

Customer Requirement:

Detect clear glass for profiling and broken edge detection

Banner Solution:

A-GAGE[®] EZ-ARRAY™ with customized low-contrast receivers

Why Banner?

Flexible and accommodating—the modified EZ-ARRAY solves clear-object applications that a standard measuring array would not accommodate, plus it's a cost-effective and convenient alternative to ultrasonic arrays and manual inspections

Customer Benefits:

- **Easy setup and maintenance**—EZ-ARRAY installation and alignment is simple and has a small learning curve
- **Versatile solution**—the EZ-ARRAY has no length restrictions, and the output accommodates various communication protocols

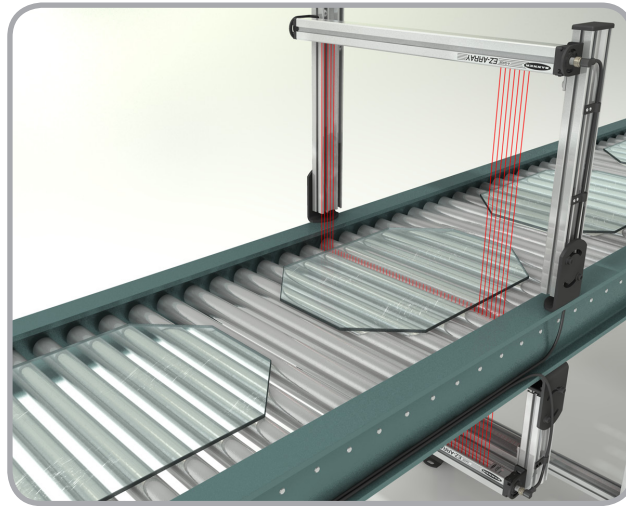


EZ-ARRAY Special Features:

- Model # EA5R900PIXMODSRLCQ
Standard emitter: EA5E900Q
- Receiver designed to operate at a lower sensing range (30 to 1500 mm)
- Software GUI provides advanced sensor setup and display
- Solution can also be used for transparent web guiding and detection

For more information about the [EZ-ARRAY](#), go to www.bannerengineering.com.

A-GAGE EZ-ARRAY solves clear glass profiling application



A specially-designed EZ-ARRAY detects glass plates for profiling and broken edge detection. The receiver is customized with low-contrast detection to successfully see clear objects.

Background

A leading glass manufacturer creates large glass plates for various markets and industries. After fabrication, the plates travel a conveyor for profiling and broken edge detection.

Challenge

The manufacturer needed to replace tedious manual inspections with an automated process for glass profiling and broken edge detection. A measuring light curtain or array is an ideal solution for object sizing, profiling and edge detection applications. However, clear objects such as glass pose unique challenges to measuring arrays—the beams can potentially burn through the objects, producing inconsistent results. Consequently, ultrasonic sensors, which use sound vs. light, are often used. Yet installation and maintenance of an ultrasonic array is complex and costly, and detection can be inhibited by the hot temperature of glass leaving the ovens. Banner's challenge was to provide a measuring array that could reliably and cost-effectively detect clear glass.

Solution

To meet the customer's need, Banner created a special model of EZ-ARRAYs, specifically designed to detect clear objects in clean industrial environments. By customizing the standard receivers to operate at a lower sensing range (30 to 1500 mm), the modified EZ-ARRAY can accurately and reliably detect transparent objects such as glass and clear webbing. In the customer's facility, the EZ-ARRAYs are mounted above and below the glass plates, looking for the edges as they travel the conveyor. Beam status is tied to a corresponding measurement mode and converted to analog values, and the data can be sent out of the Modbus 485 wires to a PLC or HMI panel. In place of time-consuming and unreliable manual methods, the customer now has a fully automatic and dependable solution that ensures their manufacturing line runs more smoothly and productively.