

Measurement

Inspection

Controlling

Sorting

Positioning

Completeness detection

Presence check

Surface control

Part checking

Integrated tool presetting

3D-vision

3D-recognition

Robot vision

Marker control

Coplanarity

BGA check

Contour check

Defects, contamination

OCR/OCV character recognition

Bar code, pharmacy code

Data Matrix Code

Thread and fabric inspection

Paper and plastic inspection

Metal inspection

Display inspection LCD, LED, OLED

Pattern matching

blister control

robot guidance

drill measurements

FireWire, IEEE1394

USB2.0

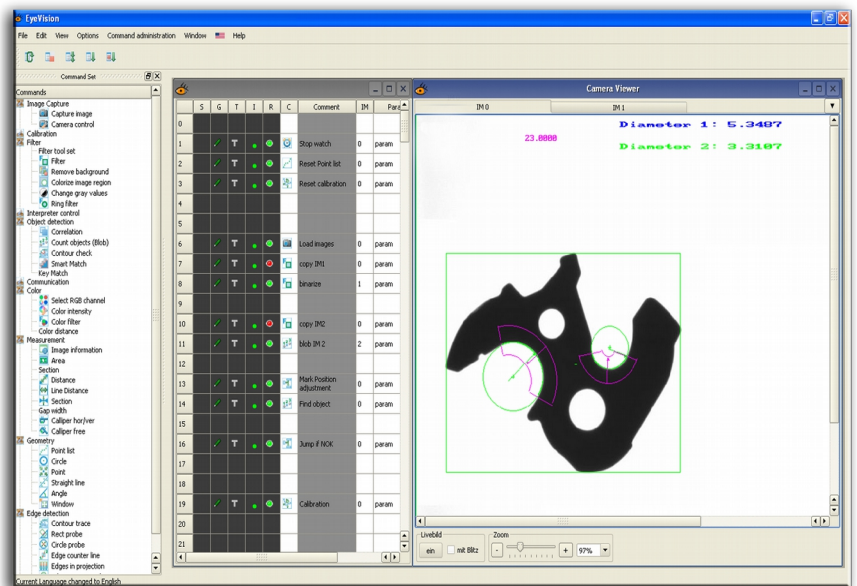
GigE

CameraLink, Analog

Digital I/O

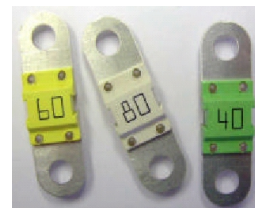
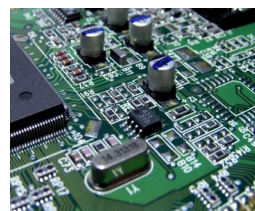
PCI, PCIe

and many more ...



# EYE VISION

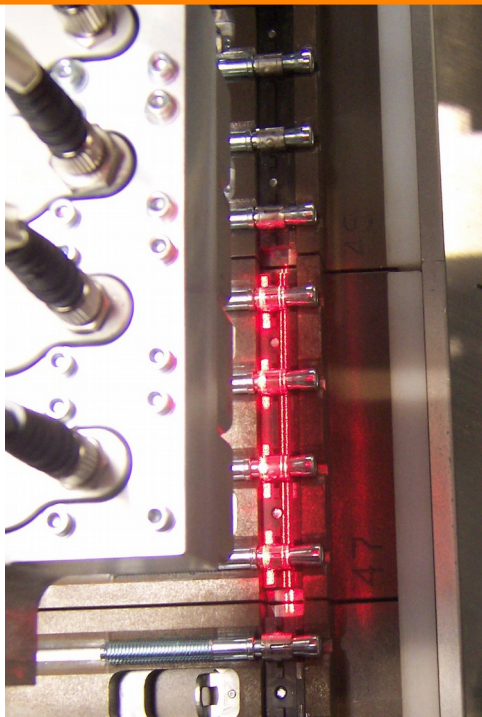
Three steps to your machine vision solution !



# EVT



## ***EyeVision*** – one software for automation and quality control in industrial applications



Single manual or visual controlling steps are required to achieve a result, anywhere, where you have to measure, identify, control, locate or place something.

A high expenditure of time, as well as high manpower requirements are part of this process.

