

## PC-Based Machine Vision

Education Imaging Teaching Training Kit

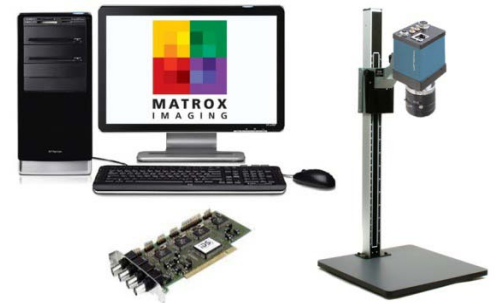
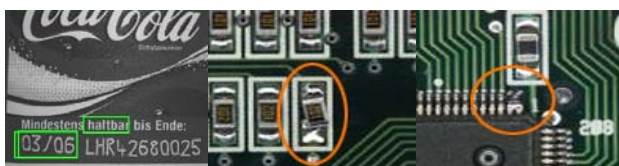
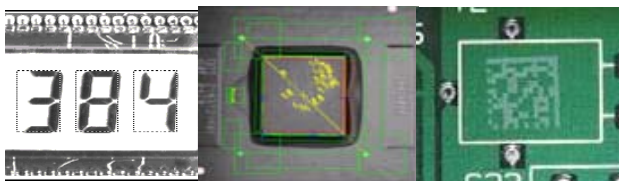
Model: EZ-V8001

This is an educational system to learn the theory and principles of machine vision application. It consists of an image processing board (Matrox Morphis MOR/2VD frame grabber), Samsung camera & lens, adjustable camera table stand with sensor, Matrox MIL & Inspector imaging software, USB interface module, RS485 interface I/O card and C-Mount lighting illumination devices. Students can design, program, build, and test, step by step, many machine vision applications using the system. The system can be used to learn in PC-Based Image Processing and PC-Based Control Technology.

This system also come with Matrox Iris GT300-Series is a line of powerful smart cameras with an intuitive flowchart-based integrated development environment (IDE)-Design Assistant. The two-piece design, Break out box for GPIOs, trigger, strobe, RS232, and power input included M12 to DB25 cable. The key features are powerful embedded Intel architecture processor running Microsoft Windows® CE .NET, web-based configuration and monitoring, high-fidelity monochrome or color CCD sensors, externally triggered or internally controlled electronic shutter , Ethernet network interface, RS-232 serial communication and auxiliary digital I/Os.

### Applications and Experiments:

- Pre-Image processing in Image Mapping, Sharpen, Median and Morphological Operation.
- PCB Inspection (Pattern Matching & Geometry Finder) with external trigger.
- Label Print & Text Inspection(OCR) with software trigger.
- Blob Analysis identify, count and locate objects.
- Lead Measurement and Angle Analysis Inspection.
- Bar code,1D,2D,3D and data matrix code reading.
- Shape and color Analysis Inspection.

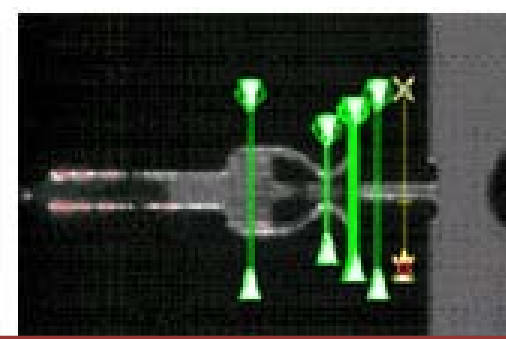
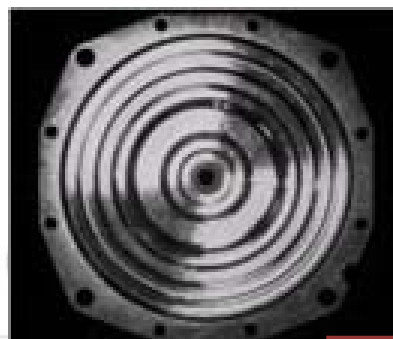


### Key features:

- Utilizes Matrox Imaging systems, includes Matrox Imaging Library(MIL),Matrox Inspector and Matrox Morphis MOR/2VD frame grabber.
- User friendly ControlEz Vision software (Easy Vision) enables user to easily modify inspections to suit various image processing.
- Sample follow-through examples on applications and experiments are provided to easily learn the PC-based machine vision and control basics.
- Selectable courses from a simple inspection vision system to a complicated system of integrated functions with additional external devices.
- Programming in VB.NET® 2003, Visual C++.NET 2003, step-by-step learning from simple vision functions to applications involving sensors and others.
- Real-life industrial machine vision examples are provided in the system
- Using vision components commonly found in industrial sites, students can quickly apply their skills for practical use.
- Matrox MIL and Inspector manual and all the required software including sample programs are provided.
- SPC Vision Database in Microsoft Excel sheet with VB SQL for Bar chart and statistic.
- 8 Days training for MIL/Inspector and Matrox Design Assistant software
- Sensor for external trigger

