**News Release**

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**Renesas Electronics Implements KNX Protocol Over G3-PLC to Simplify Building Automation Network Extension for Smart Buildings**

*Proof of Concept at embedded world 2019 Highlights G3-PLC Modem Solution with KNX Protocol to Usher In a New Era of Smart Buildings at Reduced Cost*

Düsseldorf, February 14, 2019 – Renesas Electronics Corporation (TSE:6723), a premier supplier of advanced semiconductor solutions, today announced it has implemented KNX protocol on its G3-PLC™ powerline communication ([PLC](https://www.renesas.com/us/en/solutions/key-technology/connectivity-wired/plc.html)) solution. Based on the Powerline Modem Solution, Renesas will demonstrate a proof of concept at [embedded world](https://www.embedded-world.de/en), February 26-28, 2019 in Nuremberg, Germany, Booth 1-310 (Hall 1), to illustrate how to implement KNX networks and take advantage of the flexibility and efficiency offered by modern G3-PLC technology while eliminating the need for new network cable deployment.

Combining data line and power line onto one cable system and using the most efficient modulation techniques, PLC is a cost-efficient way to expand connectivity through the building in particular over long distances and across the walls.

“With the trend toward energy efficiency and green design of commercial buildings, the challenges of renovating existing facilities is growing, particularly for power distribution networks, since most commercial buildings have areas where RF and traditional network cabling do no reach,” **said Akihiro Kuroda, Vice President, Renesas Electronics Corporation.** “The new Renesas Powerline Modem Solution demonstrates the possibilities for G3-PLC technology to address these needs without requiring new cable deployment by combining the advantages of the open G3-PLC standard with the attractiveness of KNX protocol known to be one of the most popular network protocols for building automation. This will enable the deployment of reliable and cost-effective networking solutions for HVAC, lighting, fire and safety, and building access security, among others.”

"The Renesas Powerline Modem Solution with KNX over G3-PLC is an excellent way to validate the benefits of using of G3-PLC technology for building automation applications using KNX,” **said Joost Demarest, CTO of the KNX association.** “Furthermore, considering the KNX association activities to pave the way for KNX IoT, the Renesas G3-PLC solution as a fully IP based solution will also be a strong fit for the future KNX IoT protocol.”

Primarily developed for energy metering applications, the G3-PLC protocol is freely usable as an open standard and continuously maintained **by the** [G3-PLC Alliance](http://www.g3-plc.com/home/). **Mr. Marc Delandre, Chairman of the G3-PLC Alliance commented**: “Even though G3-PLC was first adopted for metering applications, its field of usage is not restricted and the Renesas solution opens new horizons for G3-PLC technology adoption in smart building applications.”

The Renesas Powerline Modem Solution comprises Renesas’ OFDM PLC software modem ([R9A06G037](https://www.renesas.com/solutions/key-technology/connectivity-wired/plc/r9a06g037.html)), a [Renesas Synergy™ microcontroller](https://www.renesas.com/products/synergy/hardware/microcontrollers/s7-series.html) (MCU) and the [ISL15102](https://www.renesas.com/products/analog/communications/plc-line-drivers/device/ISL15102.html), which serves as the power line driver. The software stack is based on the Synergy Software package (SSP) and combines the Renesas G3-PLC stack with a KNX software stack provided by [Tapko Technologies GmbH](https://www.tapko.de/). The proof of concept allows customers to build KNX over the G3-PLC protocol, offering a smooth migration path from existing KNX standard towards upcoming KNX IoT standard.

Renesas was the first supplier to achieve certifications for all frequency bands defined by the G3-PLC Alliance, including ARIB, CENELEC-A, CENELEC-B and FCC. With the new proof of concept solution, Renesas continues to support the adoption and deployment of PLC technologies for smart buildings and other energy-efficient building automation environments.

**About G3-PLC**

G3-PLC is a protocol for narrow band low frequency powerline communication that facilitates high-speed, highly-reliable, long-range communication over the existing powerline grid. The protocol is developed and maintained by the [G3-PLC Alliance](http://www.g3-plc.com/home/) as a potentially ubiquitous powerline communications standard to enable the smart grid vision.

**Availability**

The Renesas G3-PLC Modem Solution with complete set of software supporting KNX Protocol will be available in Q3, 2019. (Availability is subject to change without notice.)

**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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**Company contact for reader and customer inquiries:**Simone Kremser-Czoer

Renesas Electronics Europe GmbH, Karl-Hammerschmidt-Str. 42, 85609 Aschheim-Dornach

Tel.: +49 89 38070-216
Email: simone.kremser-czoer@renesas.com
Web: [www.renesas.com](http://www.renesas.com)

**Agency contact for further media 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

Fax: +49 89 930 24 45

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

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