

Picsara Optilia

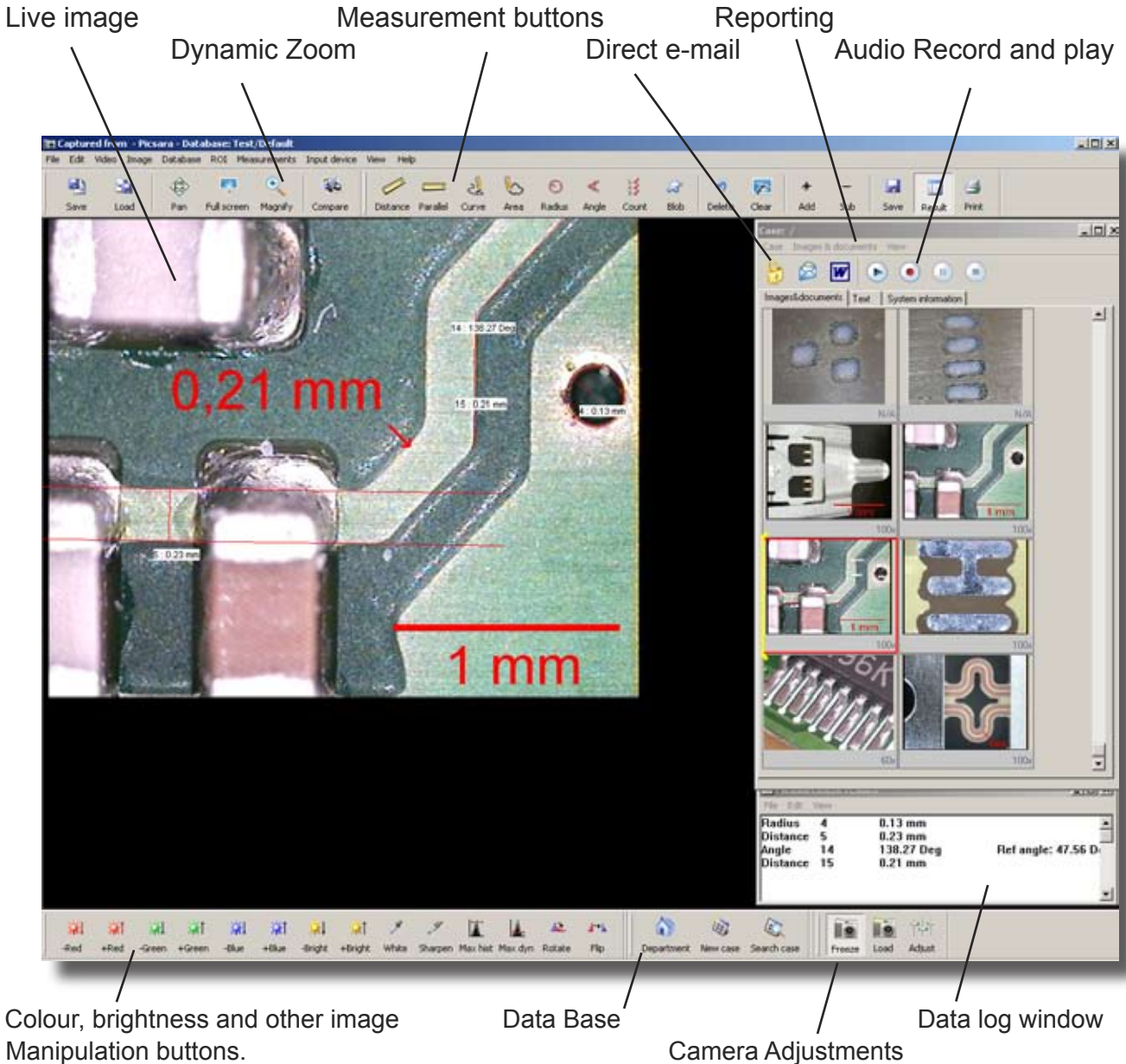
Image Data Base and Measurement Software



Pixara Optilia 8.6 Rev B
High Quality, Flexible Vision Microscopes



Picsara Optilia is an Image Measurement, Analysis and Archival System for small or large groups of users with a focus on user friendliness and security. Picsara together with Flexia vision microscopes is a powerful, easy-to-use and cost effective tool for Design engineers, quality engineers, production technicians and for R&D.



