



FLEX-VISION MODULE

Available for the whole range of FLEX test systems, the vision module allows for a camera and supporting software to be added to the tester. Our self-learn capability offers rapid program development and debug.

Sherlock Software

Sherlock is advanced machine vision software that can be applied to a wide variety of automated inspection tasks. The graphical design environment provides a rich suite of proven tools and capabilities that have been deployed in thousands of installations worldwide. Recognised throughout the machine vision industry, Sherlock offers the flexibility to satisfy the full spectrum of vision applications.

Sherlock also provides Monitor, Reporter, and Watch utilities for gaining insight into vision task program flow, internal/external events, internal variables, or other parameters as you run the vision application.

Software Tools

Regions of Interest (ROI) Processing shapes:

- Flexible Area and Line ROI selection; Rectangle, Annulus, Polygon, Torus, Circle, Arc, Point, Polyline, Rake, Rainbow, Bulls-eye and Spoke

Preprocessors:

- Extensive set of conditioning functions that can be applied to a ROI prior to analysis

Positioning Tools:

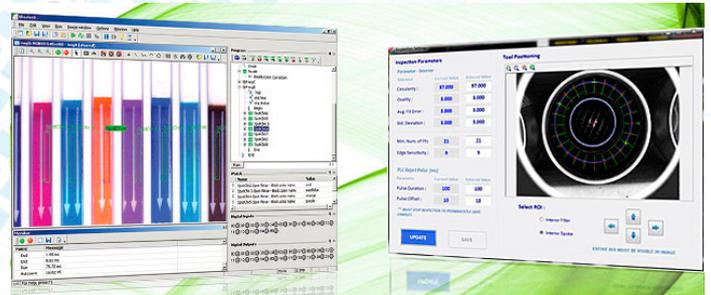
- Advance pattern finding tools for object alignment and robot guidance.

Measurement Tools:

- Precise tools for computing the dimensions on a variety of parts and shapes

Analysis Tools:

- Tools for finding and counting edges, extracting and analyzing features, detecting contrast variation and performing statistical analysis



Calibration Tools:

- Correct for linear, nonlinear and perspective image distortion. Convert camera pixel to real-world coordinates

Colour Tools:

- Learn colors for monitoring, classifying, sorting, tracking and counting objects

Reader (Identification) Tools:

- Reads and verifies 1D and 2D codes. Reads and identifies printed, molded or stamped text (OCR)

Script Tools:

- JavaScript based scripting tool, complete with drag-and-drop instruction editing, allows you to develop custom formulas or inline **and background operations**

Custom Algorithms :

- Unique inspection requirements? No problem! Sherlock allows you to add your favorite custom algorithm into the development environment.

Administration :

- Controls for protecting against unauthorized access and copying

Custom Interface :

- OCX for designing custom operator interface using Visual Basic



Hardware options

Camera Systems:

- Sherlock affords choice and flexibility when it comes to selecting a hardware deployment platform. You can select from one of Teledyne DALSA's integrated Vision Systems, Digital Frame Grabbers, GigE Genie cameras or any supported 3rd party Firewire or USB cameras.

Compact Vision Appliances

VA15

- Teledyne DALSA's VA15 and VA3X Vision Appliances provide automated optical inspection solutions for applications requiring one or two views of a part. Designed for easy setup and integration, Teledyne DALSA Vision Appliances offer a cost effective and practical means of automating quality control on the factory floor.



Genie C1024

- The Genie C1024 uses a Sony CCD, color bayer sensor with a resolution of 1024 x 768. Operating at 20 frames per second at full resolution, the Genie C1024 takes advantage of gigabit Ethernet technology, transmitting data over standard CAT-5e and CAT-6 cables to distances of up to 100 m. Like all Genie cameras, the C1024 is based on AIA (Automated Imaging Association) GigE Vision Standard to directly link the camera to a PC.



Frame Grabber

Teledyne frame grabbers offers real-time image processing functions such as Run-length Encoding (RLE), color space conversion for Bayer, RGB and CIELAB, multiple dynamically switchable lookup tables and support for multiple shading correction configuration sets.



Run Length Encoding

- Run-Length Encoding (RLE) is a technique widely used to perform blob analysis operations, to detect defects or to classify objects. This technique is also used in image processing applications to reduce raw input data. X64 Xcelera-CL PX4 SE features 32 level thresholding and dual-destination output streams when performing run-length encoding functions. It is, therefore, possible to transfer the input image and the processed data simultaneously to the host computer for subsequent processing.

Colour Space Converter

- The X64 Xcelera-CL PX4 SE offers real-time colour space conversion for the L^*a^*b color space, including RGB to CIELAB, Bayer to CIELAB 1, and Bayer to RGB color conversion capabilities. The CIELAB ($L^*a^*b^*$) algorithm represents the most perceptually linear color space. By removing the affects of luminance, the color representation is perceptually more precise allowing color segmentation to be more perceptually accurate than any other color space technique. This compute-intense algorithm supports 8, 10 and 12-bit color pixel formats.

