



Connecting to the Future



OVERVIEW OF THE
**CC-LINK PARTNER
ASSOCIATION**

CLPA, the organization promoting open networking as well as your business partner



The CC-Link Partner Association (CLPA) is an international association whose members comprise the world's leading factory automation companies. Our goal is to advance open, interoperable information and communication technologies in industrial automation. SLMP or Seamless Message Protocol is the CLPA's core technology – along with its network implementations – CC-Link and CC-Link IE. CLPA acknowledges the adoption of commercial-off-the-shelf (COTS) and standard Ethernet technologies as a guiding principle. This principle is characterized via the family of CC-Link networks – the world's most advanced industrial automation networks.

The CLPA is the organization tasked with the worldwide promotion and technical development of the CC-Link IE and CC-Link family of open networks.

The CLPA is a global organization with 11 regional offices and conformance test centers worldwide. Each office works to increase the market perception of the CC-Link networks and improve the adoption of CLPA networks by device makers, machine builders and end-users.

All members of the CC-Link Partner Association are companies who develop, sell and use products compliant with CLPA technology and standards. The CLPA's underlying application network protocol – 'SLMP' or Seamless Message Protocol; is the backbone of its technology. Our partners, their customers, stakeholders, employees and companies all benefit from their membership in the CLPA because we develop and promote open and interoperable standards for information and automation technology used in factory automation. We follow strict Antitrust Guidelines and member policies designed to promote the freedom to succeed for all partners – developers and end-users alike. Through global promotional activities for CC-Link IE and CC-Link, the CLPA increases the business opportunities for our partners and users. The outcome is an improved automation marketplace providing greater opportunities for all partners.

Since being established in 2000, the CLPA; along with the Board of Directors, Marketing Task Force and Technical Task Force; have helped our Partner vendors develop compatible products and the CC-Link users to construct open factory automation systems.

Governing Body

The CC-Link Partner Association is governed by a nine firm Board of Directors. This Board of Directors sets the direction the CLPA and adopts plans for the future of the association.

The Board of Directors setup two groups to complete the tasks assigned to the organization; the Marketing Task Force and the Technical Task Force.

Marketing Task Force

Focuses on increasing the number of CLPA members & products, enhancing global adoption and expanding the use of CC-Link. Oversees a wide variety of promotional activities worldwide, including trade shows, conferences, seminars, advertising programs, social media, the worldwide web and other activities.

The Marketing Task Force consists of the Marketing Working Group which advises on promotional activities and oversees the daily activities of the CLPA regional offices worldwide.

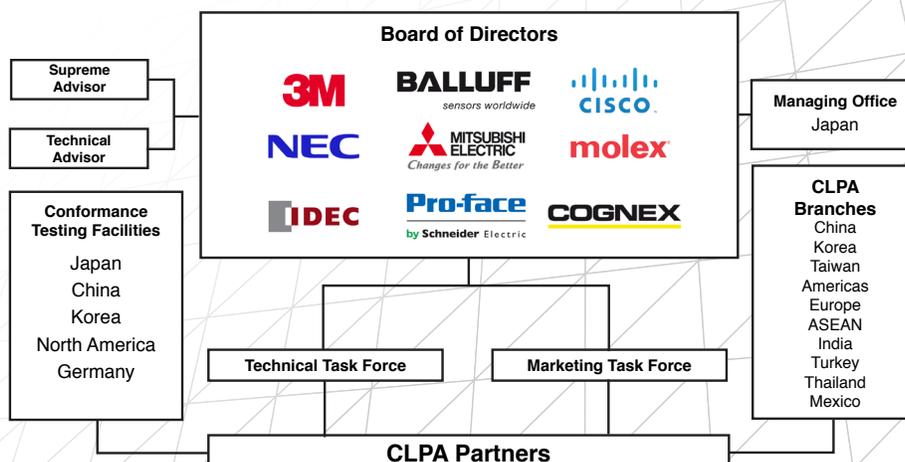
Technical Task Force

Focuses on managing and incorporating the latest network related technology and coordinates providing the necessary information to members and other standards organizations (IEC, ISO, etc...). Oversees the future technical development of CC-Link IE and CC-Link. Develops technical specifications for conformance testing, network infrastructure and creating other vital technical guidance documents and tools.

The Technical Task Force consists of multiple working groups to complete the mission of the task force – including the Technical Working Group, the industrial networks Security Working Group and the Working Groups setup to develop standardized interfaces with other networks – Including cooperating with other network organizations.

These Task Force activities have been key to our networks becoming adopted globally.

