



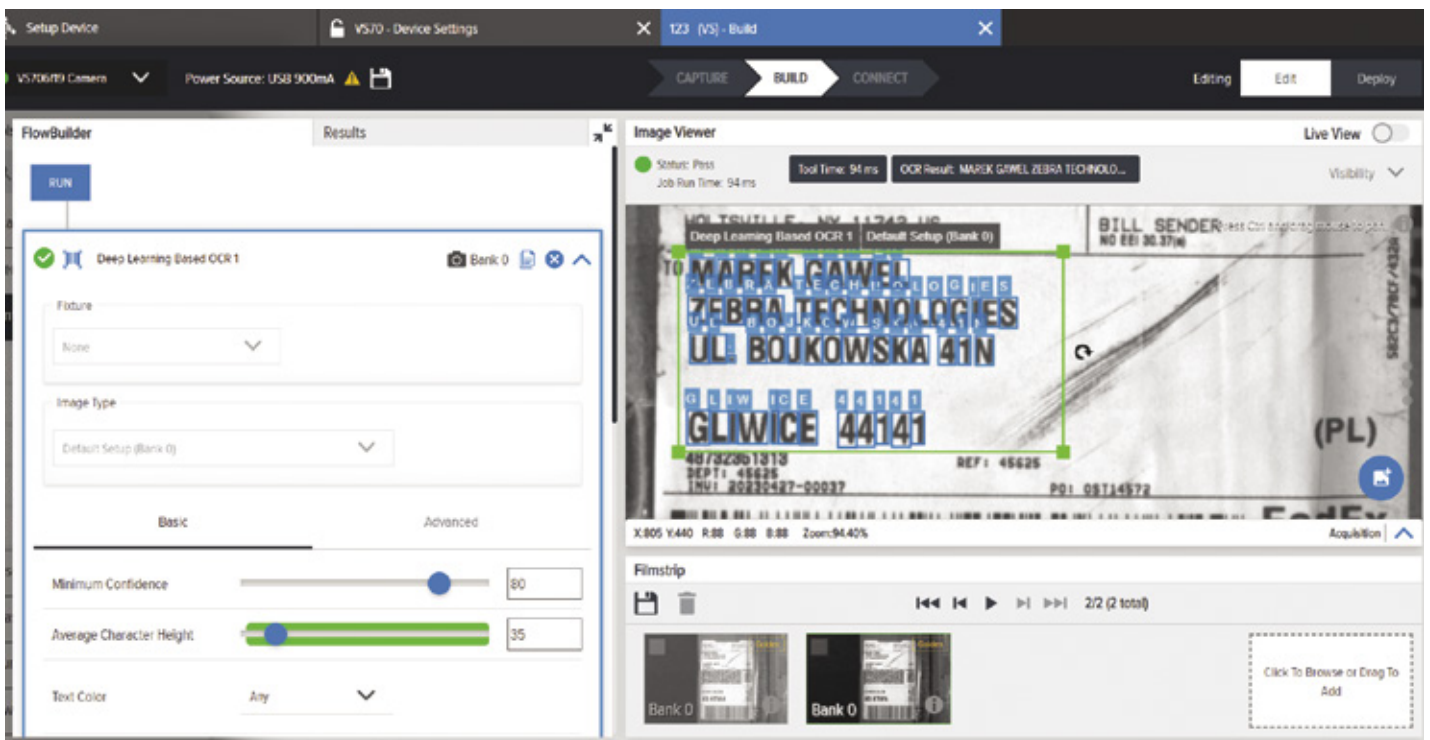
# Zebra Aurora™ Deep Learning-Based OCR Tool



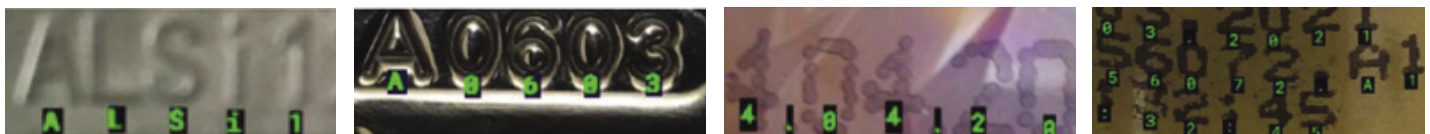
# Reliable, Accurate Reads Without Training

The Zebra Aurora™ suite of industrial automation software gives end users of all skill sets control over all Zebra fixed industrial scanners and machine vision solutions, simplifying management of enterprise-wide manufacturing and logistics automation solutions. Among the software’s many capabilities is optical character recognition (OCR), which automatically extracts information from images.

