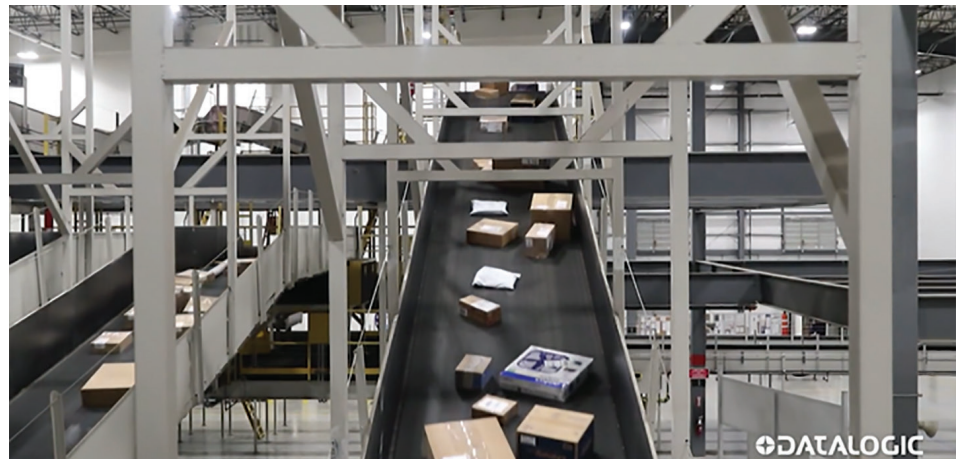# New FOV and Pixel Density Improves Traceability Accuracy

Barcodes ensure traceability throughout supply chains as parcels travel on high speed conveyors but poorly printed labels, damaged barcodes, low contrast, and colored backgrounds are difficult or impossible to read for scanners.

In the world of transportation, logistics, and manufacturing, barcodes are used to track the movement of materials and products; a critical effort to keeping customers happy and maintaining profitability. Enterprises everywhere rely on industrial imaging barcode scanners mounted above conveyors to track parcels.

Enterprises that scan as few as 10,000 parcels daily often see barcode read rates of 94% - 96%.

Barcode reading is affected by poorly printed labels, damaged barcodes, low contrast and colored backgrounds. A read rate of 94.5% creates 550 daily exceptions where parcels require manual processing which drains resources.

Datalogic has created a truly revolutionary industrial scanner in the Matrix 320™ with the technology to provide read rates as high as 99.9% and delivers an outstanding ROI in less than 2 weeks!! (Based upon information from US Bureau of Labor Statistics).

To understand the power of the new Matrix 320, let's take a closer look at how parcels are scanned for barcodes.

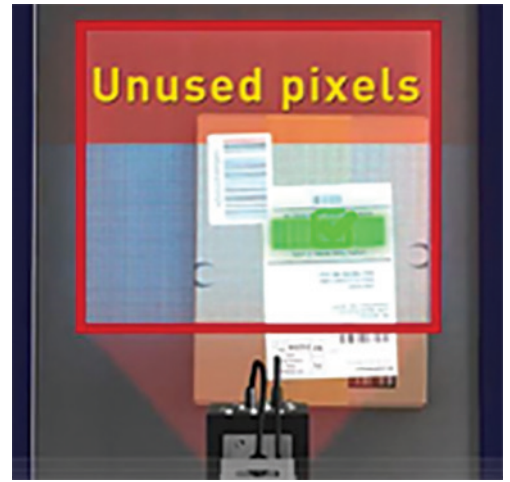Enterprises that scan as few as 10,000 parcels daily often see barcode read rates of 94% - 96%.

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Most industrial scanners use a 4:3 aspect field of view (FOV); a field of view that closely resembles a square area. Their pixels are spaced out evenly and projected onto the conveyor for reading barcodes. As parcels enter the field of view, barcodes are detected near the starting edge. This means that a significant percentage of the pixels in the field of view are unused.

Wide conveyors are used to move as many parcels as possible requiring scanners be raised high to extend their field of view over the width of the belt. Raising the scanner reduces the pixel density in the field of view impacting how well barcodes can be detected.
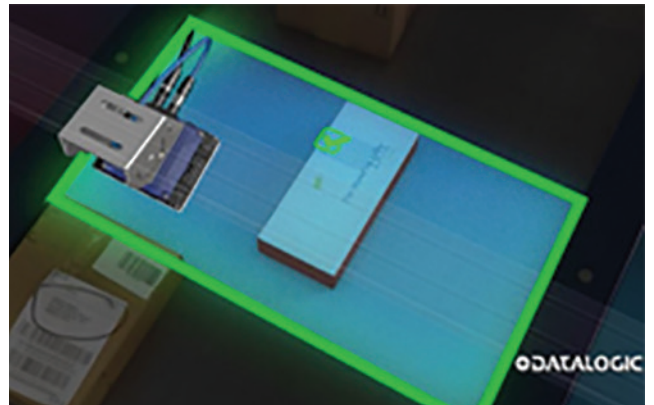

Industrial scanners use a 4:3 aspect FOV rendering many pixels unused.

Poorly printed labels, damaged barcodes, low contrast, and colored backgrounds become difficult or impossible to read for scanners at higher elevations. To resolve these reading challenges, enterprises install multiple devices at lower heights. Using multiple devices significantly increases the cost and complexity of the system.

In a side-by-side field test, the Matrix 320 registered 99.9% of codes presented compared to another imager that registered only 94.5% on the exact same parcels. The Matrix 320 eliminated over 550 daily exceptions that required manual attention. This productivity delivers an outstanding ROI in less than 2 weeks.
(US Bureau of Labor Statistics)

Datalogic technology brings a new paradigm to traceability with the Matrix 320 that eliminates the challenges and reduces system costs. The new Matrix 320 is unlike any other scanner projecting a 16:9 aspect field of view. This new field of view tightly packs all the pixels into a rectangular area to deliver maximum resolution exactly where it is needed to read any barcode.

Matrix 320 uses 16:9 FOV packing all the pixels into the ideal usable area.

With a dual core processor, the Matrix 320 has the horsepower to analyze and process image data to decode the most challenging barcodes. Damaged codes, poorly printed codes, barcodes with low contrast and barcodes on difficult background colors are read with ease.

In a side-by-side field test, the Matrix 320 registered 99.9% of codes presented compared to another imager that registered only 94.5% on the exact same parcels. This is a significant difference – in applications such as e-commerce, distribution, and 3PL where over 10,000 parcels are being scanned daily, the Matrix 320 eliminated over 550 daily exceptions that required manual attention. This productivity delivers an outstanding ROI in less than 2 weeks! (Based upon information from *US Bureau of Labor Statistics*).

Now is the time to put your intralogistics and supply chain operation at peak performance with the new Matrix 320 from Datalogic.

Learn more:
www.datalogic.com

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