

## Case Study

# AUTOMATED WELDING GOES FLEXIBLE: MACHINE BUILDER MEETS CHALLENGING CUSTOMER DEMANDS WITH IO-LINK

When looking to update their popular FlexFast™ welding machines, CenterLine (Windsor) Limited, identified several requirements for increased flexibility and performance. Because the FlexFast's unique modular design is used for applications ranging from advanced fastener (nut & stud) welding to other resistance welding applications, the versatility of the equipment needed to be supported by a controls architecture that was just as flexible.

The design update was required to satisfy an expanding, globally competitive market and to meet the demands of CenterLine's growing customer base. To extend the flexibility of the machine, CenterLine needed an I/O and controls design that provided them with one common platform, allowed for different tooling, and also enabled their machines to interface with many different controller brands regardless of customer specifications. According to Simon Britton, Controls Technologist at CenterLine, "we were looking for a globally available platform that would be fast, flexible and provide the features that would satisfy the needs of our international customers."

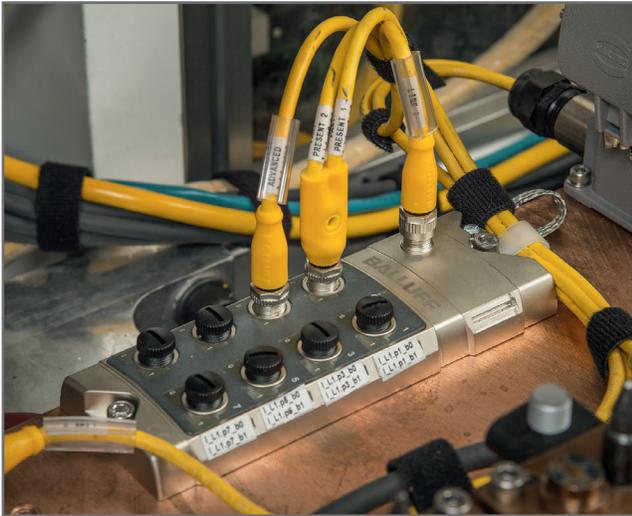
The new FlexFast design also demanded a controls architecture that could easily integrate cutting edge automation components with minimal concern. Simon added, "The need to integrate new components on the machine quickly and easily is critical to addressing ongoing changes in production needs that this equipment is expected to satisfy."



CenterLine FlexFast™ Welding Machine

To realize its objectives, CenterLine partnered with Balluff, a global sensor, networking and RFID component supplier. This enabled CenterLine to utilize Balluff's distributed modular I/O solution which incorporates IO-Link technology. IO-Link is a universal, vendor neutral standard, designed with the purpose of making it easy to integrate smart automation components into any control architecture. By specifying Balluff's I/O blocks with built-in identification data, CenterLine was able to operate multiple tooling fixtures with the same standard machine. This increased the flexibility and intelligence of the equipment without increasing the overall cost of the machine. Moreover, it enabled CenterLine to accurately track interchangeable tools to ensure proper machine setup.

Essentially, IO-Link allowed CenterLine to have a common control architecture while easily integrating a wide variety of sensing and control components. Product Engineer Adam Waites said, "IO-Link supports the versatility of our product line, and the new design streamlines the design of the equipment while reducing cycle time and increasing machine throughput."



Balluff I/O block with integrated ID data

Devicenet, Profibus or Profinet, we don't have to worry about platform standards from our customers. Whatever they require, we have been able to accommodate.”

By integrating IO-Link components into their machine, CenterLine was able to fulfill their need for increased flexibility and improved cycle time – all at a reduced implementation cost. Now that Centerline has integrated IO-Link into their machines, IO-Link allows future designs to quickly and easily take advantage of the value of other IO-Link technologies such as the Smart Light stack light and valve manifold control.

CenterLine is ready to meet their customer's automated welding needs with custom functions, interchangeable tooling and support for multiple control systems. And IO-Link is ready to handle the expanding requirements for years to come.

## About CenterLine

CenterLine (headquartered in Windsor, Ontario) is a valued supplier to the automotive, mass transit, aerospace and defense industries. CenterLine has a complete range of products and services ranging from consumable electrode products to complete custom automated production systems. Through its various operations, CenterLine has the capabilities to satisfy virtually any need. Its standard and custom production systems, component products and technical support services satisfy resistance, arc and laser welding needs, as well as metal forming and cold spray metal coating applications.

For more information on the FlexFast™ welders, visit [www.cntline.com](http://www.cntline.com) or contact CenterLine at 1-800-771-6172.

## About Balluff

Balluff is a leading manufacturer of a wide range of inductive, photoelectric, capacitive and magnetic sensors as well as linear position transducers, identification systems, and full network solutions. Balluff products for OEM and factory floor solutions are used to control, regulate, automate, assemble, position, and monitor manufacturing, assembly, and packaging sequences for industries including metalworking, automotive, plastics, material handling, wood processing, aerospace, electrical, and electronics.

For more information regarding Balluff's IO-Link, RFID, and sensing products, visit [www.balluff.com](http://www.balluff.com) or contact Balluff at 1-800-543-8390.