing to Society**

### **Cultural Activities**

#### **ROHM Music Foundation**

The ROHM Music Foundation strives to cultivate young minds and enrich the social tapestry through music. Numerous seminars and festivals, featuring the world's most renowned musicians, are held to promote classical music as well as nurture young, up-and-coming talent.

# Seiji Ozawa Ongaku-juku Performance





#### **Kyoto International Music Students Festival**



Music students all over the world have been invited to Kyoto every year since 1993.



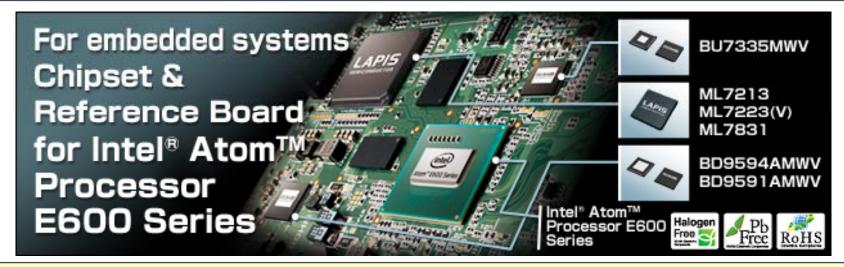
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### **ROHM and Intel**

Started being an eco-system partner as IOH, PMIC and CGIC vendors for Intel Atom E600-series



#### And, followed by a PMIC for Bay Trail-T (Atom-based tablet platform)

ROHM announces development of a Dedicated System Power Management IC to Support Intel's latest Atom™ based platform

Kyoto, Japan, March 4th 2013 – ROHM Co., Ltd. (TSE: 6963) has announced the development of a dedicated system power management IC (PMIC) to support Intel® 's latest Atom<sup>™</sup>-based platform, code name "Bay Trail". A highly integrated power management solution with industry leading power efficiency, ROHM's PMIC is targeted towards ultra-thin form factor tablet and convertible devices.

2013-03-04