All industrial tasks can be solved quickly, efficiently and cost-effectively with the help of the all-in-one machine vision software ***EyeVision***.

***EyeVision*** stands for the „zero-error-production“, a reduction of processing time, an increase in quality and productivity and - coming along with all this - of course a higher customer satisfaction.



## ***EyeVision:***

- can be used even for challenging tasks
- a quick installation
- universal application for all vision tasks
- an easy application-specific adaption
- easy-to-handle
- modular expandable
- economic and efficient
- compact and insusceptible to shock
- easy integration of PLC for machine connection
- OEM instruction set
- Powerful BASIC interpreter

## **One software for all machine vision solutions**

***EyeVision*** is more than just a smart software. You get a complete machine vision package for all possible application areas in machine vision.

***EyeVision*** combines a powerful software with the easy installation on a standard Windows PC working with a wide range of hardware for image acquisition and digital I/O.

Inspection procedures for all applications can be generated without programming skills, with its help, just with a minimum of training time.

Wide range of cameras



+



Ready-to-use software

+



Various interfaces for image acquisition

+



Various PLC and field bus interfaces

+



Free choice of lens

+



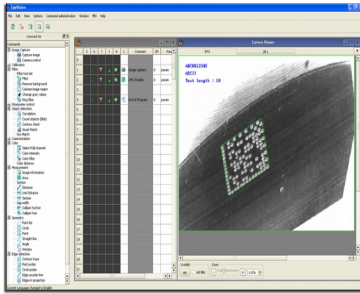
Free choice of light

+





## Software



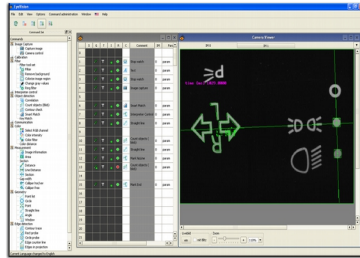
**EyeVision means programming via graphical user interface – simple and easy**

- Easy handling and programming, intuitively per drag-and-drop
- universal software for all machine vision tasks
- expandable without any problem
- easily portable
- quick solutions
- individually configurable
- broad range of given solutions for various applications

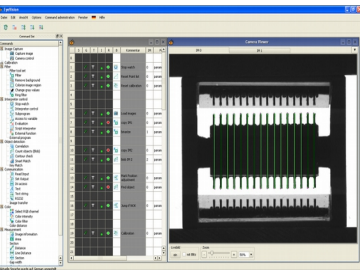
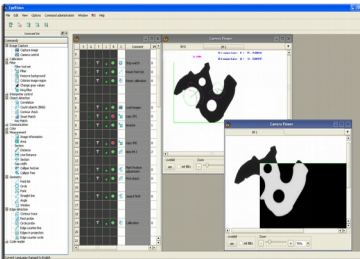
The easy programming per drag-and-drop is exemplary for the extremely customer and user friendly handling of the **EyeVision** software. It is possible to solve challenging machine vision tasks autonomously without any previous knowledge. You can have a short training, if it's necessary.

The **EyeVision** user interface was created in order to be easily operated and to be functional.

Of course we provide our support at any time.



**Preconfigured check programs and a wide range of custom-designed instruction sets for varied applications are what make EyeVision and a PC a highly functional machine vision system.**



### Branch

### Task

Semiconductor	marker control, coplanarity, BGA test, THT solder test
Rotating parts	measuring, testing, sorting
Stamping parts	measuring, checking, completeness, contour
Glue inspection	sealing bead control (contour, thickness, position)
Screw inspection	thread, screw head, dimensions
Endless material	fabric, plastic, metal
Dash board inspection	gas, electric and water flow meter
Display control	LCD, LED, OLED
Pharma	pharmacy code reading, seal inspection, scratches
Robot vision	robot leading (e.g. Kuka, Fanuc, Stäubli, ABB...)