Simple storage

In Picsara, cases (also referred to as studies, or investigations) are used to store and organize images. Each case has its own definable text field, which could be for example Product number, Product name, User name, order number, date of image, or defect. An arbitrary number of images can be stored in each case by simply clicking and dragging the picture into the case. Numbers of images can be imported directly into a case from files, digital cameras, smart media, TWAIN sources or from a Frame grabber (USB2.0, Fire Wire, PCI etc.) . The system is also able to capture and save an image through an external trigger, such as a foot pedal.

Calibrated measurement functions

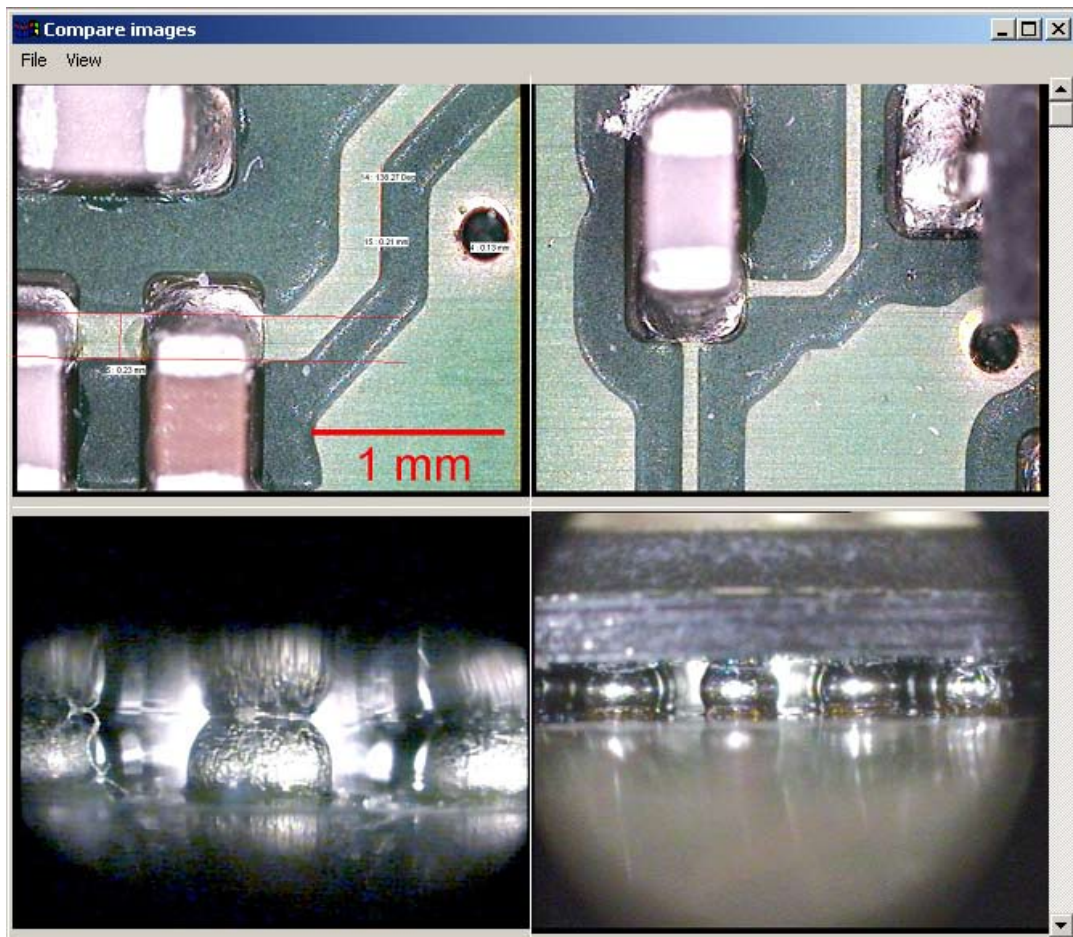
Measure lengths of lines and curves, as well as areas, on both live camera and saved images. The database keeps track of the magnification used for the original image, allowing the user to make accurate measurements at any time.

