Modern society has to deal with numerous challenging issues, like booming demand for electric power worldwide, rapid urbanization and increasing population in emerging countries, and the aging of the world's population.

Such problems are especially prominent in the emerging countries. It is no longer enough to transplant the status quo of the developed countries to emerging ones. Today we are called upon to seek solutions to problems in both types of countries at the same time. At the Renesas Electronics Group, we believe we can solve these problems by building a society that is safe, secure, comfortable, and eco-friendly.
Contributing by Offering Optimal Services with More Added Value

The Renesas Electronics Group aspires to respond to a changing market environment and build a society that is safe, secure, comfortable, and eco-friendly. We pursue this aim by offering optimal services with more added value. We have three tiers of semiconductor solutions—devices, kits, and platforms—which we make available to our primary fields of focus: Automotive, Industrial and Home Electronics, and OA/ICT.

**Automotive**
- Integrated cockpit/navigation + safe driving support
- Ecosystem collaboration
- Solutions for new e-mobility, motorbikes in emerging countries
- MCU + Power kit solutions
- MCUs for driving, steering, and braking control
- Analog and Power semiconductors

**Industrial and Home Electronics**
- Industrial Ethernet
- Industry-standard platforms
- Solutions for motor control, smart meters
- MCU + Power kit solutions
- General-purpose MCUs for embedded solutions
- Power semiconductors for industry

**OA/ICT**
- Network/surveillance camera platforms
- Solutions for offices, communications, security
- MCU + Analog kit solutions
- OA/Camera MCUs
- Network memory, MCUs for OA/Camera

**Device value**
- Performance, Function

**Kit value**
- Kit device, System know-how

**Platform value**
- Ecosystem, Software, Application

Devices: Our traditional business model, offering individual products like MCUs, analog devices, and power semiconductors
Kits: A business model offering solutions optimized for customers’ products with combinations of individual semiconductor products
Platforms: A business model offering solutions that include software and intellectual property (IP) as products get more complex and highly functional.
Integrated Cockpit

**R-Car Platform Achieves People-Friendly Interface**

The next generation cars are increasingly integrating information systems (IT), such as high-performance navigation and safe driving support, with conventional “driving, steering, and braking” control systems (control). As cars incorporate more and more IT, the driver seat is evolving into an “integrated cockpit,” bringing together the traditional meter display, infotainment (such as IT data that is connectable to the car navigation systems and can be obtained from the cloud), and driving support in the form of warnings and surround view. All of this data is made available to the driver on an easy-to-read display. The integrated cockpit is a good example of a people-friendly interface. By instantly offering the needed information just when it is needed, it enhances driver comfort, safety, and security.

For the Renesas Electronics Group, the integrated cockpit concept has three aspects: flexibility (supporting multiple screens), scalability (supporting multiple vehicle models), and personalization (accessible to multiple generations of users). The solutions we offer are tailored to achieve these objectives.

Scalable and Flexible R-Car Platform

The Renesas Electronics Group offers the R-Car SoC series in a scalable format matching customer specifications, whether entry class, midrange, or premium class. R-Car is an open platform that we are building with more than 130 partner companies. We are working to expand the menu of software, development environments, and so on supporting the variety of operating systems used by customers. In this way we are working to achieve an integrated cockpit with the three concepts.

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R-IN Platform

Combining High-Speed Communication with Low Power Consumption to Boost Factory Efficiency and Save Energy and Labor

Modern factories are increasingly using tools like industrial robots to replace human operators. They are also adopting FA (factory automation) to enhance work efficiency and safety. FA devices have linked to each other with a variety of network standards, but now the world is moving toward connecting FA devices by industrial Ethernet which is based on Ethernet, the global network standard. Linking numerous control devices by IT allows entire factories to operate efficiently while saving energy and labor. The Renesas Electronics Group was among the first to support various communication protocols for industrial Ethernet. We offer the R-IN SoC, which saves energy while enabling communication speeds that are 5 to 10 times faster than before. Through the R-IN Consortium, a group that we announced in September 2014, we will collaborate with our partner companies to build R-IN platform solutions by offering a range of software and development environments. By developing R-IN for use all the way up to the highest levels of the factory, we will contribute to greater efficiency and savings of energy and labor in factories around the world with this de facto solution for all FA devices. In addition, we will develop R-IN not just for the factory but also for applications requiring real-time communications, such as robot attitude control.

Enabling Faster, Energy-Saving Industrial Ethernet with Super Real-Time R-IN Engine

- Super-fast real-time response
- Stable control with low fluctuation
- Enables low-power systems

5 to 10 times faster communication

Supporting the World’s Standards

Launch of R-IN Consortium

In September 2014, we started to invite partner companies to jointly provide software, operating systems, development environments that support R-IN.

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