

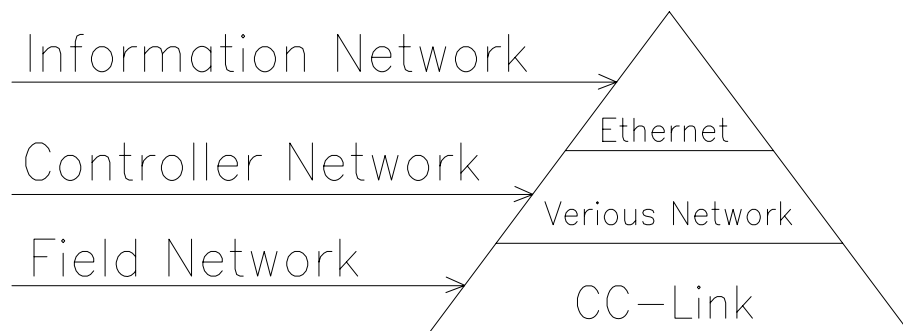


# CC-Link

## What is CC-Link?

CC-Link (Control & Communication Link) is a **field network system** that processes both control and information data at high speed, to provide efficient, integrated factory and process automation.

### Where CC-Link placed



### Key Word

- Expanding multi-vendor environment
- High performance network
- Reduce wiring, reduced costs

## Feature of CC-Link

- 1: Efficiency through reduced wiring
- 2: Expanding multi-vendor environment
- 3: High Speed Input-Output response
- 4: Easy to extend distance]
- 5: Enriched RAS Function

RAS: Reliability, Availability, Serviceability

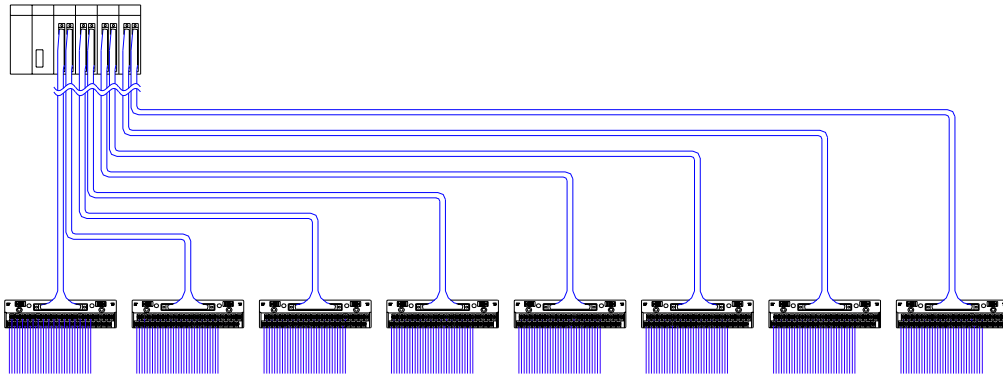
## **Benefit – 1**

### **Efficiency through reduced wiring.**

CC-Link significantly reduces the amount of control and power wiring needed in today's complex production lines.

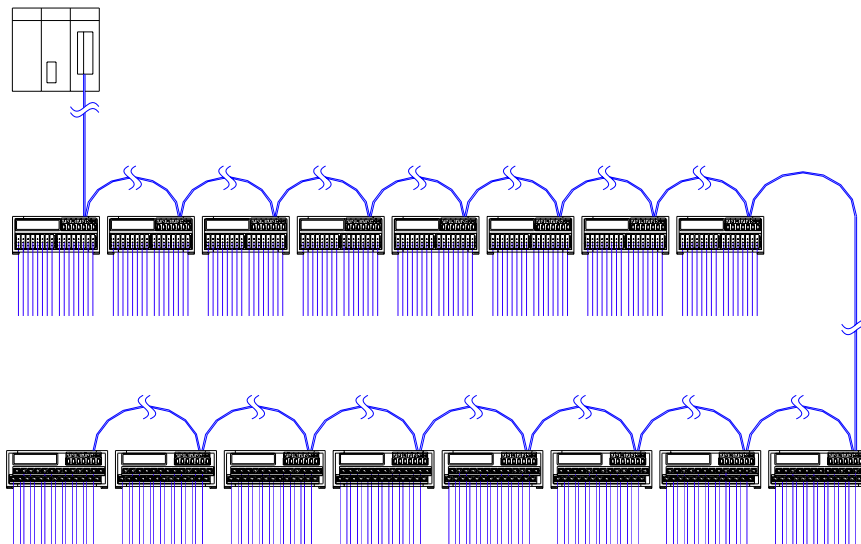
### **Effects expected by installing CC-Link field network**

#### ● I/O module system



#### ● CC-Link System

##### **Multi-dropped connection**



- ⊙ Reduced wiring and Installation cost
- ⊙ Reduction in wiring time
- ⊙ Improvement in maintenance

