Enhance Renesas’ Value to Support Customer Competitiveness

Enforce devices and technologies that underpin the evolution of Renesas solutions

Platform Solution

- Smart Cars
  - Automotive Information
  - Automotive Control

- Industry 4.0
  - Industrial

- IoT
  - General Purpose

Global Ecosystem

Software

- MCU/SoC
- Analog
- Power

Device/Kit Solutions

Strengthen solution propositions

Strengthen product lineup

Strengthen technological capabilities

Core Technologies
- Functional Safety
- Security
- Sensing
- Low Power
- Connectivity

Fundamental Technologies
- Process Device
- Mounting
- Elemental IP
- Testing
- EDA, Development Methodologies
Established Role of CTO to Further Strengthen Technological Capabilities

Members of the Board

- Takao Endo, Chairman & CEO
- Tetsuya Tsurumaru, President & COO
- Hidetoshi Shibata, EVP & CFO
- Nobuyuki Nakano, Outside Director
- Tetsuro Toyoda, Outside Director

Corporate

Corporate Planning Unit
- Hidetoshi Shibata, EVP & CFO

Sales/Marketing

Global Sales & Marketing Unit
- Tsuneo Takahashi, EVP & CSMO
- Manabu Kawashima, SVP (Japan & Asia)
- Ali Sebt, SVP & President of Renesas Electronics America
- Gerd Look, SVP & President of Renesas Electronics Europe

Design/Development

1st Solution Business Unit (Automotive)
- Ryuji Omura, EVP

2nd Solution Business Unit (General Purpose)
- Yoshikazu Yokota, EVP

Development of Core/Fundamental Technologies

- Hideto Hidaka, SVP & CTO

[Mission] · To plan technological strategies · To establish core technologies · To train and recruit technical talent

Manufacturing

Production and Technology Unit
- Masahiko Nozaki, EVP
Strengthen Product Lineups and Solution Propositions

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Strengthen product lineup
- Strengthen technological capabilities
Delivering Devices, Kits and Platforms
Provide enhanced value propositions to customers with solutions based on Renesas’ technological capabilities

Customer Value Propositions

- Customer expansion
- Platform solution
  - Ecosystem
  - Software
  - Application
- Kit solution
  - Kit device
  - System know-how
  - Device integration
- Device solution
  - Device performance

Renesas’ Added Value

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- Automotive
  - Cockpit & ADAS
  - MCU + Analog + Power
  - Ideal solution for HEV/EV
- General Purpose
  - Industrial
  - IoT
  - High-end IoT devices (under development)
  - Industrial inverter control solutions
  - Reduced size and power consumption
- Device
  - High performance
  - Energy efficiency
  - Safety
- Kit
  - IT networking
  - HMI display
  - High-speed data processing

*1 ADAS: Advanced Driver Assistance System
*2 HMI: Human Machine Interface
Strengthen Product Lineup with Advanced Devices

40nm MONOS*1 MCU

- Problems with heat, speed, memory capacity and chip size

Features

- Low power consumption
- High frequency (Highly-precise control)
- Dual lock step core (Robustness/Fail-safe)
- Large-capacity memory (Increased # of software/Background processing)

Energy efficiency

90nm BiCMOS*2

- Problems with heat, speed, and chip size

Features

- Low power consumption
- High integration
- High frequency (Highly-precise control)

*1 Metal Oxide Nitride Oxide Silicon

*2 BiCMOS integrates 3 different IC functions in one chip (Bipolar (Linear IC) + CMOS (Logic IC) + DMOS (Power IC))
Develop the Emerging Markets with Kit Solutions
Cooperation targeting the HEV/EV market

HEV/EV motor control kit solution

- Motor control MCU
  - CPU core
  - Motor Control IP
    - Vector Engine
- μ isolator
- Pre-driver
- High-speed breaker
- IGBT
- Temperature Accuracy Calibration
- HEV/EV motor
- Resolver

- Increasing the ratios of HEV/EV at carmakers are inevitable in markets where the need for fuel consumption control continues
-Began cooperation with local carmakers
Platform Solutions for Growing Markets

Strengthening offerings and becoming the de facto standard in the industry by expanding global ecosystems

Smart Cars (ADAS)
Integrated cockpit / Car navigation + Safe driving support system
- # of participating companies of the consortium founded in 2005 grew to approx. 170
- Jointly-developed advanced applications including ADAS

Industry 4.0
High speed and low power industrial Ethernet communication
- Established a consortium in April 2015 that currently consists of approx. 40 participating companies
- Jointly-developed solutions to promote smart factory

IoT
General-Purpose
- Introduced the Renesas Synergy VSA Program*1 in October 2015 with 11 participating companies
- Rich software library fully-verified as compatible with Renesas Synergy MCUs

*1 VSA Program: Verified Software Add-on Program
First to introduce IoT platform for embedded system designers

A complete and qualified platform that **accelerates** embedded development, inspiring **innovation** and enabling **differentiation**

Our Three Values

- **Faster Time to Market**
- **Reduce Total Cost of Ownership**
- **Lower Barriers to Entry**

Synergy Software

- Software APIs
  - Synergy Software Package (SSP)
  - BSP
  - HAL Drivers
  - Application Framework
  - Functional Libraries
  - ThreadX® RTOS
  - FileX®
  - GUIX™
  - USBX™
  - NetX™
  - NetX™ Duo
  - BSP

- Synergy Microcontrollers
  - Synergy Tools & Kits
  - Synergy Solutions
  - Synergy Gallery

- Qualified Software Add-ons (QSA)
  - Protocols
  - Algorithms
  - Functions
  - Cert Artifacts
  - Specialties
  - … and more

- Verified Software Add-ons (VSA)
  - Protocols
  - Algorithms
  - Functions
  - Cert Artifacts
  - Specialties
  - … and more

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Partnership Activities
Renesas DevCon 2015 held in the US

- Private event showcasing Renesas products and technologies for customers and partners
- Held from Oct 12-15, 2015 in West Coast with approximately 1,400 visitors

In collaboration with 5 partners, incl. software companies, demonstrated smart cars integrating technologies that realize ADAS and facilitate early development

Collaboration with Verizon, an American major telecommunications company, to facilitate the connections between Renesas Synergy-based devices and the cloud
Executive Summary
Towards Renesas’ future growth and enhanced brand image

- Contribute to customer competitiveness
- Expand Renesas’ value propositions
- Strengthen product lineup
- Strengthen technological capabilities
- Strengthen solution propositions

Further pursue:

- Contribution to customer competitiveness
- Expansion of Renesas’ value propositions
- Renesas’ future growth and enhanced brand image
(FOREWARD-LOOKING STATEMENTS)
The statements in this presentation with respect to the plans, strategies and forecasts of Renesas Electronics and its consolidated subsidiaries (collectively “we”) are forward-looking statements involving risks and uncertainties. We caution you in advance that actual results could differ materially from such forward-looking statements due to several factors. The important factors that could cause actual results to differ materially from such statements include, but are not limited to: general economic conditions in our markets, which are primarily Japan, North America, Asia and Europe; demand for, and competitive pricing pressure on, our products and services in the marketplace; our ability to continue to win acceptance of its products and services in these highly competitive markets; and movements in currency exchange rates, particularly the rate between the yen and the U.S. dollar. Among other factors, a worsening of the world economy; a worsening of financial conditions in the world markets, and a deterioration in the domestic and overseas stock markets, would cause actual results to differ from the projected results forecast.