

ONLINE IMAGING KIT

With state-of-the-art Technology H/w and S/w

ONLINE IMAGING KIT with field proven Color Camera, hardware and software with accessories allows all Research Labs, educational institutions, corporates, manufacturers looking for skill development to set up a state-of-the-art IMAGING and VISION Lab to teach, learn, create prototypes, apply concepts and develop real world applications. Proof of concept demonstration and develop student projects, industry applications in the field of Biomedical Engineering, Electrical and Electronics and all related fields.

Color Camera with accessories:

- 2.3 Megapixel
- 45fps in Full Resolution
- 100+ fps in reduced resolution
- GigE Vision Technology Genic am compatible camera Configurator and SDK S/w
- Windows and Visual Studio Support.
- Lens to view standard and Micro objects
- Tripod Stand
- 10 meter data cables
- Connection to Multiple PCs

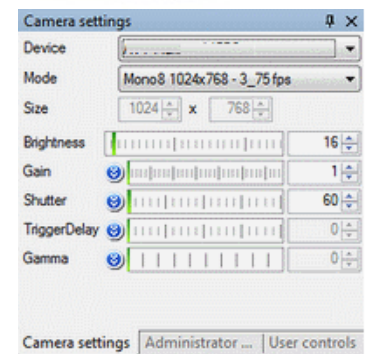


Image Processing Software:

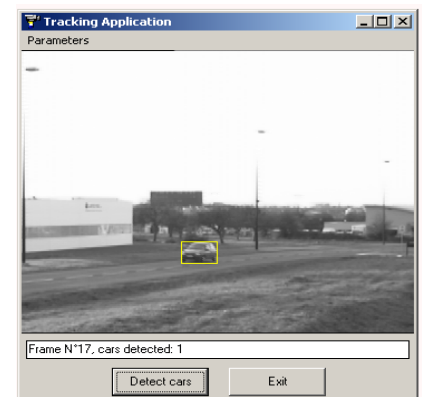
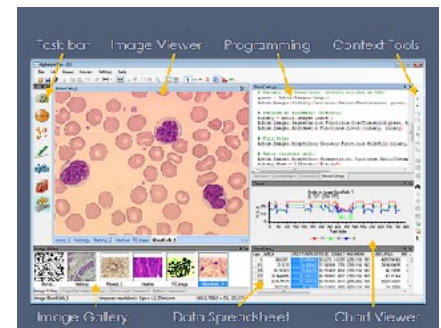
Software has both GUI and SDK approach

Graphical User Interface utilizes the best features of current Windows[®] technology, such as .Net components and software architecture tools. Its context-based tools guide a new user from image acquisition, through image processing and analysis, to report generation. Software provides the user the tools to develop advanced and automated imaging processes that quickly become deployed applications.

Users benefit from the openness of the software made possible by support for multiple macro command languages that can call functions from the library as well as from third party software products

Libraries are available as native code and .Net[®] components. This capability enables users to create "stand-alone imaging" applications with customized GUIs in a timely manner.

SDK allows working with *Live Images* from Cameras and other devices for any Image processing and analysis function and also display capability.



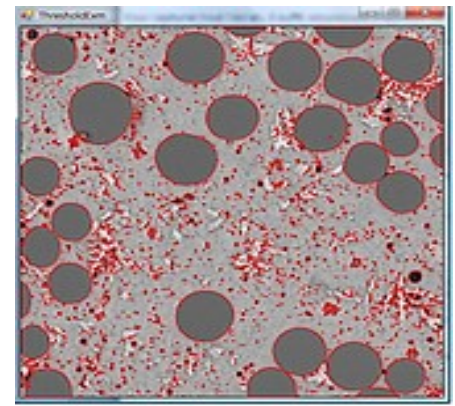
SDK - Software Development Kit includes native libraries (**DLLs**) and **.NET components** fully compatible with Windows® environments and 32/64 bit architectures built on the Microsoft® .NET Framework organized as:

- **Acquisition:** To capture images from a camera (IEEE1394 and DirectShow drivers)
- **Visualization:** To display both still and live images, and Aphelion Object Sets, and to annotate images and graphics
- **Processing:** To process 2D and (3D*) images, and Object Sets

