

Quickly Create, Integrate, and Monitor Powerful Machine Vision Applications

With Aurora Vision Studio™ and Aurora Vision Library™

Accelerate Your Machine Vision Application Development

Zebra is now a leading provider of user-friendly machine vision software for industrial image analysis. Our comprehensive Zebra Aurora Vision for OEM software portfolio helps you easily create custom machine vision applications.

Enhanced and optimized by machine vision experts since 2007, these world-class software products offer state-of-the-art, industrial reliability, quality, and speed. They have been used by machine builders, vision system integrators, robotic designers, and industrial end-users worldwide to enable rapid development of vision applications in verticals ranging from food production and retail to agriculture and healthcare.

Ready-made tools for dataflow and comprehensive image analysis filters are all hardware-agnostic – to suit your customers' specific needs. They enable your engineers to quickly and easily construct powerful, customized machine vision applications to augment your operations.

Aurora Vision Studio

Powerful simplicity for complex projects

Machine and computer vision engineers can use Aurora Vision Studio to quickly create, integrate, and monitor powerful machine vision applications. Advanced yet easy to use and hardware-agnostic, this industry-leading software provides an intuitive graphical environment for the creation of sophisticated vision applications – without the need to write a single line of code.

Straightforward drag and drop functionality drives real-world vision applications that save time, cost, and operational resources. The mature technology behind this robust, rapid-to-develop functionality can be further enhanced by an impressive set of deep learning tools and capabilities, including optical character recognition (OCR), to make an extensive range of complex industrial image analysis tasks unbelievably simple.

Makes vision applications easier

Enhanced and optimized by machine vision experts for nearly two decades, Aurora Vision Studio software is renowned for its ease of use – and the power it brings to all varieties of vision applications. Whatever customers want to capture, this software makes complex vision tasks (and their operators' lives) so much easier.

Comprehensive adaptability

The ease of use of Aurora Vision Studio belies the sophistication of the technology at work. Aurora Vision Studio is one of the most powerful visual/graphical development environments available. Based on dataflow, it comes with a comprehensive set of thousands of proven and ready-to-use filters. This enables operators to design a customized solution quickly and easily – all based on a simple, three-step workflow.

Hardware-Agnostic with 3D capabilities

Aurora Vision Studio software is hardware-agnostic, so can be used with the vast majority of machine vision cameras available on the market, with out-of-the-box dedicated support for devices from all major manufacturers. 3D capabilities enable complex vision tasks and operators can also create custom user interfaces (HMI).

A Simple, Three-Step Workflow

Creating your machine vision program involves a simple three-step process:



Design your algorithm

1. Drag and drop filters from the toolbox to the program editor
2. Set parameters and create connections
3. Drag and drop filter outputs to data preview panels for interactive analysis

Create a custom HMI

Creating a custom graphical user interface is simple too:

1. Drag and drop controls to the HMI panel
2. Set the controls' properties
3. Create program connection
4. Manage events with Event Handlers

Note that you can also easily integrate your algorithm with an HMI created in C++ or C#.

Deploy

All set? You need to export the program as a run-time executable file and deploy it to a PC-based industrial computer or smart camera.

Zebra Aurora Vision Library

Complete custom programming control

Designed for use by experienced programmers, Aurora Vision Library provides the same sophisticated functionality as our Aurora Vision Studio software but presented in programming language, rather than via a graphical user interface.

We recognize that many programmers who are highly proficient in vision applications and programming languages prefer to be able to build their own completely customized code and integrations – so Aurora Vision Library allows them to do just that. As the “engine” that powers our Aurora Vision Library software, it enables programmers to benefit from complete control over custom programming, so they can create an imaging application and bespoke user interface from scratch.

Totally Customizable

Like its graphical-based sister product, our Aurora Vision Library software has been tried, tested, and fine-tuned by machine vision experts for nearly two decades. As a result, it's optimized for use by expert programmers who are looking for total control over the fully customized vision application they design.

Save Time on Code Writing

Customers who install both Aurora Vision Library and Aurora Vision Studio can save time on code writing by, instead, using the graphical environment of Studio to quickly create or prototype their machine vision applications. Aurora Vision Studio's C++ code generator then allows the user to swiftly incorporate their solution into programming projects.

Comprehensive Application Functionality

Aurora Vision Library offers thousands of functions for image analysis applications – from basic barcode reading to remote camera calibration, 3D measurement, and more. If programmers also install Aurora Vision Library, they can use that software to quickly generate C++ code automatically or create .NET microfilter interfaces.

A complete solution

Discover our full portfolio of intuitive software for industrial image analysis

Alongside our core Aurora Vision Studio and Aurora Vision Library graphical software, we can help you further optimize your machine vision solutions with additional applications:

Zebra Aurora Deep Learning™ to further enhance solution quality

This add-on product offers a complete set of industrial-quality deep learning (DL) tools which can be used to solve problems that are far too complex for traditional machine vision algorithms and further enhance the outputs of Aurora Vision Studio and Aurora Vision Library software. Features & anomaly detection, advanced optical character recognition (OCR) technology, and deep learning capabilities combine to recognize the way real-world images are used – and evolve accordingly.

Dedicated support and services to further accelerate projects

Elevate the performance of your machine vision applications by tapping into the expertise of our dedicated technical support and custom software development services for machine builders.

Our friendly experts have overseen hundreds of projects. You can access this accumulated expertise to further accelerate your own projects and maximize the potential of machine vision to improve accuracy and quality, reduce costs, and optimize productivity – from the manufacturing plant to the distribution center and beyond.

To find out more, visit zebra.com/aurora-for-oem