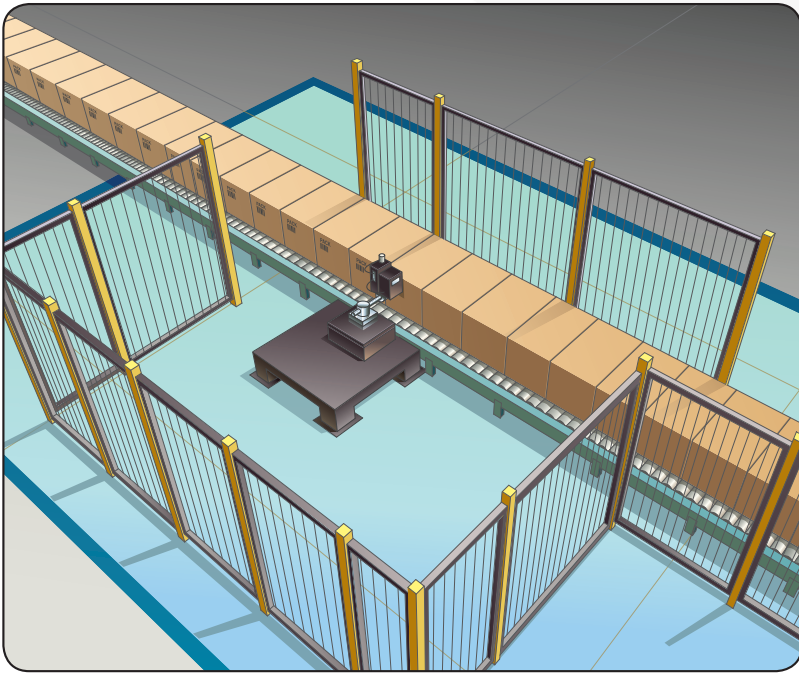


## PACKAGING AUTOMATION WITH IO-LINK

A CPG (consumer packaged goods) manufacturer produces several varieties of one product, requiring different printed labels during packaging. The packaging is mostly automated due to the heavy machinery that is used and the volume of the product being packaged.



The label printing occurs in the middle of the packaging cycle. Due to safety regulations, the area is blocked off during production. If configuration of a specific luminosity sensor for different printing requirements is needed during the packaging process, a technician is required to turn off all the equipment between production runs to access the luminosity sensor for reconfiguration. This requires the technician to go through all the safety access points on the assembly line before reaching the sensor, and the downtime costs the company time and a lot of money. In addition, a long screwdriver has to be used to bypass the required safety barrier. This action is not just inconvenient and clumsy, but dangerous for the technician.

As well as changing the configuration method of the luminosity sensor, the company wanted to gain easy access to process data from a photoelectric sensor from a different manufacturer. This sensor detects the number

of products coming off the line. It was a challenge for the company to make manufacturing adjustments in a timely fashion, as the data was hard to access and required additional PLC programs to be written.

In addition to remote configuration and accessing process data, the company also needed a solution to easily integrate sensors from multiple manufacturers. In production, a variety of sensors were used to meet the specific needs of each system. Having a multitude of manufacturers' sensors made installation, maintenance, and monitoring cumbersome. The company was seeking to increase efficiency by using a central management system for all sensors.

The company knew that the IO-Link standard was the answer because it provided the advanced capabilities required and would be simple to install in the existing architecture. The company had purchased IO-Link enabled sensors, but also needed a master to network them together. Other IO-Link masters provided some functionality, but posed concerns with product form factor and ease of integration with the PLC. Comtrol's IO-Link Master 4-EIP (IOLM 4-EIP) was selected because it solved all these difficulties:

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- **Small form factor**

The IOLM 4-EIP has a slim-line design making it easy to mount to any machine, wall, or panel. In addition, it uses M12 connectors and is IP67 rated, making it reliable in even the harshest environments.

- **Straightforward integration with the PLC**

Comtrol provides free sample programs for easy integration into PLCs, including Control Logix, Compact Logix, SLC 500, Micrologix, and PLC5. Using innovative ISDU (Indexed Service Data Unit) handling, Comtrol has developed a flexible and simplified interface, eliminating the need for lengthy PLC programming by the user. With EtherNet/IP and Modbus support, the IOLM 4-EIP provides multiple protocol configuration options.

- **Remotely configure the luminosity sensor**

Users can remotely view and update configurations based on current production requirements, making it easy to manage sensors in isolated or hazardous areas. Remote parameterization can be done through a PLC, HMI, PC, smartphone, or tablet. In addition, Comtrol has added IODD file storage to the IOLM 4-EIP web server, allowing for automatic discovery and default configuration of known sensors and devices. This works with all IO-Link devices, guaranteeing the widest variety of sensor and devices are automatically recognized.

- **Access to photoelectric sensor process data**

The IOLM 4-EIP provides advanced diagnostic data via PLC, HMI, PC, smartphone, or tablet, supplying the user with timely production control. This process data can help detect potential repairs or adjustments needed on the line in advance to avoid costly downtimes.

- **Easily integrate multiple manufacturers' sensors**

Each sensor requiring access for this company was designed by a different manufacturer. The IOLM 4-EIP is IO-Link V1.1 compatible and was designed to be sensor-neutral; most production environments have a mixed array of sensors. Regardless of the manufacturer, IO-Link sensors and devices are easily integrated with the IOLM 4-EIP.

IO-Link is a powerful standard, an increasingly deployed point-to-point serial communication protocol used to communicate with sensors and/or actuators. Extending the globally recognized PLC standard IEC 61131, it allows three types of data to be exchanged – Process data, service data, and events. Major sensor manufacturers and industrial manufacturing companies, including Comtrol, have joined the international IO-Link Consortium to promote the IO-Link communication protocol due to its many advantages over standard I/O.

Comtrol is pleased to introduce the industry's highest density IO-Link Master Industrial IO-Link gateway in its IO-Link Master. The IO-Link to EtherNet/IP™ Master combines the benefits of the IO-Link standard with the EtherNet/IP and Modbus TCP protocols. You can easily integrate the IO-Link Master into a system network with existing and new industrial Ethernet installations.

For more information, please contact [sales@comtrol.com](mailto:sales@comtrol.com) or visit [www.comtrol.com/io-link](http://www.comtrol.com/io-link).



**Warranty Information**

Comtrol offers a 30-day satisfaction guarantee and 5-year limited warranty.

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