

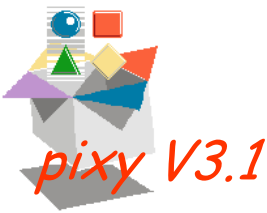
Pixy

LCD + LEDs + Logos machine vision inspection

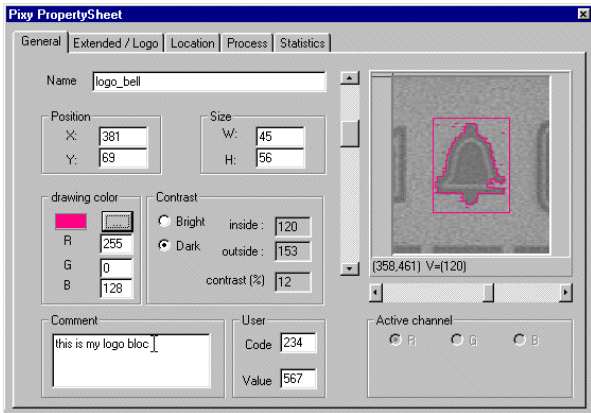


functional checking
LCD, LEDs, signals, backlights...
cosmetics and visual inspection
logos, keyboard, printings, color...
fully trainable software tool





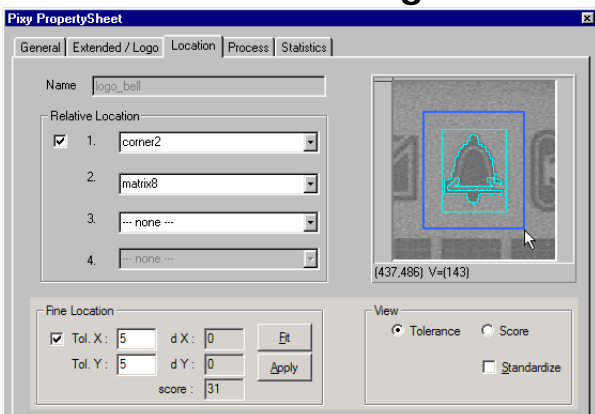
simple and intuitive setup



visual access to control tools properties

- Set working points
- Specify location tolerances
- Choose and enable testing tools
- Fit threshold values
- Test "live" your setup

smart locating



user-friendly location strategy and tolerances setup

- up to 4 points relative location : offset, rotation, scaling, parallax (within given limits)
- pixel-acute fine location
- setup through an intuitive graphical user interface

various types of work blocs



rectangle or ellipse :
flat area, light or button



logo
pictogram, characters



matrix
matrix LCD



digit
segments LCD



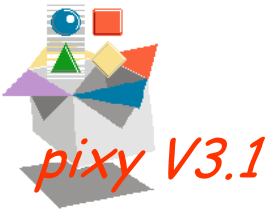
edge 1D location



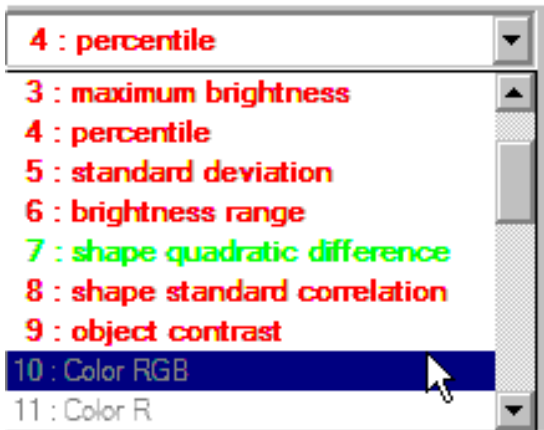
corner 2D location

each controlled element has a matching bloc type

- quick set up through graphic user interface under windows™
- immediate learning, testing and results display
- statistics management
- easy integration into end-level test application : executable teach software and wide compatible dll (Visual C++™, Visual Basic™, Delphi™ or LabWindows CVI™)



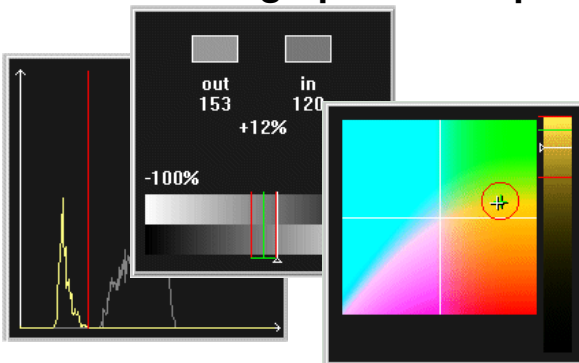
several testing tools



every need meets its tool.

