**News Release**

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**Renesas Electronics Introduces Industry’s First ASi-5 ASSP for Industrial Automation**

*New ASSP Delivers Easy Integration and Enhanced Performance from OFDM (Orthogonal Frequency Division Multiplexing) for Smart Sensors, Actuators, and Networked Industrial Automation Devices*

**Düsseldorf, November 20, 2019 ―** Renesas Electronics Corporation (TSE:6723), a premier supplier of advanced semiconductor solutions, today introduced the ASI4U-V5 ASSP – the industry’s first silicon solution to fully implement the ASi-5 (Actuator Sensor Interface specification version 5) standard for industrial network equipment. ASi-5 offers superior performance and usability over ASi-3, delivering 1.27 ms cycle time, 200m cable length and 96 slaves per segment.The field-proven ASSP delivers an easy-to-use fieldbus integration option for developers working with sensors, actuators, and other industrial equipment requiring easy and cost-efficient fieldbus connectivity.

The new ASI4U-V5 ASSP features a fully verified and field-proven firmware that reduces the complexity associated with ASi-5 implementations, allowing users to minimize design risks. The ASSP is fully backwards compatible with ASi-3 devices while incorporating the shorter cycle times, higher bandwidth resulting from the use of Orthogonal Frequency Division Multiplexing (OFDM), enhanced diagnostics, and state-of-the-art robustness associated with the ASi-5 standard. The ASSP also supports all bus topologies, including line, star, and tree. Users can also take advantage of easy and cost-efficient integration with other industrial protocols such as IO-Link and HART.

“As the digital transformation wave sweeps across industrial factories and production facilities, the ASi-5 interface constitutes the shuttle into digitization for millions of connected industrial endpoints and devices at the edge,” **said Niels Trapp, Senior Director of Industrial Automation Business Division at Renesas.** “The tight collaboration of Renesas and its ASi-5 development partners proved to be extraordinarily successful, and we are excited to bring the first ASi-5 silicon solution to market and enable faster transmission of larger data quantities and more efficient integration with smart sensors that are becoming an integral part of the Industrial IoT.”

Renesas will demonstrate the new ASSP in Booth 110 (Hall 10.1) at the [SPS fair](https://sps.mesago.com/events/en.html), November 26-28, 2019 in Nuremberg.

**Key Features of the Renesas ASI4U-V5 ASSP**

* The integration of up to 96 devices and operation down to 1.2 ms cycle time with less than 10ns jitter compared with 5 ms cycle times for ASi-3 solutions
* Support for up to 200m cable and 16 data bits per transport channel
* Diagnostics and event handling for industry 4.0 applications
* Backwards compatibility with ASi-3 devices
* Exceptional robustness against electromagnetic disturbers
* Fully verified and field-proven firmware enables easy integration, as no further programming of the chip is required.

The new ASi-5 ASSP expands Renesas’ robust industrial network portfolio, which includes the RZ/N and R-IN32M series of network processors, the TPS-1, as well as IDT’s ASI4U and SAP5 devices implementing ASI-3.

Availability

Reference samples of the fully qualified ASi-5 ASSP are available now. Mass production is planned for March 2020.

For more details on the ASI4U-V5 ASSP, visit:

<https://www.renesas.com/products/interface/industrial-network-transceivers/asi4u-v5.html>

**About Renesas Electronics Corporation**

Renesas Electronics Corporation ([TSE: 6723](http://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. A [global](https://www.renesas.com/en-hq/about/company/profile/global.html) leader in microcontrollers, analog, power, and SoC products, Renesas provides comprehensive solutions for a broad range of automotive, industrial, home electronics, office automation, and information communication technology applications that help shape a limitless future. Learn more at [renesas.com](http://www.renesas.com/).

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