### Instruction excerpt



Image acquisition; camera control



Digital I/O; RS232f; Ethernet



Program control



BASIC interpreter



Data Matrix Code



Bar code



OCR/OCV



QR Code



Blob analysis



Correlation



Measurements



Coordinate system



Evaluation, distance



Caliper



Color inspection

## A few steps only to your own test program

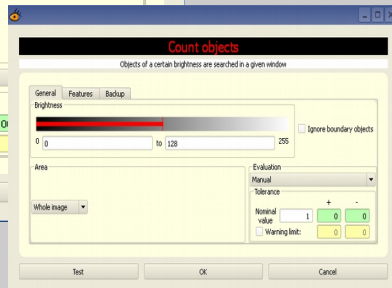
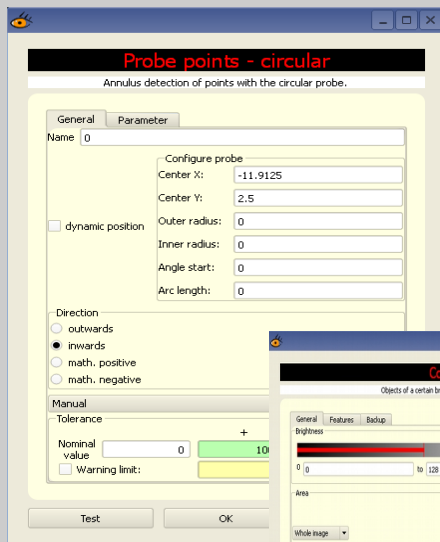
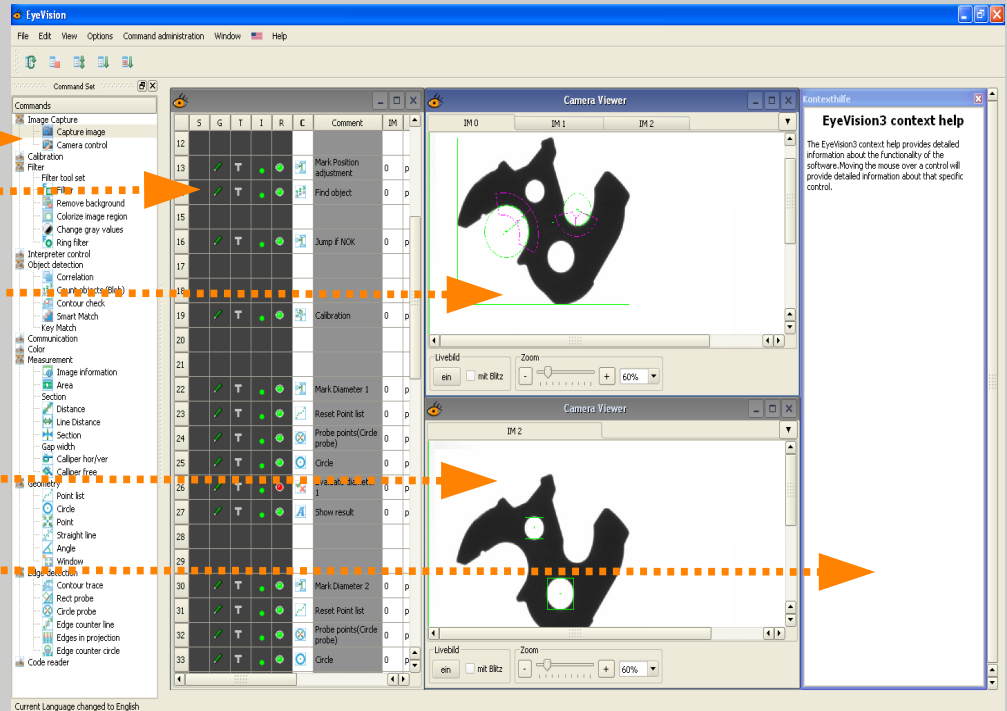
Toolbox

Program editor

Camera Viewer (IM 1)

Camera Viewer (IM 2)

Context Help



[1] **Programming your task**

Pull the commands from the menu into the program editor per drag-and-drop and in this way create your own test program – without any programming skills

[2] The required parameters can be entered after transferring the commands into the program editor – just per mouse click

[3] Once the test process is generated, you leave the program editor mode and proceed to the operation mode. Now your inspection is ready to start.