The high-level technologically advanced and ‘ease-of-use’ CC-Link family of networks have been certified to conform to international standards; IEC, ISO, and SEMI Standards (semiconductor and FPD industries); in addition, multiple National Standards have recognized CC-Link and CC-Link IE – such as: Japanese Industrial Standards, Chinese National Standards, Korean National Standards and Taiwanese Standards. As such, the CC-Link networks are now recognized as global standards; meeting the conventional requirements for open networks and communication compatibility. With a diverse lineup of compatible products, CC-Link can drastically improve the production efficiency of manufacturing systems and applications. Its advanced technology and ease of use are internationally appreciated.



As a leader in the industry, the CC-Link Partner Association spearheads the initiative to open up industrial networks.

As a result of enthusiastic promotional activities since the establishment of the CLPA, the CC-Link networks have grown into a global standard family of automation networks, as proven by the ISO and IEC certifications, among others.

The CC-Link networks have been opening up automation applications as the CLPA takes the lead to develop and improve as the industry grows.

Now, CLPA brings about an Ethernet-based industrial network vision as a solution to the needs for total system optimization. This vision integrates multiple functions; including control, device management [setting, monitoring], device maintenance [monitoring and failure detection] and data collection [operating condition].

This vision is the integrated network – CC-Link IE [Industrial Ethernet]. It enables seamless data transfer from the information network layer to the field device layer. Backed up by the technology and proven services accumulated through the development of CC-Link, the CLPA is promoting to open it up further to meet your expectations – today and into the future.

CC-Link is a family of industrial open technology automation networks that process control, information & diagnostics to provide efficient, integrated factory-wide industrial and process automation. The family provides 'Industry 4.0 Ready' Gbps speed, deterministic communication seamlessly linking a wide assortment of multi-vendor automation devices.



CC-Link Family of Industrial Automation Networks

The 'Family of CC-Link Networks' is ideally suited for machine automation, cell or process control in a wide variety of industries. The CC-Link family includes fieldbus and safety networks – CC-Link & CC-Link Safety; the newest general-purpose industrial Ethernet network – CC-Link IE Field Basic; and the most advanced Industrial Ethernet networks – CC-Link IE Control & CC-Link IE Field. These advanced Ethernet networks operate at 1 Gbps providing deterministic behavior for your control and enough bandwidth for all of your Industry 4.0 requirements

CC-Link IE TSN – CC-Link IE TSN builds on our successful pedigree of open automation networks by combining the unmatched bandwidth of open gigabit Ethernet with the future proof technology of Time-Sensitive Networking (TSN). CC-Link IE TSN offers manufacturing industries the technology they need to address the challenges of Industry 4.0 by focusing on Performance, Connectivity & Intelligence. Performance: Highest productivity Industry 4.0 solution combines gigabit Ethernet with TSN Connectivity: Open technology provides freedom of choice for end users, OEMs and device vendors Intelligence: A wealth of intelligent features reduce time to market and downtime while increasing productivity

CC-Link IE Field – Industry 4.0 Ready Industrial Ethernet network linking field level devices to controllers at an ultra-fast 1 Gigabit. CC-Link IE Field provides the bandwidth necessary for all of your Industry 4.0 requirements while maintaining absolute deterministic communications. CC-Link IE Field provides a secure industrial Ethernet network via its token-based architecture. CC-Link IE Field is IEC approved for safety communications and can provide integrated motion control and/or energy management functions all on a single Industrial Ethernet network.

CC-Link IE Basic – Software based, open-technology general-purpose Industrial Ethernet network. CC-Link IE Field Basic is a cyclic network that provides a cost effective, and easy to use industrial Ethernet network for small-scale equipment not requiring high-speed control. CC-Link IE Field Basic is easy to use with a low cost software only development cycle.

CC-Link – Open-technology fieldbus network with performance up to 10 Mbps providing absolute deterministic behavior & cost effectiveness, flexibility and ease of use. Fully compatible CC-Link Safety is IEC/ISO approved for safety communications and meets or exceeds industry safety network standards.

SLMP (Seamless Message Protocol) – the common protocol that binds the family of CC-Link networks together. SLMP is a protocol that operates using a Client/Server model. No specific hardware is required to implement the SLMP communication option.

CC-Link IE TSN

CC-Link IE Field

CC-Link

CC-Link IE Field Basic

SLMP
Seamless Message Protocol

CLPA Services

Promotional Activities

The promotional activities supported by the CLPA include participation in trade shows, conferences and automation (both process & industrial) events. The CLPA creates publications such as brochures, end user articles and other marketing material to support the CLPA partners and products. The association holds training and informational seminars to train, teach and promote the advantages of the CC-Link family networks. The CLPA participates in social media and the worldwide web to help our partners keep up with the latest technologies and trends. We work with our partners to create marketing packages including press releases and application articles to further promote their CC-Link certified products and accomplishments.

