Zebra Aurora Vision Studio™

POWERFUL SIMPLICITY FOR COMPLEX PROJECTS

Zebra Aurora Vision Studio™ is a dataflow-based software designed for machine vision engineers. It does not require programming skills, but it is still so powerful that it has been used in many of the most demanding vision systems.

Quickly Create Powerful Machine Vision Applications

Machine and computer vision engineers can use Zebra 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 architecture is highly flexible, ensuring users can easily adapt the product to the way they work and to specific requirements of any project.

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.
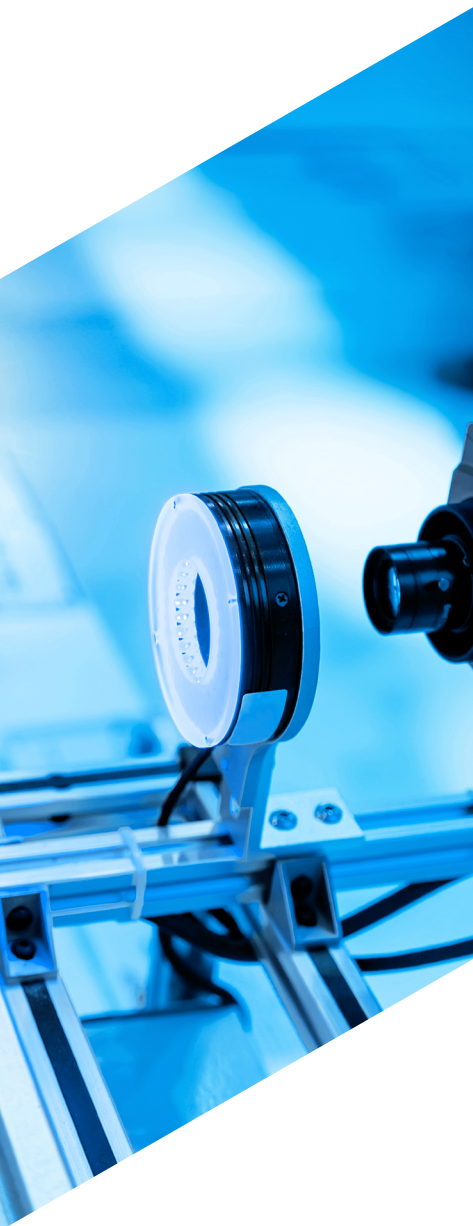
MAKES VISION APPLICATIONS EASIER

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. It is one of the most powerful visual/graphical development environments available. Based on dataflow, it comes with a comprehensive set of over 3,500 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 local and on-line user interfaces (HMI & WebHMI).

Why Choose Zebra Aurora Vision Studio™?

- It helps you develop vision systems much faster than with low-level programming.
- This is the most powerful graphical software on the market.
- You get everything you need for industrial image analysis – together with the highest performance and flexibility.
- The world is changing – and new challenges require new approaches.

Key Features

Intuitive

Drag & Drop

All programming is done by choosing filters and connecting them with each other. You can focus all your attention on computer vision.

You can see everything

Inspection results are visualized on multiple configurable data previews; and when a parameter in the program is changed, you can see the previews updated in real time.

HMI Designer + Events

You can easily create custom graphical user interfaces and thus build the entire machine vision application using a single software package. Moreover, your interface can also be accessed on-line when built using the brand new WebHMI feature.

Powerful

3,500 effective filters

There are over 3,500 ready-for-use machine vision filters tested and improved in hundreds of applications. They have many advanced capabilities such as outlier suppression, subpixel precision or any-shape region of interest.

Hardware acceleration

The filters are aggressively optimized for the SSE/AVX/NEON trechnologies and for multicore processors. Our implementations are ones of the fastest in the world (as can be seen in the Performance section).

Loop, conditions & more

There is no coding, but you can still create custom and scalable program flows. Loops, conditions and subprograms (marcofilters) are realized with appropriate data-flow constructs in the graphical way. Moreover, our software also supports parallel programming.

Adaptable

GigE Vision and GenTL

Aurora Vision Studio™ is a GigE Vision compliant product, supports the GenTL interface, as well as a number of vendor-specific APIs. Thus, you can use it with most cameras available on the market, including models from Allied Vision, Basler, Baumer, Dalsa, FLIR, Matrix Vision, Photon Focus and XIMEA.

User filters

You can use user filters to integrate your own C/C++ code with the benefits of visual programming. It takes 30 seconds to update one after the recompilation.
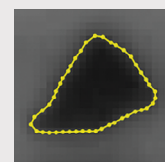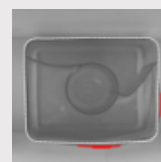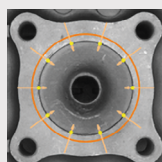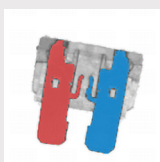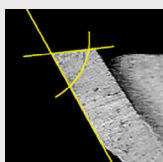
C++ and .NET Generators

Programs created in Studio can be exported to C++ code or to .NET assemblies. This makes it very easy to integrate you vision algorithms with applivations created in C++, C# or VB programming languages.

Capabilities

- Image Processing
- Blob Analysis
- Contour Analysis
- Planar Geometry

- Shape Fitting
- Camera Calibration
- Fourier Analysis
- Hough Transform

- Barcode Reading
- Data Code Reading
- Corner Dectection
- 1D Profile Anaylsis

- 1D Measurements
- 2D Measurements
- Template Matching
- Histogram Analysis

- OCR
- GigE Vision and GenTL
- 3D Point Clouds
- Deep Learning (Add-on)

Explore the Zebra Aurora Vision Portfolio™

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

Accelerate your Machine Vision Application Development

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.

Zebra **Aurora Vision** Studio™

Zebra **Aurora Vision** Library™

Zebra **Aurora** Deep Learning™

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

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