**News Release**

No.: REN2221(A)

**Renesas Unveils Industry’s First I3C Intelligent Switch Family for Next Generation Server, Storage and Communications Systems**

*Innovative Devices Enable Control Bus Scaling in Chassis- and Rack-Based Systems While Simplifying Overall Design*

**Düsseldorf, May 31, 2022 ―** Renesas Electronics Corporation (TSE:6723), a premier supplier of advanced semiconductor solutions, today unveiled the industry’s first I3C intelligent switch devices targeting next generation server motherboards and other infrastructure equipment. The new chips vastly enhance scalability and reliability while reducing the complexity of high-performance system designs. They enable I3C control plane networks with multiple initiator controllers, such as CPU and Baseboard Management Controllers (BMC), to support targets across a large physical network running at full speed by improving signal integrity and reducing capacitive loading. They also support heterogeneous designs by providing IO level shifting and protocol translation for mixed I2C/SMBus and I3C networks.

The MIPI I3C® bus is a scalable control bus interface for connecting peripherals to processor or other management controllers. It offers advantages of high performance, improved reliability, very low power, and low electromagnetic interference (EMI). All of these benefits enable new system functionality such as advanced telemetry, fault recovery, sideband security, component authentication and faster boot times.

Current system designs often use the legacy I2C protocol and simple field-effect transistor (FET) switches to connect initiator and target devices on a motherboard. This approach cannot scale to I3C speeds, which fundamentally limits system management to the most rudimentary of capabilities. Renesas’ new I3C intelligent switch family allows expansion of two initiator (upstream) ports to four, eight or more target ports at max speed with full protocol awareness and compliance. The new Renesas family also provides seamless translation between I3C and I2C devices allowing full plug and play compatibility of legacy devices onto the control plane network. The I3C Intelligent switch is a result of close collaboration between Renesas and Intel teams starting with conception, specification definition and other pre silicon activities. The collaboration continued to post silicon activities including software development and component and system level validation.

“Renesas was the pioneer of I3C hubs and expanders targeting the DDR5 DIMM market and we have always imagined great potential for this technology to proliferate across the entire platform,” said **Rami Sethi, Vice President, Infrastructure Mixed Signal Division at Renesas**. “We are thrilled to have worked with Intel to realize that vision with the introduction of our new I3C intelligent switch family. These devices empower our customers and partners to bring advanced platform management capabilities to every subsystem within the rack.”

“We are pleased at the strong collaboration between Renesas and Intel in defining an essential circuit solution for the expanding use cases of MIPI I3C Basic applications,” said **Vik Tymchenko, VP and GM Platform Hardware Engineering Division at Intel**. “Products like the I3C intelligent switch family help solve the fundamental limitations of MIPI I3C interface implementations in data center hardware. With an I3C switch we can increase capacitance and devices supported by an I3C network.”

Renesas is a world leader in high-performance computing peripheral devices. The new I3C intelligent switch family complements Renesas solutions such as the DDR5 I3C expanders, registered clock drivers (RCDs), power management ICs (PMICs), serial presence detect (SPD) hubs, temperature sensors and data buffers.

**Availability**

Renesas is offering two versions of the I3C intelligent switch device, one with two upstream ports and four downstream ports and another with two upstream ports and eight downstream ports. The new devices are sampling to select customers now and are expected to be widely available in the first quarter of 2023. More information is available at [www.renesas.com/i3c](https://www.renesas.com/us/en/products/memory-logic/memory-interface-products/memory-multiplexers?utm_campaign=memory_i3cexpander_gen2&utm_source=press_release&utm_medium=press_release&utm_content=i3c_lp).

**About Renesas Electronics Corporation**

Renesas Electronics Corporation ([TSE: 6723](http://www.jpx.co.jp/english/)) empowers a safer, smarter, and more sustainable future where technology helps make our lives easier. A leading global provider of microcontrollers, Renesas combines our expertise in embedded processing, analog, power, and connectivity to deliver complete semiconductor solutions. These Winning Combinations accelerate time to market for automotive, industrial, infrastructure and IoT applications, enabling billions of connected, intelligent devices that enhance the way people work and live. Learn more at [renesas.com](http://www.renesas.com/). Follow us on [LinkedIn](https://www.linkedin.com/company/renesas/), [Facebook](https://www.facebook.com/RenesasElectronics/), [Twitter](https://twitter.com/renesasglobal), [YouTube](https://www.youtube.com/user/RenesasPresents), and [Instagram](https://www.instagram.com/renesas_global/).

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**Media contact for further information, text and graphics or to discuss feature article opportunities:**

Alexandra Janetzko / Martin Stummer

HBI Helga Bailey GmbH (PR agency), Stefan-George-Ring 2, 81929 Munich, Germany

Tel.: +49 89 99 38 87-32 / -34

Email: alexandra\_janetzko@hbi.de / martin\_stummer@hbi.de

Web: [www.hbi.de](http://www.hbi.de/)