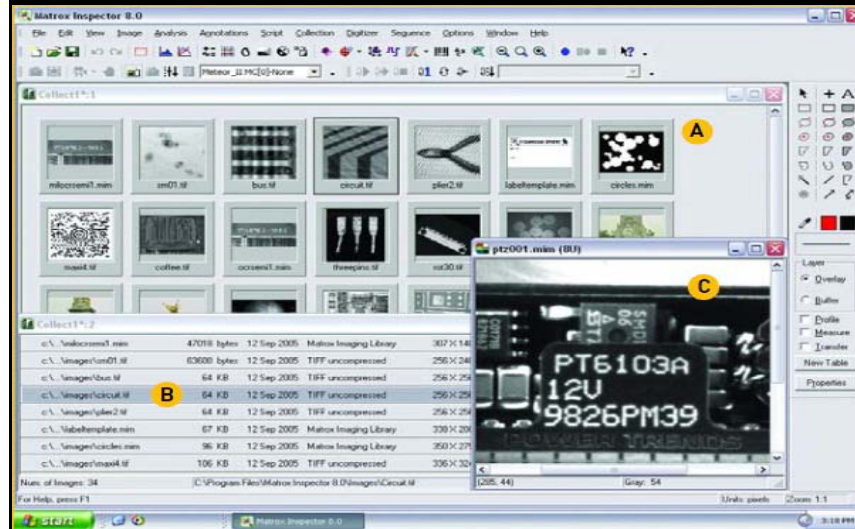
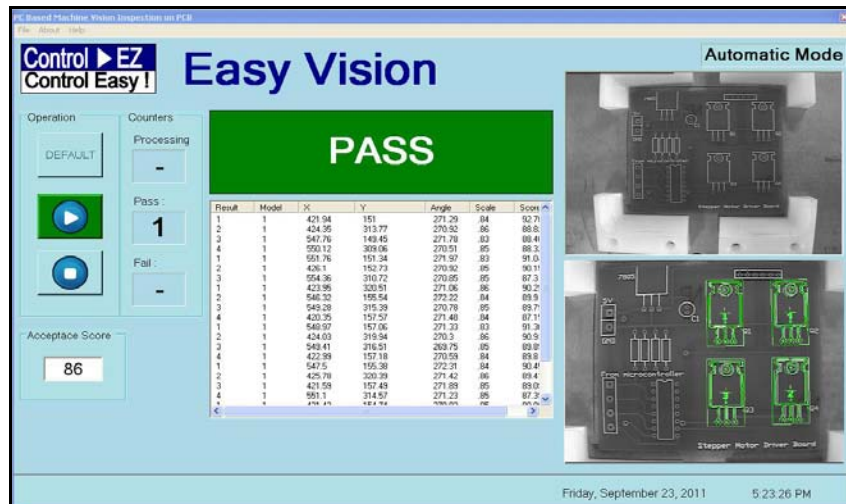
# See in color

Matrox Iris GT smart camera brings color to your vision



## Matrox Imaging Library (MIL) is a high-level programming library with an extensive set of optimized functions

Optimized functions for image capture, image processing (e.g., point-to-point, statistics, filtering, morphology, geometric transformations, FFT and segmentation), pattern recognition, registration 5, 6, blob analysis, edge extraction and analysis, measurement, metrology 7, 8, character recognition, 1D and 2D code reading, calibration, graphics, image compression, display and archiving.



## Requirements Specifications:

- Product Type: PC Based Machine Vision
- Power Supply: 24 VDC, 1.5A.
- Power Consumption: 2 Amps max (operations).
- Operation Mode: Easy Vision Software and External trigger
- Dimension: 300 mm (W) x 300 mm (L) x 600 mm (H)

## Minimum PC System Requirements:

- PC with min an IA32 processor (Pentium II class).
- Microsoft® Windows® 2000 with Service pack 4 or Microsoft® Windows® XP with Service Pack 1.
- 98 MB RAM for Windows® 2000 or 192 MB RAM for Windows® XP
- Free hard disk space.
  - 155 MB (85 MB for Inspector and 70 MB for MIL 8.0 run-time and utilities).
  - Additional 80 MB of presentations and tutorials.
  - Matrox frame grabber with a MIL driver for Microsoft® Windows® 2000 or Microsoft® Windows® XP (optional).
- Graphics adapter (may be on Matrox frame grabber board)

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