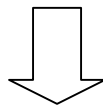
### **Benefit – 2**

#### **Expanding multi-vendor environment**

You can select the optional equipment to suit your automation needs from a wide variety of CC-Link compatible products

- Number of Partner Manufactures → 649
- Number of CC-Link compatible products → 653

Solenoid Valves, Sensors, Transformers, Temperature Controllers, Transmitting Equipments, Barcode Readers, ID systems, Gateways, Robots, Servo Drives, PLC, etc

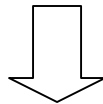


**Easy to select products to suit your application**

### **Benefit – 3**

#### **High speed Input-Output response**

High speed communication with speeds up to 10Mbps has been achieved. Input-Output response is reliable and the response time is fast, reliable and the response time is fast, reliable and deterministic.

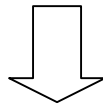


**Applications requiring fast I/O response and large sized data transmission are easily handled.**

### **Benefit – 4**

#### **Easy to extend distance**

The maximum cable length for CC-Link is 1.2Km(at 156kbps). If you use repeater (T-Branch) units or optical repeater units, you can further extend the network distance.



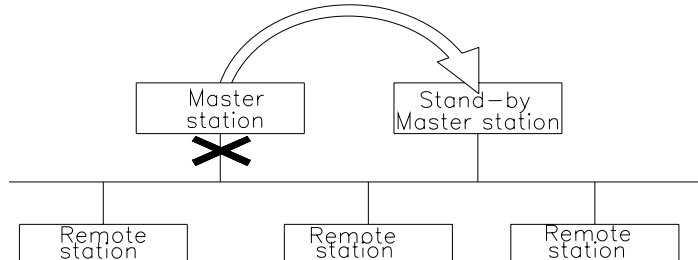
**Flexibility of cable length enables you to reduce your device wiring and your device wiring and installation costs and provide great flexibility in equipment layout**

## Benefit – 5

### Enriched RAS function

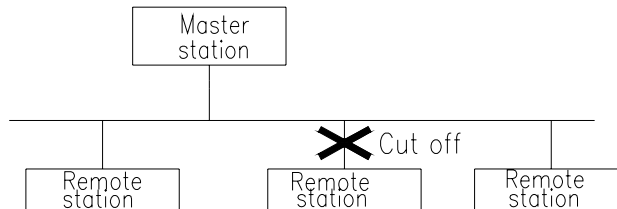
#### ● Stan-by Master function

Even when a fault occurs on the Master station, the Stand-by will maintain network Communication.



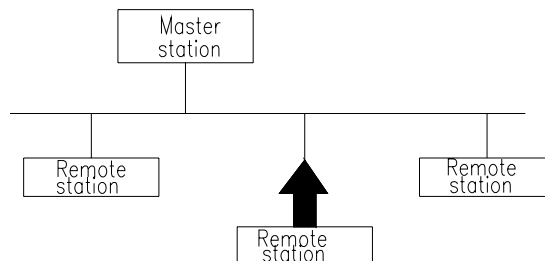
#### ● Detaching Slave Station function

Removes the slave station that has a fault and allows communication to continue with all other station.



#### ● Automatic Return function

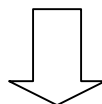
Automatically returns a disconnected station to the data link when the faults connected.



**No need to reset the whole system to return a station. (to the data link)**

#### ● Testing and Monitoring function

You can conduct data link status checks, hardware tests and circuit tests.



**Easy to recover from communication fault**  
**and to debug the system at start-up time.**

## Case studies of CC-Link use

### Case1

#### **Semiconductor production line**

You can reduce wiring and installation costs by using CC-Link, CC-Link simplifies the connection between equipment used in semiconductor manufacturing.

### Case2

#### **Electronic device production line**

Connection between various devices used for parts mounting, soldering, assembly, and inspection can be easily done by using CC-Link. System costs can be reduced and maintenance improved.

### Case3

#### **Automatic Transfer System**

In a system where long distances separate input/output devices, such as a sorting system using a transfer conveyer, the use of CC-Link allows cost reduction due to reduced wiring. By using aerial optical repeater units, you can also communicate between liner moving objects without cables, thus facilitating communication within automated warehouses.

### Case4

#### **Food production line**

With transmission speed of 10Mbps, CC-Link can be applied to food manufacturing lines that require high speed response. CC-Link compatible waterproof Remote I/O is handle commanding application that require wash down performance. A wide variety of compact, inexpensive CC-Link compatible remote I/O contribute to cost reduction.

### Case5

#### **Automobile production Line**

With CC-Link, overall cable distance is 1.2Km. With the use of repeater units, it can be extended to up to 4.3Km even at 10Mbps. Thus CC-Link can be applied to long lines. Robots, inverters, servo drives and many other CC-Link compatible units can be applied to various lines such as coating, assembly, and welding. Using personal computers and HIM is connected to the CC-Link, programming and monitoring of the operation can be easily accomplished.