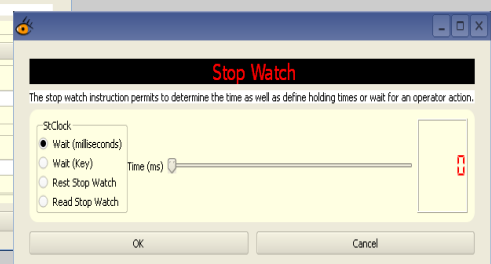
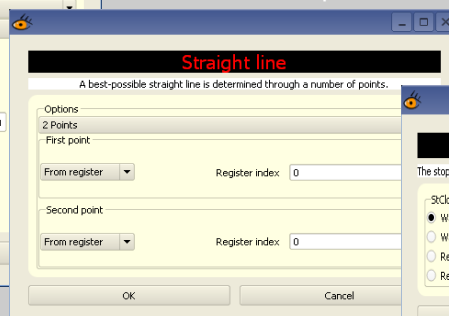
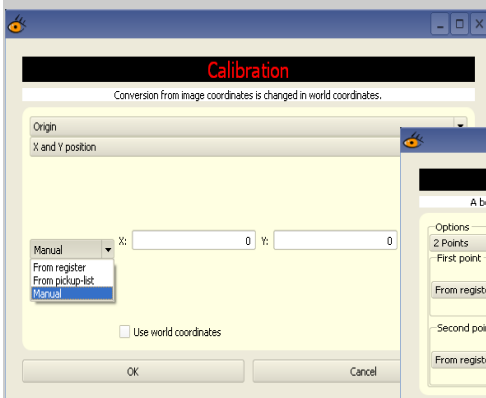
[Ready]

On the other hand you also can transfer pictures or live images easily from the camera onto the PC.

There, inspection programs can be optimized and tested at the same time

The Basic-interpreter turns *EyeVision* into a universal machine vision software.

Your own existing algorithms can be imported, and you also have the possibility to write new commands. In this way any functionality can be implemented.



## Hardware

The EyeVision program and test software runs on every PC based hardware (Intel or AMD) with a Windows OS (W2K, XP, Vista, W7, W8). The runtime software is available on Windows, VC OS and LINUX and is easily portable to other hardware and operating systems.

The modular software design allows an easy adaption to any image acquisition hardware like IEEE1394 (FireWire), USB2.0, GigE, CameraLink, CoaXPress or analog boards. For the digital I/O (PLC) or field buses there are many implementations available, which are easy to adapt.

## Product overview

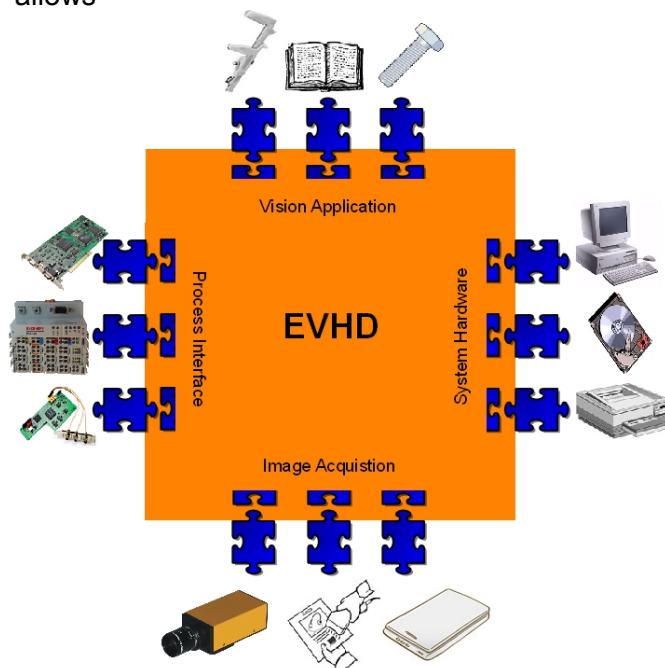
### General purpose systems

	Operating System				Interfaces						I/Os				Communication Protocol							
	Windows *1	LINUX *2	VCOS	Other OS	USB 2.0, 3.0	IEEE1394 a,b	GigE, GenlCam	Camera Link	CoaXPress	Other	I/O ICP DAS	I/O Addi Data	I/O EVT	Other	Ethernet UDP /TCP IP	RS232 / RS422 serial	Ethernet IP	Profibus DP	Interbus	CAN-Bus	EyeVision Protocol *3	HTTP Webserver
EyeVision Basic	●	●			●	●		●	●	●	●	●	●	●	●	●		●	●	●	●	●
EyeVision Standard	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
EyeVision Runtime	●	●	●	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
EyeVison SDK	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