In addition to those activities, the CLPA also produces an electronic product catalog (CD-ROM); fully covering all the CC-Link certified products that the CLPA member manufacturers have developed and have made available to the marketplace. The CLPA web site (am.CC-Link.org) also provides information on the numerous CC-Link certified products developed and available by the member manufacturers. This web site also provides the CLPA partner contact information, such that end users may directly contact those product manufacturers. Through the myriad selection of certified products, the CLPA and our partners provide users with diversified solutions to meet their automation requirements.

Development Support

For developing compatible products that attract the world's attention, come to the CLPA.

We support you in all stages of product development – from investigation to marketing.

To facilitate the development of CC-Link Family – compatible products that match market needs, the CC-Link Partner Association provides a variety of support that includes everything from planning to design, evaluation, production, and conformance testing, as well as product sales promotion and marketing for certified products.

Product development and marketing support for CC-Link certified products is available to CLPA Regular members, Executive members or Board members.

The CLPA can support your hardware and software design in detail based on the network configurations and specifications. We are able to work with you to help you produce a prototype product to meet the design drawings and CLPA can evaluate it from various aspects.

The CLPA provides CC-Link protocol specifications free of charge to member organizations. Development methodologies (dedicated communication LSI, ASIC or built-in modules) prepared for different kinds of products may be used when developing products.

As part of the development support, the members can take part in various CLPA-coordinated seminars or those promoted by a development methodology Partner. From members dealing with CC-Link for the first time to those adding to their CC-Link product line, partners have opportunities to gain technical knowledge that meets/exceeds their needs.

CLPA Services

Conformance Test Support

CLPA provides member firms with the CLPA Conformance Test specifications for use during the development process to assist with the development of the compatible product(s). Automatic test tools are available for CC-Link IE Field Basic and SLMP. Conformance testing is to be conducted on each model to ensure highly reliable communication between CC-Link compatible products. The member firm completes their portion of the conformance test according to the specific conformance test specifications for each product model.

The CC-Link [CC-Link IE] conformance test verifies products from various aspects; including noise test, hardware test, software test and combined test; among others to appropriately check whether the CC-Link [CC-Link IE] products can communicate normally and without disrupting other certified products.

Partner products need to be tested to the conformance test requirements to be certified. Once a product meets the CC-Link [CC-Link IE] communication specifications and is certified, it can be connected to CC-Link [CC-Link IE] networks. The conformance test is completed to ensure that the product meets the common CC-Link [CC-Link IE] specifications. The conformance test is not intended to ensure the performance and quality of the product itself. You are invited to join the CLPA and become a member of one of the largest network organizations in the world.

CLPA Membership

CLPA members are able to develop business opportunities by receiving services such as technical support for developing compatible products and marketing assistance to help promote their CLPA certified products.

The member firms are entitled to obtain the most up-to-date technological information and CC-Link specifications at no cost. Support is available for conformance testing that is essential to establishing the reliability that End-Users of CC-Link network devices have come to expect.

To become a member of the CLPA, please contact the CC-Link Partner Association at Info@CCLinkAmerica.org

CLPA's global offices are located in Japan, Korea, Taiwan, United States, Europe, China, ASEAN, India, Turkey, Mexico and Thailand. These offices promote CC-Link /CC-Link IE technology and provide a wide range of services for CLPA members.

Why choose CC-Link? Primary reasons include CC-Link and CC-Link IE Field are high-performance, cost effective, flexible, as well as easy to install and use. These networks are globally accepted and CC-Link IE is an industry leader with Gigabit Ethernet networking. If that's not enough; CC-Link is a market leader in Asia, the fastest growing market in the world. There are more than 24 million installed nodes & over 1900 CC-Link compatible products on the market. Many export oriented manufacturers are incorporating CC-Link compatibility because of its strength and market leadership in Asia.

Are you ready for the Industry 4.0 Revolution – CC-Link IE is!

CLPA Membership

Cost/Privileges		Membership Categories		
		Registered	Regular	Executive
Annual Membership Fee*		\$0	\$1,000	\$2,000
Protocol specifications		Included	Included	Included
License to use CLPA SLMP technology		yes	yes	yes
License to use CLPA CC-Link technology (other than SLMP)		no	yes	yes
Technical support		no	yes	yes
Conformance Test Fee* (per device)	Cables, Remote I/O Device, Remote Device, Master/Local & Intelligent device stations	not applicable	\$1,000 to \$5,000 depending on device type	consult CLPA
Marketing	Use of the CLPA CC-Link logo(s)	no	yes	yes
	Display or listing of products on websites			
	Display or listing of products @ exhibitions			



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