Audio comments

Save audio comments associated with individual cases or images. It is as simple as pressing the record button. Simply press the play button to listen to the comment at any later time. This is an incredibly useful feature when you want to add an important comment but don't have the time or desire to write it down.

Compare images

A very useful tool included in Picsara is its comparison feature. You can have up to 20 images loaded and open simultaneously to compare with one another or with a camera image. It is even possible to save your comparison group for future use.



Smart cards

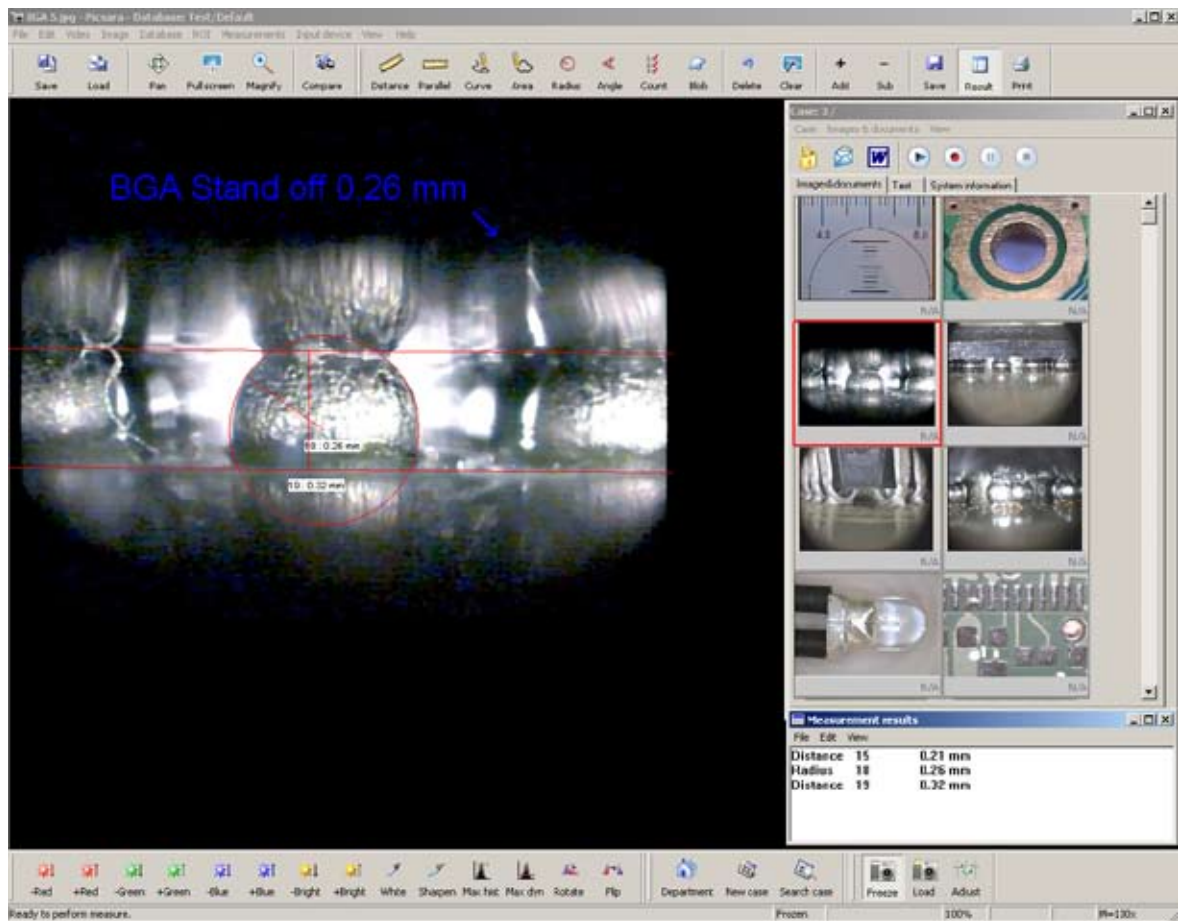
Support for smart cards is built into Picsara as well. Simply insert your smart card into the card reader and Picsara will automatically open the images without a single required key-stroke. All you have to do is decide which images will be saved in the database.