<sup>\*1</sup> XP, Vista, W7, XPe,W7e (embedded), W2K support until version 2.4 R 036 ; <sup>\*2</sup> Debian, Ubuntu, eLINUX; <sup>\*3</sup> Multiview, EyeControl  
Supported Processors: x86 (Intel, AMD); TI DSP; ARM Architecture

With **EyeVision** any PC System is converted into an industrial machine vision system. The flexibility in the hardware selection allows the user to build cost-effective or complex, high-priced systems. The modular system concept allows

to integrate various hardware devices into the software in the same way as the hardware is plugged into the sockets in the PC motherboard. If there is a new hardware only the associated **EyeVision** driver has to be selected and the new hardware can be used.



EVHD is the PlugIn integration for all components of your vision system. Simply select the hardware and the desired algorithms – EVHD connects them together.

## Workshops and support

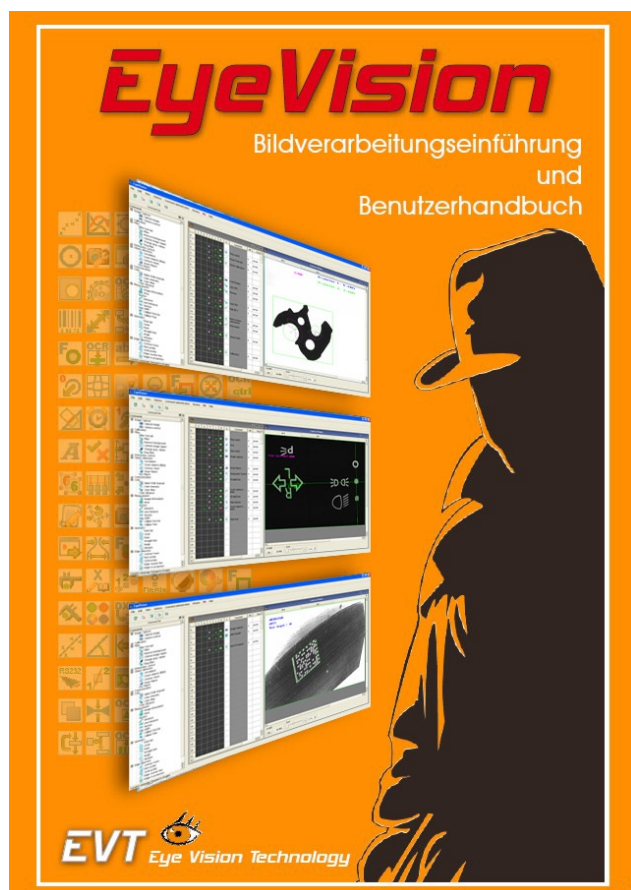
We offer free starter seminars in Karlsruhe and at our distributor's locations. Complementary we have a full training program at the EVT TQ and at our distributor's locations.

You can find the registration form for our seminars on the EVT homepage. Do not hesitate to call us if you have any questions or if you want to register for one of our trainings or to get a complete seminar program.

All offers are also offered by our distributors and for a small surcharge we also offer trainings at your place.

**For our EyeVision systems we provide full product support.**

This does not only include the choice of components like cameras, optics, lighting and other accessories, perfectly matching with your applications. It also means accompanying you with the help of our partners when implementing your vision task - starting with the creation of your requirement profile and a feasibility study, as well as implementation and programming up to the point of setting up your system.





## Vision Sensors

**EyeSens**

ObjectCount  
OCR Reader  
DMC Reader  
Pattern Match  
Bar Code Reader



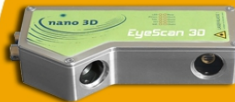
## Smart Cameras

**EyeCheck  
EyeSpector**



## 3D Sensors

**EyeScan 3D**



## Embedded Systems

- USB
- GigE

**EyeDisplay & EyeVBox**



- USB
- FireWire
- GigE
- Camera Link
- CoaXPress

**PC-Based  
High End  
Machine Vision  
Systems**



**EyeVision**  
Development Libraries

**SDK**



Haid-und-Neu-Str. 7  
76131 Karlsruhe  
Germany

Tel.: +49 721 668 004 23 0  
FAX: +49 721 626 905 96

info@evt-web.com  
www.eyespector.com  
www.evt-web.com