

## **CLPA announces availability of CC-Link IE technology on Renesas IE communication SoC with embedded gigabit Ethernet PHY**

The CC-Link Partner Association (CLPA), comprising an alliance of companies around the world working to promote the CC-Link IE and CC-Link technologies, announces that Renesas Electronics Corporation, a premier supplier of advanced semiconductor solutions, is opening up new market opportunities by embedding a gigabit physical layer (PHY) into its [R-IN32M4-CL2](#) industrial Ethernet communication system-on-chip (SoC). The R-IN32M4-CL2 can now support CC-Link IE network connectivity with minimal external components, leading to simplified and cost-effective system designs. This will make it even easier for automation system manufacturers to incorporate CC-Link IE into a wide variety of products such as PLCs, variable speed drives, motion controllers and robots.

CC-Link IE is unique in offering gigabit bandwidth and as such is ideally placed to offer solutions for the data intensive applications of Industry 4.0. Moreover, it offers Ethernet-based integration of I/O, safety and motion control, all on one cable. The high-speed, wide-bandwidth communication provides safe, high-speed control while simultaneously handling non control-related data, such as quality and traceability information. Furthermore, the integration of different control requirements onto a single network simplifies system design, implementation and maintenance while reducing cost. This is further aided by a simple communication control model, and a standard Ethernet physical layer with added diagnostic functions. These performance benefits of CC-Link IE are leading to accelerated adoption of the technology worldwide.

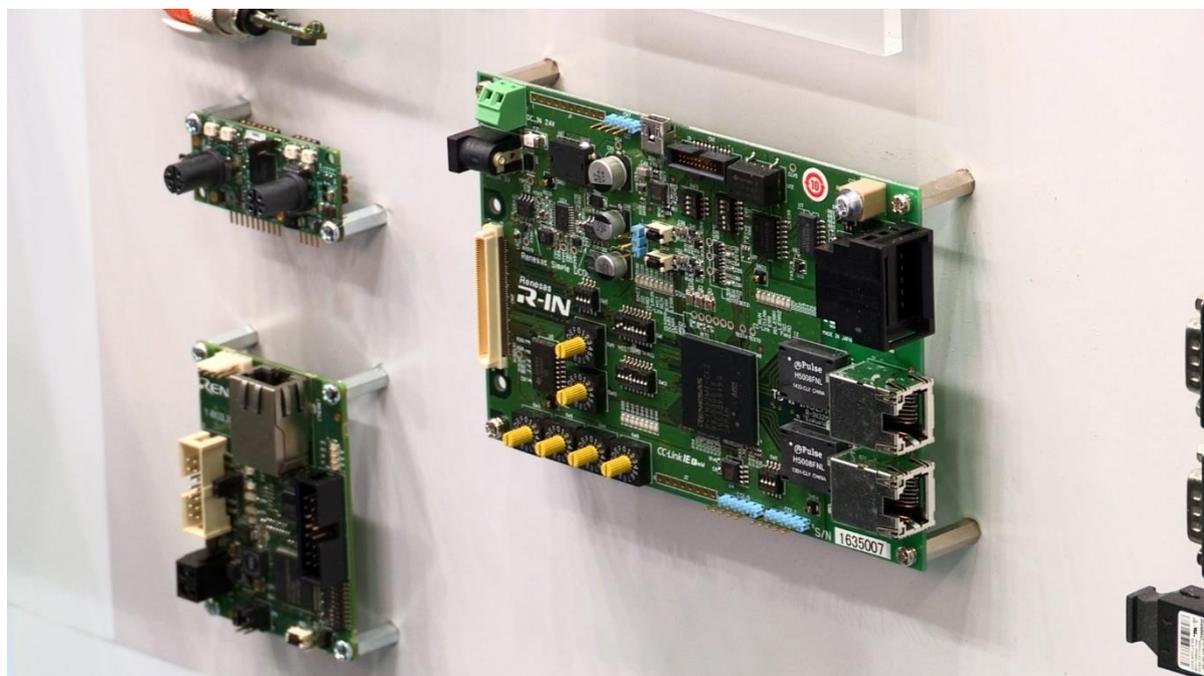
“Our R-IN32M4-CL2 SoC supports multi-protocols including CC-Link IE and is equipped with an embedded Gigabit Ethernet PHY circuit design that does not require a related analogue design,” says Niels Trapp, Senior Director, Industrial Automation Marketing Department at Renesas Electronics Corporation. “By simplifying the PHY peripheral high-frequency analogue circuit design, the SoC contributes to reduced development time, and lower bill-of-material (BOM) costs.”

Renesas’ R-IN32M4-CL2 also incorporates an ARM® Cortex®-M4 processor. The idea is that it can be the key component of a solution, rather than just an accessory part for handling communications. Hence even sophisticated devices may be

implemented with the R-IN32 and a minimum of additional parts, leading to streamlined, powerful and low-cost designs.

*ARM and Cortex are registered trademarks of ARM Ltd and acknowledged.*

**Image 1:**



The R-IN32M4-CL2 can now support CC-Link IE network connectivity with minimal external components, leading to simplified and cost-effective system designs.

**Keywords:** CC-Link, CC-Link Partner Association, CLPA, Renesas Electronics Corporation, semiconductor, industrial Ethernet communication, system-on-chip, automation, gigabit bandwidth, Industry 4.0

### **About the CC-Link Partner Association (CLPA)**

The CC-Link Partner Association (CLPA) is an international organisation founded in 2000 dedicated to the technical development and promotion of the CC-Link family of open automation networks. The CLPA's key technology is CC-Link IE, the world's first and only open gigabit Ethernet for automation and an ideal solution for Industry 4.0 applications due to its unmatched bandwidth. Currently the CLPA has over 3,000 member companies worldwide, with more than 1,700 certified products available from over 300 manufacturers. CC-Link is the leading open industrial automation network technology in Asia and is becoming increasingly popular in Europe and the Americas.

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