Oftentimes, training and retraining consumes a significant amount of time during OCR setup. Companies today need machine vision products that can dynamically adjust to such scenarios and deliver a reliable read. Traditional OCR applications may fall short when working with tough-to-read or low-contrast characters on confusing backgrounds. With the new Deep Learning-Based OCR Tool, font training becomes redundant, as the tool delivers reliable, accurate reads without having to train numerous different texts or fonts. The tool leverages state-of-the-art techniques based on artificial intelligence that allow novices to quickly and easily set up highly accurate text recognition and character reading applications.



Zebra Aurora Focus Interface—Deep Learning OCR Job Setup



# Approachability for End Users

End users unfamiliar with OCR technology or general machine vision may encounter challenges in system setup. Challenges that can impact success include how a code is printed, the type of surface it's applied on, the way the code is illuminated, and the way it's captured by the camera. The Deep Learning-Based OCR Tool removes these roadblocks. The approachable, easy-to-deploy machine vision system requires no coding or programming expertise on most Aurora software platforms. This allows companies to quickly install new deep learning-based OCR applications that could previously not be automated.



# Swift Setup for Systems Integrators

For systems integrators, Zebra Aurora's Deep Learning-Based OCR Tool saves significant setup and deployment time. The software requires no font training. Most non-deep-learning OCR technologies require samples of all potential OCR fonts — and all possible variations of a given font — and subsequent time spent training the software on them. Integrators might spend months setting up an OCR font because the system has not yet encountered a particular variant of letter, such as one that is rotated, skewed, stretched or compressed due to variations in line speed. Instead, the integrator can set up the scanner or camera and turn it over to a control engineer or another plant floor operator to begin using the deep learning-powered OCR tool.



# Out-of-the-Box OCR Inspection

## ZERO TRAINING FOR FASTER DEPLOYMENT



Zebra's Deep Learning-Based OCR Tool can handle a great amount of process variation. The robust and powerful algorithms ensure maximum readability and throughput.

Manufacturing and logistics environments need machine vision systems that offer flexibility and ease of use. Requirements can quickly change, or new parts can be introduced. Streamlining the process of adjusting an automation system helps make flexibility and ease of use possible. Zebra Aurora's Deep Learning-Based OCR Tool offers a pretrained model that allows users to deploy the tool easily, removing the time-intensive training portion of deep learning development entirely, including the training of new fonts or texts.

### Ease of Use

Zebra Aurora's Deep Learning-Based OCR Tool was designed to allow end users to deploy automated reading systems quickly and easily. Putting the tool to work is as simple as drawing a box in an image when the text to be read is at a fixed position. The tool can also be easily used in combination with traditional machine vision and other deep learning-based tools when text position varies significantly from image to image. For any necessary adjustments, the tool offers a range of different settings, including for changing character heights, from within intuitive graphical interfaces. Directly read text without having to train a font with the Deep Learning-Based OCR Tool.

### Confident Code Reading

With the Deep Learning-Based OCR Tool, end users can set minimum confidence scores to ensure a reliable read. In addition, users can look at the overall confidence of a given string and then drill down to the character-to-character quality to ensure the algorithm is reading correctly and that the highest-confidence reads are being delivered. Users can then make adjustments as needed. The deep learning tool supports a wide range of font types, including dot-formed, solid, printed, engraved, and direct part marking formats.

## Software Platforms Supporting Deep Learning OCR

<p>Zebra <b>Aurora</b> Focus™</p>	<p>Aurora Focus simplifies control of enterprise-wide manufacturing and logistics solutions. Its interface makes it easy to set up, deploy, and run fixed industrial scanners and smart cameras, eliminating the need for other tools and reducing training time.</p> <p><b>Learn More</b></p>
<p>Zebra <b>Aurora</b> Design Assistant™</p>	<p>Aurora Design Assistant, formerly Matrox Design Assistant, integrated development environment (IDE) is a flowchart-based platform for building applications, with templates to speed up development and bring vision applications online quicker.</p> <p><b>Learn More</b></p>
<p>Zebra <b>Aurora</b> Imaging Library™</p>	<p>Aurora Imaging Library, formerly Matrox Imaging Library, machine vision software development kit (SDK) has a deep collection of tools for image capture, processing, analysis, annotation, display, and archiving. Code-level customization starts here.</p> <p><b>Learn More</b></p>
<p>Zebra <b>Aurora Vision</b> Studio™</p>	<p>Aimed at machine and computer vision engineers, Aurora Vision Studio software enables users to quickly create, integrate and monitor powerful machine vision applications without the need to write a single line of code.</p> <p><b>Learn More</b></p>
<p>Zebra <b>Aurora Vision</b> Library™</p>	<p>Designed for experienced programmers proficient in vision applications, Aurora Vision Library™ provides the same sophisticated functionality as our Aurora Vision Studio software but presented in programming language.</p> <p><b>Learn More</b></p>

For more information about Zebra's fixed industrial scanners and machine vision solutions, visit <https://www.zebra.com/us/en/software/machine-vision-and-fixed-industrial-scanning-software.html>.



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