Extensive compatibility with cameras

With new possibilities to easily connect digital DV-, FireWire- or USB- (DirectX) compatible cameras, together with the earlier possibilities to connect analogue TV cameras, we offer the markets most complete and user-friendly system. Most new digital cameras use neither extra hardware nor software to operate. Picsara is compatible with the large majority of cameras available in the market today. It is possible to directly attach cameras with a TWAIN interface or as a "removable disk". Picsara even supports the majority of analogue cameras, if a frame grabber is installed in the computer. Picsara supports, among others, the Matrox Meteor-II Frame Grabber for Stationary PCs, which is the current industry leader in this area.

Measurement

Perform manual measurements directly on the screen. Measure properties such as length, width, radii, curve lengths, angles, and quantity. It is even possible to add or subtract measurements to or from one another within the program, useful for example in measuring length of a crack that spans several images.

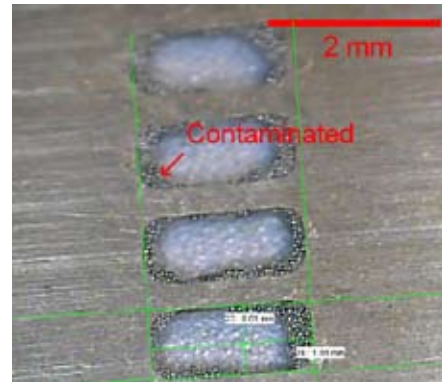
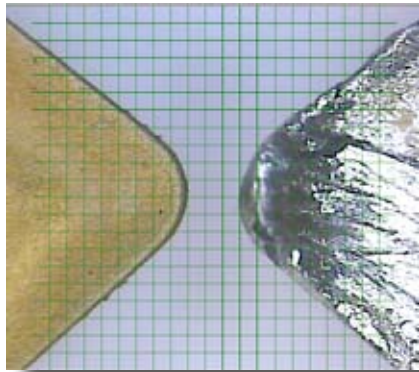


Information exchange

Send a whole case as an e-mail to someone else. An e-mail with text, images and other multimedia objects, can be created with a single mouse click, and you choose the recipient from your own address book. Add some text or a question to the e-mail if you wish, and then simply press send.

Annotating images and Grids

Add simple comments, draw arrows, and insert scale bars, among other things, directly on the image. It is even possible to make these annotations in a transparent layer above the image so that it remains undisturbed. Regardless of how you choose to make your annotations, they are always visible when you view the image via the web. Add “crosshair” or “square net” grids on your LIVE or freeze pictures.



Reporting

Create routine reports in Microsoft Word with a single mouse click. Choose from your own assortment of templates, and the text and images will be automatically placed where you want them in the document. Customized reports can be ordered upon request.

High-quality reports

Measurement results can be easily exported to Excel, for example, for reporting or further data analysis. Alternatively, the measurements can be saved as a text file or sent to a database for statistical analysis or permanent storage.

