

MAJ Enterprises Presents from Cognex Barcode reader upgrade saves \$250,000 annually



A snack food manufacturer with multiple brands ran into problems when it tried using a laser-based barcode scanner to direct boxes to different shipping areas. The height of the boxes made it necessary to position the scanner at an angle a considerable distance from the labels, resulting in read rates of only 20% to 30%. The manufacturer assigned an employee fulltime for three shifts to manually divert the boxes when barcodes weren't read by the existing laser scanner. The company also had to deal with the consequences of orders filled incorrectly, such as returned product that could not be resold.

The company solved the problem by switching to a DataMan 500 image-based barcode reader from Cognex. This device, which can read any label at any orientation within its 12-inch by 12-inch field of view, improved the read rate to 100% even though it reads from the same location as the previous laser-based scanner. The DataMan 500 saves the company the cost of three full-time employees as well as the losses incurred by returned products, accounting for a total savings of approximately \$250,000 annually. The snack food manufacturer is very happy and is now considering using DataMan 500 readers on other packaging lines as well.

Image-based barcode reader overcomes limits

Crescent Electric Supply Company, a distributor and Automation Solution Provider (ASP) for Cognex based in Cleveland, Ohio, came up with a better approach. "I knew the minute I looked at their setup that there was no way a laser-based scanner would work," said Rick Rasbitsky, an application engineer at Crescent Electric.

What he proposed instead was a different technology for capturing the barcodes, specifically an image-based reader called the DataMan 500 from Cognex. The idea behind image-based technology is that the reader captures an image and uses a series of algorithms to process the image to make it easier to read. A typical algorithm searches the entire image for the code and identifies the position and orientation of the code for easy reading. Other algorithms handle degradations in code quality due to differences in material types and surfaces. Although the DataMan 500 can capture 2-D matrix barcodes, the snack food manufacturer only needed it for 1-D codes. The DataMan 500 uses a new 1DMax+™ algorithm, which incorporates Hotbars™ technology to handle difficult ID code-reading applications on high-speed lines.

Rasbitsky configured a DataMan 500 with a 50 mm lens and mounted it exactly where the laser-based scanner had been. He also installed an external blue light (SV75) at a low angle to the box to better illuminate the 12-inch by 12-inch area of inspection, and then connected the DataMan 500 to the Allen Bradley PLC. The entire set-up process took about 6 hours.

Since replacing the laser-based scanner with the DataMan 500, the company has eliminated the cost of having one employee per shift manually divert boxes. They also avoid shipping products to the wrong locations, eliminating the losses previously caused by returned products. Management is so pleased with the DataMan 500, and the \$250,000 annual savings it generates, that they are planning to purchase additional devices for other packaging lines.

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