Zebra Aurora Vision Library™

COMPLETE CUSTOM PROGRAMMING CONTROL

Zebra Aurora Vision Library™ is a machine vision library for C++ and .NET programmers. It gives you instant access to the highest quality, well-optimized and field-tested code that you need for your machine vision projects.

Create Bespoke Imaging Applications and User Interfaces

Zebra Aurora Vision Library™ provides a comprehensive set of functions for creating industrial image analysis applications – everything from standard-based image acquisition interfaces and low-level image processing routines to ready-made tools, such as template matching, measurements, or barcode readers.

Designed for use by experienced programmers, it provides the same sophisticated functionality as our Aurora Vision Studio™ software, but presented in programming language, rather than via a graphical user interface. This makes it possible to prototype algorithms quickly in a graphical environment and then translate them to C++ or .NET, or even generate the C++ code automatically.

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 Studio™ 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 Studio 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 over 3,500 functions for image analysis applications – from basic barcode reading to remote camera calibration, 3D measurement, and more. If programmers also install Aurora Vision Studio™, they can use that software to quickly generate C++ code automatically or create .NET microfilter interfaces.

Key Features:

Performance

In Aurora Vision Library careful design of algorithms goes hand in hand with extensive hardware optimizations, results in performance that puts the library among the fastest in the world. Our implentations make use of SSE/AVX/NEON instructions and parellel computations on multicore processors.

Modern Design

All types of data feature automatic memory management, errors are handled explicitly with exceptions and optional types are used for type-safe special values. All functions are thread-safe and use data parellelism internally, when possible.

Simplicity & Consistency

The library is simple collection of types and functions, provided as a single DLL/SO file with appropriate headers. For maximum readability, functions follow consistent naming convention (e.g. SmoothImage, RotateVector). All results are returned via reference output parameters so that many outputs arew always possible.
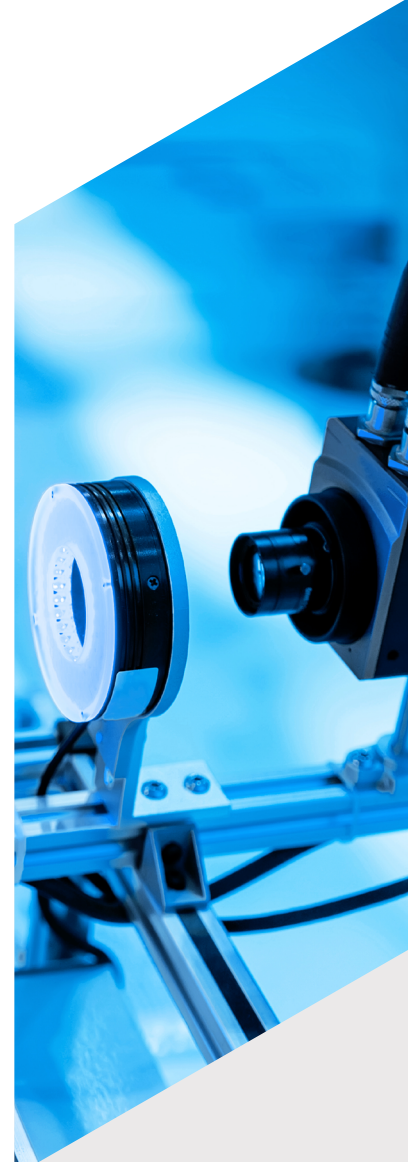
Explore the Zebra Aurora Vision™ Portfolio

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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