1. **Media alert**

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**Renesas Electronics Highlights Embedded Artificial Intelligence at electronica 2018**

*Technological Advancements Showcased in Hall B4/Booth #556 for Smart Living, Infrastructure, Factory Automation, Healthcare and Automotive Environments*

*Special Guest on Renesas Stand: Nick Heidfeld, member* *of Mahindra Racing Formula E Team Sponsored by Renesas*

Düsseldorf, November 7, 2018 – Embedded artificial intelligence (e-AI) is paving the way towards a safer, healthier, greener and smarter world. Renesas Electronics Corporation (TSE:6723), a premier supplier of advanced semiconductor solutions, announced it will showcase its innovations that are transforming the embedded design landscape at the electronica trade fair, which takes place November 13-16, 2018 at the Munich Trade Fair Centre. Renesas will demonstrate how to deliver intelligence to endpoints and highlight solutions and techniques that enable system developers to speed their solutions for smart homes, smart healthcare, connected factories and infrastructure, as well as for the automotive segment. Renesas is also proud to present Nick Heidfeld, member of the Mahindra Racing Formula E Team, as its special guest on the Renesas stand. On November 13, ‘Quick Nick’ will be signing autographs on the Renesas booth in Hall B4 at booth #556 from 15:45 to 16:30.

**Technology Insights**

**Embedded Platforms Conference: Michael Hannawald**, Senior Vice President and Deputy General Manager of Industrial Solution Business Unit will give a key note speech on the importance of endpoint intelligence across a variety of applications.

* Topic: Embedded Artificial Intelligence – Why the endpoint doesn’t want to stay stupid
* When: Thursday, November 15, 12:50 - 13:20
* Where: ICM – International Congress Centre

**Medical electronic conference: Kaushal Vora,** Marketing Director, Healthcare & Emerging Technologies, will give a keynote speech on the crucial role that AI and other emerging technologies play in medical device design and its implications for the healthcare industry.

* Topic: Thinking Out Loud: The Expanding Role of Embedded Technologies in Medical Devices
* When: Thursday, November 15, 15:10 - 16:05
* Where: ICM – International Congress Centre

**Industrial IoT forum: Knut Dettmer**, Senior Manager, Industrial Solution Business Unit, will discuss how endpoint intelligence contributes to advancing smart factory precepts and boost efficiency.

* Topic: Retrofitting Production Lines with Edge Analytics to increase Production Efficiency
* When: Thursday, November 15, 13:00 - 13:25
* Where: electronica forum hall C3, stand 534

**Solution Demonstrations**

Key factors in placing higher intelligence at the endpoint are performance and capability, ability to execute artificial intelligence, and high energy efficiency. At electronica, Renesas will be showing practical examples of all these factors by execution of AI inference for real-time action at the endpoints, running complete systems from harvested energy, realizing low-power wireless connectivity, providing intuitive human-machine interfaces, and demonstrating four advanced automated driving solutions.

* **e-AI solutions**

In the **first** of **three e-AI demos**, Renesas will be racing Cloud AI, Edge AI and e-AI against each other to compare speed and performance. The **second** showcases how a single RX microcontroller (MCU) can simultaneously run sensorless vector motor control and execute predictive motor failure analysis. The **third** e-AI demo highlights image recognition using a RZ/A2M microprocessor (MPU) which incorporates Renesas’ exclusive Dynamic Reconfigurable Processor (DRP) that executes both machine vision and artificial intelligence in real time.

* **Energy harvesting solutions**

Renesas will be showcasing **three extreme low-power applications** using the **new ground-breaking energy harvesting embedded controller** based on Renesas’s unique Silicon-on-Thin-Buried-Oxide *(*SOTB*)* process technology that enables energy harvesting to eliminate the need for batteries to provide power. The **first** demo measures and displays an object’s peak velocity using just the small amount of energy harvested from stretching a piezoelectric material. The **second** demo reveals how Renesas’ breakthrough technologies enable enough energy to be harvested to power a smart garment worn for ECG heart monitoring. The **third** demo shows a practical agricultural soil monitor that measures parameters and transmits them wirelessly – all powered by harvested energy from light and wind.

* **Cloud solutions**

Developers of connected applications using Renesas Synergy™ S5D9 MCUs will want to see Renesas’ **IoT Device-to-Cloud Connectivity** based on AE-Cloud1 for rapid evaluation, prototyping and development. They can also discover the **new AE-Cloud2 kit**, ensuring global LTE IoT cellular connectivity to major enterprise cloud service providers.

* **Power management solutions** **–** From digital and industrial power solutions up to battery management solution reference designs, Renesas will present a broad variety of its latest power management portfolio.
* **Advanced automotive solutions**Renesas will be demonstrating four aspects of its automotive expertise that support intelligent endpoints in and around the car:
	+ **Embedded Computer Vision for Automated Driving** is demonstrated with the high-performance, low power consumption IPs for stereo vision and dense optical flow supporting Level3+ automated driving. The required camera data is simulated with Renesas’ OpenADx environment.
	+ The **Surround View Solution** shows how parking can be made more comfortable and safer in the future, with highly integrated SoCs and software solutions from Renesas and partners.
	+ The **Connected Car Simulator** demonstrates a predicted driving assistant, monitoring the driver and its driving behaviour locally, whilst connecting to the Cloud for further driving assistant information and fleet management services.
	+ The **Mahindra Race Simulator** leverages Renesas’ collaboration with Mahindra, presenting an exciting chance to participate virtually in Formula E racing, which is supported from Season 5 onwards with the newly developed battery management system from Renesas. As a special highlight at electronica, Quick Nick gives the Mahindra Race Simulator a lap time against which every visitor can compete during electronica. Attractive prizes await the fastest of all participants. Join us for a race!

**About Renesas Electronics Corporation**

Renesas Electronics Corporation ([TSE: 6723](https://www.jpx.co.jp/english/)) delivers trusted embedded design innovation with complete semiconductor solutions that enable billions of connected, intelligent devices to enhance the way people work and live—securely and safely. A [global](https://www.renesas.com/en-hq/about/company/profile/global.html) leader in microcontrollers, analog, power, and SoC products and integrated platforms, Renesas provides the expertise, quality, and comprehensive solutions for a broad range of Automotive, Industrial, Home Electronics, Office Automation and Information Communication Technology applications to help shape a limitless future. Learn more at [renesas.com](https://www.renesas.com).

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