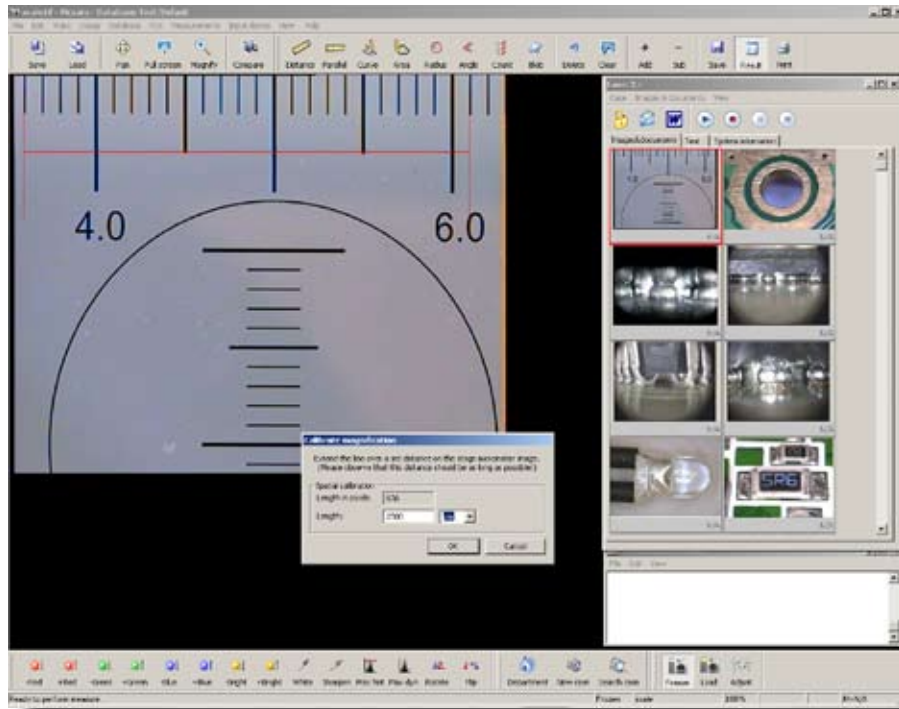
Special Measurements

Perform special measurements like metal hardness, effective weld depth, length of a crack, including the existing branches etc. The results can then be exported to a database and/or saved to a text file.



