

# Aphelion™ SDK

BUILD POWERFUL  
IMAGING SOLUTIONS  
WITH APHELION SDK

Specifically designed for application developers, integrators and Value Added Resellers, Aphelion SDK is the most comprehensive library for Image Processing, Analysis and Understanding currently available on the market. Resulting of a continuous development effort of over 25 years, and strategic relationship with worldwide universities and research laboratories, the Aphelion Imaging Suite has established itself as the leader in imaging tools, fully supported by a team of imaging experts. It is easy to understand why successful OEMs in the field of medicine, microscopy, materials science, quality control and high throughput imaging have selected Aphelion as the base platform for their imaging needs.

Aphelion SDK libraries are available both native libraries and .NET components for Windows. A Linux version is also available. Following new programming trends, the availability of 64-bit PCs, SDK can handle very large images, such as large 2D images, 3D images, digitized on 8, 16, 32 and 64 bits, multi-band images and Aphelion ObjectSets. With this new version of the libraries, there is virtually no limit on the type of images that can be processed. Regions of Interest of any size and shapes are also supported to concentrate the processing on specific areas. And for complex applications, Aphelion optional modules are available.

Aphelion SDK is delivered with a set of examples demonstrating how to use the library in programming environments such as Visual C#, C++, Basic and Python. Users can take these examples as a reference point to develop very complex applications involving powerful image processing functions, object manipulation, and the design of a specific GUI. All functions are fully documented with code examples. See at the back to get a list of the main categories of functions.

Aphelion SDK is organized as two main library components for the .NET environment:

- **Imaging Toolkit:** Image processing/analysis and ObjectSet processing functions
- **GUI Components:** Image and ObjectSet display, Drawing Toolkit

Programmers will appreciate Aphelion SDK to challenge their expertise in the field of imaging, and will quickly deploy an application to address a specific market. Runtime versions of the SDK are available at a very competitive price in case of application deployment with the possibility to only use a subset of SDK.



## Main benefits of Aphelion SDK

- Full-compatibility with 3rd party Microsoft® .NET components enables development of powerful applications that require more than image processing functionality
- High quality design for easy integration
- Capability to process very large 2D and 3D images (exceeding 32-bit memory addressing, and up to the computer's RAM)
- High performance imaging libraries for higher performance applications
- Ability to address applications requiring high performance CPUs (e.g., high-throughput microscopy)

## List of Aphelion SDK Image and ObjectSet functions

### *Image based Functions*

Arithmetic	Matching
Edge Detection	Math
Enhancement	Measurement
Filtering	Morphology
Frequency	Segmentation
Geometry	Utility
Logic	Texture

Note: The following image formats are supported: Tiff, BMP, Jpeg, PNG, Dicom (read only)

### *Aphelion ObjectSet based Functions*

ObjectSet Drawing and Output	Lines
Chains	Measurements
Edgels	Morphology
Filtering	Segmentation
Geometry	Utility

### **Optional Modules**

3D Image Processing	Kriging Toolkit
3D Image Display	Neural Network Toolkit
Image Registration	Projection Toolkit
Camera Acquisition Interface	Virtual Image Capture
Color Space Conversion and Segmentation	Virtual Image Stitcher



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