Lika Electronic unlocks new opportunities with CC-Link IE certifications

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With rapid advancements taking place in the industrial automation landscape, staying competitive is more critical than ever for device vendors. As companies seek to setup increasingly more demanding Industry 4.0 applications, offering state-of-the-art devices that are compatible with the right industrial communications solutions is key. To address market demands and deliver value-adding products to its customers, Lika Electronic chose to develop new encoders compatible with network technologies from the CC-Link Partner Association (CLPA).

In the era of smart manufacturing, industrial automation device vendors play a pivotal role in the digital transformation of shop floors and entire enterprises, providing the enabling technologies to succeed in this journey. In particular, as interconnected factories become the norm, these vendors need to equip their devices with suitable communications solutions. They should be able to support the reliable transfer of increasingly larger volumes of data across multiple network components, some of which may come from different equipment providers.

Identifying key market opportunities

Lika, a leading developer of solutions for the automation industry and well-established manufacturer of optical encoders, magnetic measurement systems and positioning units, regularly updates its product portfolio to address market and

customer-specific needs. When looking at how to best support its customers in the creation of smarter systems, the company concluded that ensuring compatibility with the CC-Link family of open industrial networking technologies was a must.

Marco Calabrese, Managing Director - Sales & Marketing at Lika, explains: "This latest development project started when one of our customers asked our specialists for a reliable encoder solution that could communicate through the CLPA's standards. This also aligned perfectly with our ongoing plans to strengthen our portfolio by adding products that are interoperable with a wide variety of solutions offered by many other CLPA partners. This also helps us to expand the support we offer for the creation of advanced Industry 4.0 setups."

In line with this commitment, Lika decided to embark on a journey that would start with adding CC-Link IE Field Basic compatibility to some of its existing products. This is a popular, 100Mbit version of the CC-Link IE open industrial Ethernet. This offers compatibility with a range of other products, such as controller from Mitsubishi Electric. The move would also help the company eventually progress to develop new devices that would support CC-Link IE TSN. In this way, the company could grow its capabilities without overwhelming its teams as well as sustainably balance its investments.

Therefore, Lika equipped its well-established high-performance, compact EXM58 fully magnetic encoder and EXO58 optical sensing devices with the CLPA's software stack to ensure compatibility with CC-Link IE Field Basic. As a result, end users can now easily leverage the EXM58 and EXO58 devices within a CC-Link IE Field Basic network architecture.

Streamlined and straightforward development process

As Lika leveraged the CC-Link IE Field Basic solution, it was possible to implement this network on any existing 100Mbit device solely through an established software implementation route, without any additional hardware or changes required. This option simplifies and streamlines the development process, shortening time-to-market while minimising investments.

An additional element that supported the rapid development process was the use of the netX 90 System-on-Chip (SoC) from another CLPA partner company, Hilscher. Lika had been using the solution for a long time on a number of products, therefore the ability to utilise it to support CC-Link IE Field Basic was highly beneficial. Lika is also typical of the strong user base of companies that use Hilscher's solutions, which are served by the portfolio of existing CC-Link IE Field Basic development options they offer.

Once the prototypes were ready, the company proceeded certifying them through the CLPA's conformance testing process to ensure interoperability and compatibility with other CC-Link IE devices. For CC-Link IE Field Basic, CLPA members can conduct a self-assessment to prove compliance through an approved certification tool that evaluates if the product being investigated meets key requirements. This option helps vendors reduce testing times and costs, empowering them to promptly address market demands.

Alberto Griffini, Business Developer at the CLPA Europe, comments: "The process to implement and prove compliance with CC-Link IE Field Basic is particularly easy, enabling new partners to kickstart the release of products that incorporate our network technologies. In this way, companies like Lika can embrace our solutions in a stepwise approach that doesn't overwhelm their teams."

Marco Calabrese adds: "We found both the development and certification processes extremely intuitive and accessible, with plenty of resources available to support us. To meet our customers' demands, we offer encoders that utilise different standards, and implementing CC-Link IE Field Basic has certainly been the most straightforward and uncomplicated. In particular, the CC-Link IE Field Basic certification was done in-house, enabling us to offer these new encoder options quickly and benefitting end users looking for such solutions.

"We are also extremely grateful for the extensive support received throughout all the different development stages. It helped us succeed but also showed us how interested and attentive the CLPA is to its members." By assisting in the development of a growing number of automation products, the organisation is helping to advance the creation of Connected Industries.

Broadening Lika's horizons

Lika is already benefitting from the extended product offering, as customers in Asia, where the CC-Link family of network technologies is a de facto standard, and are keen to leverage the company's renowned encoders for key applications. Therefore, this strategic move is driving growth in valued markets.

Furthermore, now that Lika's first CC-Link IE Field Basic compatible encoders have been released, the company is aiming to progress further in its compatibility journey with the creation of more devices, including solutions that use CC-Link IE TSN for general and safety applications. This is the first open industrial Ethernet technology to combine gigabit bandwidth with Time-Sensitive Networking (TSN) functions to support highly deterministic, convergent Industry 4.0 applications. Looking ahead, this will help the encoder leader offer cutting-edge devices that are sought after by industry players further along their digitalisation journey.

Marco Calabrese says: "We are keen to include CC-Link IE TSN in our portfolio and look forward to the release of more supporting products that are compatible with this network technology, such as Hilscher's netX90 SoC, to fuel our development activities."

John Browett, General Manager at the CLPA Europe, concludes: "We are delighted that Lika decided to become part of the CLPA and invest in the development of compatible products. It is perhaps even more pleasing to see how this choice is boosting the company's competitiveness. We look forward to supporting Lika and many other automation specialists in the development of solutions that enable the creation of highly effective Industry 4.0 applications."

Image captions:

Images 1 + 2: Lika equipped its well-established high-performance, compact EXM58 fully magnetic encoder and EXO58 optical sensing devices with the CLPA's software stack to ensure compatibility with CC-Link IE Field Basic. ©Lika

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 4,200 member companies worldwide, and more than 2,800 compatible products available from over 380 manufacturers. Over 40 million devices using CLPA technology are in use worldwide.

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