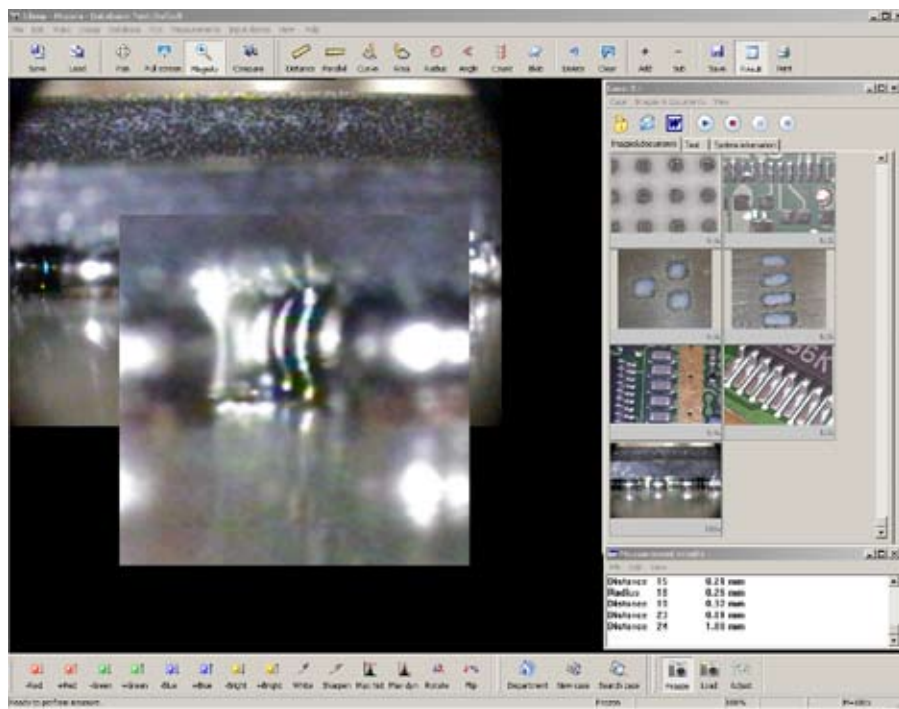
Image Calibration

Calibrate xy-ratio and magnification of the device using a micrometer stage only once. All calibrations you make for a device are automatically saved. It is not necessary to calibrate every image. Only select the input device and magnification; Picsara will take care of the rest.



Dynamic digital zoom

Increase size of an area using dynamic zoom. Increase or decrease size of the entire picture using digital zoom in/out functions.



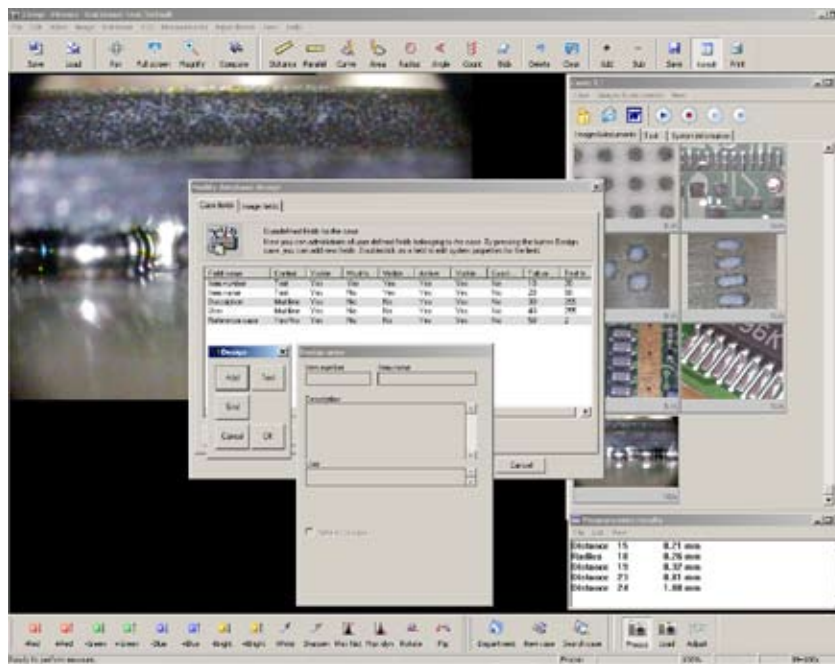
Powerful database functions

Create a new empty database or connect yourself to an existing database. You may choose between Microsoft access or Microsoft SQL database. In both cases Picsara will connect itself to the database through ODBC. Choose the database you want to open and state your user name and password.



Custom design of the “Case” data fields according to your application

Images and objects are always stored in a case. A case can be a product, a project, a customer or anything else. Create a new case simply by clicking the “new case” button. Re-design the case tabs according to your applications and needs if you prefer so.



Upgrade Picsara Personal Edition to get the following features

Built upon PictSure technology

PictSure is a flexible multimedia server that can be individually configured to serve any type of organization. The PictSure server can handle a great number of users and many simultaneous active connections without losing performance. If needed, the load on the database can be relieved with a special file server and one or many gateways to allow more simultaneous connections. The PictSure server is not limited to saving and organizing images, audio, and videos; it can save all types of files, which opens up many other archiving possibilities. PictSure technology allows for more than just configuration of its environment. The layout of the database can be individually configured for each customer. The Enterprise version even allows the database to be uniquely configured for different departments.