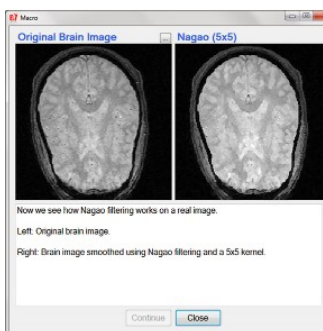
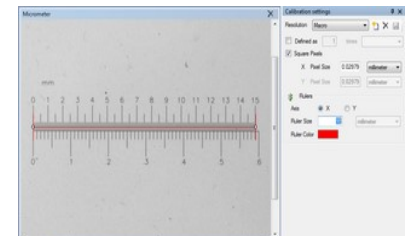
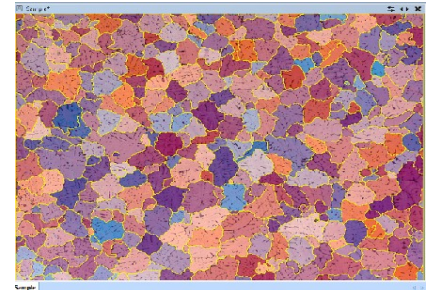
Image Processing functions: Arithmetic, Edge Detection, Enhancement, Filtering, Frequency, Geometry, Input / Output, Logic, Matching, Math, Measurements, Morphology (Basic, Distance, Enhancement, Features, Filtering, Geodesy, Opening / Closing, Segmentation, Skeleton), Reconstruction, Segmentation, Texture, Utility

Object set Functions: Bitmaps, Logic, Morphology, Chains, Display, Edgels, Grouping, Filtering, Geometry, Lines, Measurements, Polygons, Skeletons*, utility.

- **Analysis:** To compute over 50 measurements (fully calibrated)
- **Management:** To manage images and Object Sets
- **Larger Images** - Support for 64-bit environments enables processing images too large for 32-bit memory addressing
- **Faster Performance** - Optimized data addressing improves processing speed
- .Net® Imaging libraries can be called from the Python and C# programming environments and used in GUI.
- Color functions lets the user manage color images by providing advanced tools to segment images and extract objects of interest based on their color intensity. It includes four semi-automatic segmentation techniques: Interval, Distance, Region Growing, and Morphological Partition



```
// Create the input image and read the image from the disk
Adria.Images.Image imageInput = new Adria.Images.Image();
imageInput.Read(@"C:\Users\Public\Threshold\Threshold.tif");
// Display the input image
m_imageView.Data.Add(imageInput);
// Create a new Aphelion ObjectSet
Adria.ObjectSet.ObjectSet os = new Adria.ObjectSet.ObjectSet();
// Perform a Threshold operation and generate an ObjectSet
Adria.ObjectSet.Region Segmentation.Functions.Threshold(imageInput, os, new Interval
    new HighGraph(PredefinedHighGraphEnum.psqSquare));
// Display the objects generated after the threshold operation
m_imageView.Data.Add(os.Attributes["SEGOUT"]);
```



VISION TUTOR: The "Vision Tutor" Computer Vision Course is a combined theory and laboratory program designed as an introductory course in image processing and analysis. The format of this course is unique, consisting of computer-based text, graphics, figures, images, and lab exercises that utilize a comprehensive image processing library.

Image processing operators are demonstrated using a stand-alone application to execute the operators presented theoretically in the lecture materials, and applying them on a set of typical images, all within Vision Tutor.



OPTIONAL EXTENSION MODULES:

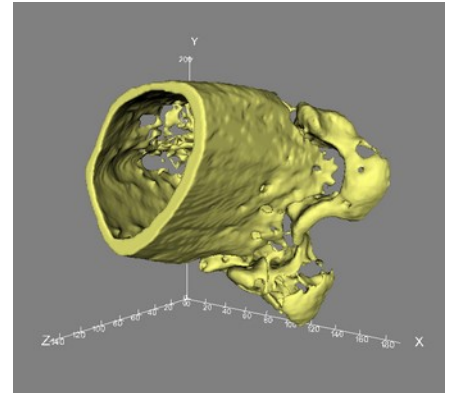
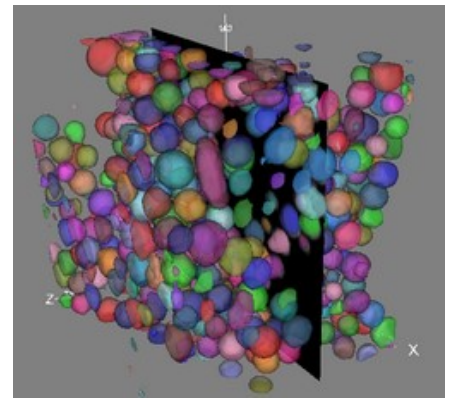
3D Image Processing & Display Extension:

Users/Developers can now effectively process and display 3D images using virtually the same processing and analysis power provided for 2D images.

Different visualization modes are available to let the user accurately analyze any 3D object using 3D Display extension.