- more than 25 pre-defined testing tools fit your needs :
brightness, homogeneity, contrast, shape, color, location, LCD...
(see details...)
- possibility of adding custom dedicated control tools (available Q3 2002)

control tool graphical setup



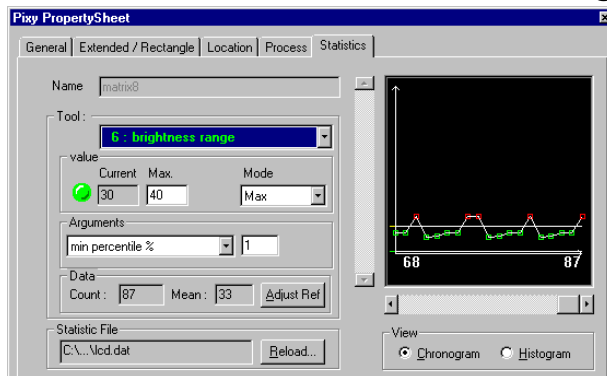
control setup through GUI

- each control tool can be setup through a specialized dedicated graphical interface.
- GUI displays current and reference value, working range and limits.

tools exhaustive list

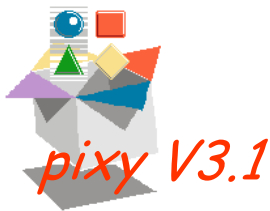
1. brightness : mean brightness
2. median : median brightness
3. min : minimum brightness
4. max : maximum brightness
5. percentile : brightness at n%
6. std-deviation : homogeneity (std deviation)
7. range : homogeneity (range)
8. difference : shape (squared difference)
9. correlation : shape (std correlation)
10. contrast : contrast
11. RGB : color (RGB space)
12. R : color (red band)
13. G : color (green band)
14. B : color (blue band)
15. ISH : color (ISH space)
16. Intensity : color (intensity)
17. Saturation : color (saturation)
18. Hue : color (hue)
19. LAB : color (LAB space)
20. Distance : Euclidean distance
21. Dist X : horizontal (X) distance
22. Dist Y : vertical (Y) distance
23. Angle : angle (orientation)
24. Alignment : angle difference
25. LCD state : LCD, On/Off state err. count
26. LCD raw : LCD, max err. count per raw
27. LCD col : LCD, max err. count per col

measurements statistics tracking



measurements statistics graphical display

- measurements production statistics display and management
- detects dispersion, drift, batch changes...



Pixy LCD + LEDs + Logos machine vision control

you are building your own machine vision control system :

- **Pixy** SDK (software development kit), on-line documentation, samples...
- Dynamic Library (dll) 32 bits native, wide-compatible Visual C++ / Visual Basic / Delphi / LabWindow CVI...
- Setup tool available as a ready-to-use executable editor, or as library function, called from the end-level application.
- quick implementation, additional services offer (training and assistance)

wide hardware compatibility



Wide range of compatible cameras

Pixy is compatible with a wide range of hardware and notably supports :

- color or monochrome cameras
- digital or analog cameras
- high or very high resolution devices and corresponding boards

Pixy used **Common Vision Blox**, distributed by : www.stemmer-imaging.fr

STEMMER[®]
IMAGING



you prefer a turnkey solution :

- Cybernétix specifies the configuration responding to your needs
- Cybernétix designs and develops a complete integrated solution
- Cybernétix supports on-site integration and validation tests, plus users training.

industrial applications :

LCD displays

matrices/segments/logos, functional testing, short-circuit detection, contrast, position and alignment control....

leds, lights

presence control, color, contrast, position, balance trimming, counting...

printings, keyboards

logos controls (pictograms), shape and location

cellular phone industry

(displays, keyboards, cosmetic testings)

automotive and aeronautic industry

(dashboards, instruments)

electronic industry

(LCD, LEDs, logos...)

Pixy

designed, developed and maintained

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