Hilscher Gesellschaft für Systemautomation mbH

Gigabit chip with protocol stack for CC-Link IE TSN

With several million controllers having been installed, Hilscher's netX platform technology has achieved worldwide success. It enables all provenfieldbus and real-time Ethernet systems to be realised in the smallest of spaces – and will soon also be available for automation providers keen to provide their products with CC-Link IE TSN connectivity.

The owner-managed Hilscher Gesellschaft für Systemautomation with headquarters in Hattersheim near Frankfurt was founded in 1986 and is regarded as one of the major international players when it comes to industrial communication solutions for modern factory automation. The company offers a full portfolio of hardware and software solutions for fieldbuses and Industrial Ethernet as well as services and customer-specific assembly production.

Hilscher is a long-standing member of the CC-Link Partner Association (CLPA) and – with its communication chips, embedded modules, pc-cards, gateways and corresponding protocol stacks – supports all network communication technologies, from the CC-Link fieldbus to the industrial CC-Link IE Gigabit Ethernet variant which has already been realised on pc-cards as slaves. In addition, the compatible CC-Link IE Basic variant is ported to Hilscher's 100-Mbit chips. Prototypes have already been created and the certification process is in progress.

"With TSN in particular, we are seeing a strong trend towards gigabit technology and because of that, we are in the process of developing a new multiprotocol chip for gigabit bandwidth which naturally will also then support CC-Link IE TSN. We see gigabit TSN as having great market value", says Sebastian Hilscher, son of the company's founder and Development Manager at Hilscher.

The complete supplier is a prominent supporter of the CLPA, regularly exhibiting at trade shows and participating in press conferences. They realised the seamless exchange of data between the PROFINET network which is dominant in Europe and

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CC-Link IE technology which is the leader in Asia with theircoupler device – shortly after PROFIBUS & PROFINET International (PI) and the CLPA formulated and published their joint specification. "With the CLPA, we can stay up-to-date with the latest technology trends and we have also been involved in the development of CC-Link IE TSN since very early on. One of the huge benefits of being a member is that we getspecifications very eraly so that we can align our product roadmap on it The other is the marketing activities carried out together with the CLPA which increases awareness of our brand", explains Hilscher.

The launch of the new chip which will support gigabit bandwidth is planned for 2020. "That is when starter kits will be launched and samples available for customers to try out. Then we will collect customer feedback and go into mass production", advises Hilscher.

Hilscher as a total solution partner will deliver the chip as usual together with the matching software protocol stack.. "Because we deliver both software and hardware we can perfectly match the components to each other, that's why our hips generate less power consumption and need only a small amount of space. Nonetheless, the chips provide the same level of performance as other CPUs because everything is totally matched and nothing on the chip is redundant", explains Hilscher.

The new generation of chips which supports gigabit TSN will be an extension of the netX chip family in the form of various derivatives, i.e. as a companion chip variant or as a single chip solution. The solution mainly focuses on factory automation and on the whole range of associated devices, from I/Os through PLCs and drives to incremental encoders and sensors.

Image Caption:

Image 1 + 2: With several million controllers having been installed, Hilscher's netX platform technology has achieved worldwide success.

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About The CC-Link Partner Association (CLPA)

The 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 TSN, the world's first open industrial Ethernet to combine gigabit bandwidth with Time Sensitive Networking (TSN), making it the leading solution for Industry 4.0 applications. Currently the CLPA has over 3,600 member companies worldwide, and more than 1,900 compatible products available from over 300 manufacturers. Over 26 million devices using CLPA technology are in use worldwide.

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