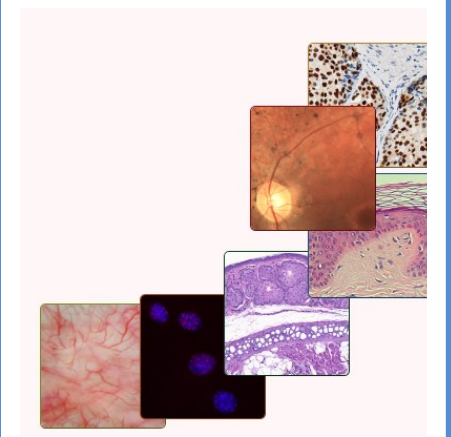
2D image processing operators have been enhanced to handle 3D data including, for example, convolution, addition, subtraction, maximum, erosion, dilation, distance function, labeling, watershed, and threshold. The 3D Image Processing Extension includes analysis on 3D images and true 3D Object sets. A set of specific 3D measurements is available such as sphericity, surface area, and volume.

Using these powerful extensions, images acquired from sensor devices such as X-ray Micro-CT, 3D Atom Probe, confocal microscopes, medical scanners, and other 3D devices, can be easily processed, analyzed, and displayed.



APPLICATION AREAS:

- ❖ Medical and Biomedical Imaging
- ❖ Industrial Vision (manufacturing and quality control)
- ❖ Material Science
- ❖ Security
- ❖ Research and Education.



CONTACT

INDIA :

Online Solutions (Imaging) Pvt. Ltd.
15A PNMK Salai Baby Nagar
Velachery
Chennai 600 042 INDIA
Phone: 91 44 65183476/43132630
Email: info@onlsol.com



ONLINE The
SOLUTIONS Solution Sellers
Since 1995

ASIA :

Online Solutions
#04-04, Golden Wall Centre
89 Short Street
Singapore 188216
Phone: 65 – 63343790
Email: onlsol@singnet.com.sg



www.onlsol.com

All trademarks and registered trademarks are property of their respective owners.
Specifications are subjected to change without any prior notice
* Pictures shown here are for representative visuals only

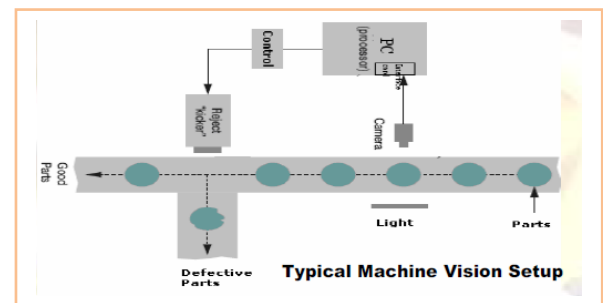
About the company

Online Solutions

- ✚ is a high performance Imaging and vision company since 1995 that distributes, designs, develops, integrates, and markets digital imaging products and solutions.
- ✚ offers the widest range of security and machine vision components and solutions in India and surrounding Asian countries and was involved in high end intelligent security and surveillance projects
- ✚ also provides training and lab setups in Imaging and Machine vision for corporates and academic institutions apart from project integration sales and support.
- ✚ can work with any System integrator or OEM to build vision systems for Security, Machine Vision and Automation applications.

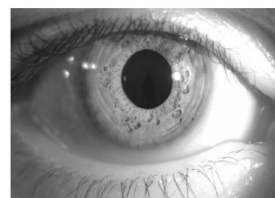
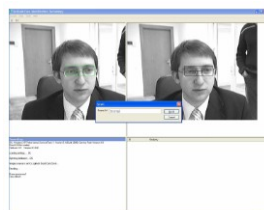
OTHER PRODUCTS:

- **ONLINE MACHINE VISION KIT** is designed to "SETUP A STATE OF THE ART MACHINE VISION LAB". and the associated Experiment Kit is designed by Online Solutions bringing the on field experience gained in more than 2 decades of solution selling in the field of Imaging and Vision
 - ✓ With a view to provide an overall experience of designing and using a machine vision system (*Need of the hour for MAKE In INDIA*) towards different Industrial application projects
 - ✓ To give professional training on machine vision to Students of Engineering Disciplines in Engineering Colleges and Universities, corporates and manufacturing units (*Skill Development*),
 - ✓ To provide knowledge on Rapid Prototyping and Real world Development



Additionally **ROBOTICS Kit, LIGHTING KITS, LENS KITS** are also available.

- **ONLINE BIOMETRICS KIT** is designed to facilitate institutes and research centers to setup a Biometrics lab to learn, teach and develop biometric applications based on Fingerprint, Signature, IRIS and Face Recognition and more.



TRAINING COURSES ON IMAGING and MACHINE VISION towards "SKILL DEVELOPMENT"