Scalable

Picsara is a highly scalable system. The system was designed from the beginning to be compatible for everything from single user systems up to entire companies or hospitals. It is even possible for thousands of geographically separated users to employ. This scalability demands differentiated solutions for performance, storage, security, and logging which is why Picsara, and the accompanying multimedia server, is available in four different versions.

Working on networks

You can install the software on multiple computers on the same network allowing images to be measured or analysed on a different computer than the image was acquired on.

Advanced image management

The Analysis Pro module also includes more advanced image management tools such as object separation, edge sharpening, noise reduction, and fill hole. These functions are used in more advanced image analysis, giving the user countless possibilities to grow with the system.

Access images over the web

A web server is included in the advanced versions to give extra accessibility. This makes it possible to access the entire database through Internet Explorer. A simple viewer is also included in the advanced versions.

Automated measurements

Analysis Pro adds even more advanced image analysis and management tools to all the features included in the Analysis package, including the ability to carry out automated measurements of such quantities as area, circumference, length, and shape of each individual object on the screen. Objects are selected based on a specified shade of gray or colour, after which the user can choose to manually remove objects, for example if they are too small or are on the edge of the image. Even parameters such as the number of objects and area percent can be easily calculated.

Integration with other systems

Picsara was specially designed to integrate with other systems, such as quality assurance systems. It is possible, for example, to open Picsara and automatically send over an ID number or information to avoid redundant measurements. It is even possible to send automatic feedback to a host or central system via XML.

Functions and Features:

Acquisition:

- Supports DirectX and Twain compatible devices
- Supports Matrox
- Advanced camera adjustments
- High resolution snap-shot
- Hot-key capture
- External button (pedal) capture
- removeable media capture
- Auto load of last used Twain source
- Automatic save of captured image
- TIFF or JPEG compression

Geometrical Measurements:

- Distance
- Distance between two parallel Lines
- Distance between two vertical Lines
- Distance between two Horizontal Lines
- Curve length
- Area and perimeter
- Polygon
- Radius
- Angles
- Objects counts
- Add or subtract measurements
- Measurements result log
- Measurements results export
- Automatic measurements
- Show measurements results on picture
- Set colours

Image:

- Digital zoom
- Dynamic zoom
- Pan image
- Rotate and Flip
- Calibrate image
- Grid on live image (Haircross, square net)
- Insert and place text, arrow
- Insert and place ruler

Overlay features:

- Add a hot spot
- Add arrow and text
- Show/Hide overlay graphics

Image enhancements:

- Colour adjustments
- Auto white balance
- Sharpen image
- Histogram equalization
- Max-min equalization

Database functions:

- Create MS-Access or SQL database
- Administrate data base (re-design case and image fields)
- Compress images (JPEG or TIFF)
- Store images inside or outside database
- Create case
- Search case or image
- Image information
- Audio annotation in case
- Automatic system information in Case
- User defined information in Case
- Protect case by password
- E-mail case
- MS-Word template design
- Automatic MS-Word reporting

Special Measurements:

- ASTM-112
- Snydergraph
- Hardness
- Weld

Other tools:

- Calibration of magnifications
- Calibration of xy-ratio
- Region of interest (ROI)
- Load external pictures
- Full screen image

System Requirement:

Component	System recommendation
Processor	Personal computer with a 1.5 gigahertz (GHz) or higher CPU
Operating System	Windows 2000 or XP Home Edition or Windows XP Professional
Memory	256 megabytes (MB) or higher of RAM
Hard disk	2.0 GB of available hard-disk space or higher
Display	XGA (1024x768) or higher resolution monitor
Graphic card	3-D graphics acceleration 64 megabytes (MB) of non-UMA VRAM or higher DirectX 9 or later graphics support
Audio	Windows 2000 or XP-compatible sound card and microphone
Other	One USB2.0 port for included Frame Grabber



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