

Kepler Pro



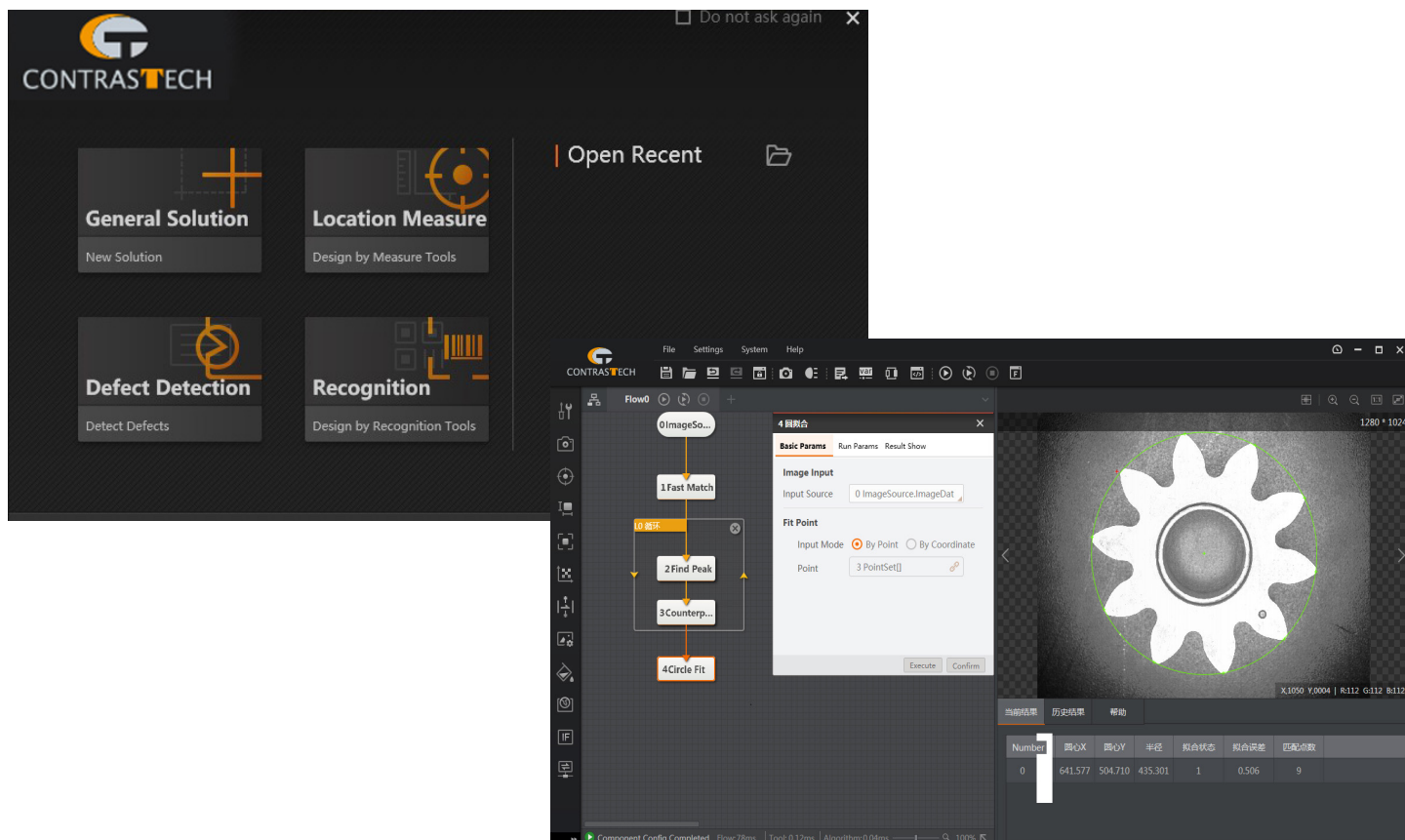
Ver.2021.01.12



CONTRASTECH
Vision Software

Kepler Pro

Kepler Pro as professional machine vision software, is independently developed by Contrastech. It is committed to providing customers with algorithm tools to quickly solve vision applications, No Programming And Algorithm Module Support Visual Editing,which can meet machine vision applications such as vision positioning, size measurement, defect detection, and information recognition.



■ Features

- Composed of nearly a thousand completely independently developed image processing Operation and a variety of interactive development tools, it supports a variety of operating systems and image acquisition hardware devices, which can meet the needs of positioning, measurement, identification, and detection in the field of machine vision applications.
- Fully graphical interactive interface, intuitive and easy-to-understand function icons, drag-and-drop operation can quickly build a visual solution.
- Users can create visual solutions according to their needs, and can also customize the running interface, and integrate the background image or company logo on the running interface to meet the individual needs of customers.
- Compatible with GigE Vision and USB3 Vision protocol standards, and can be connected to cameras of various brands. Support local image processing and camera data image processing.

■ Measuring and positioning tools

High-resolution industrial camera or multi-camera combination, matching industrial light source, combined with intelligent image processing technology and light source lighting technology can realize real-time measurement of product size

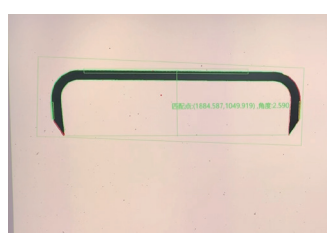
- Quickly and accurately find the positions of circles, lines, spots, edges, and vertices.
- In the automated manufacturing industry, the system can measure various size parameters of the product online, such as shape, size, area, distance, angle, intersection, arc and other geometric features of related areas.
- Provide location information and presence or absence information, which can be used in robot guidance and other vision tools.



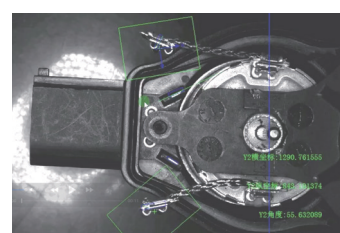
Center Distance Measurement



Components Size Measurement



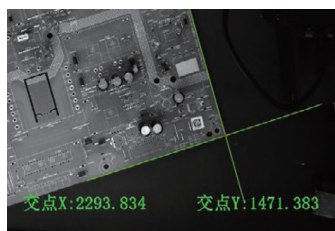
Needle Size Measurement



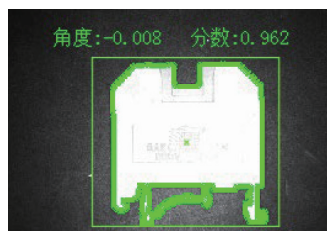
Location Crawl



Direction Recognition



Straight line Intersection



Template Matching

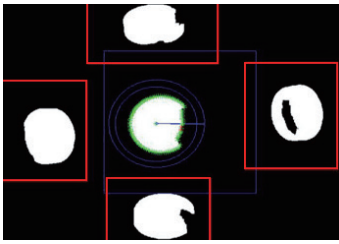


Point \ Line Measurement

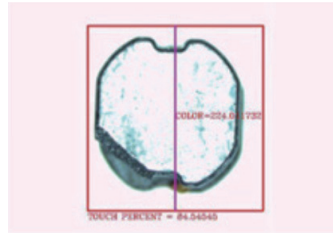
■ Defect detection tools

Using high-resolution industrial cameras or a combination of multiple cameras, matching industrial light sources, combined with an automated control platform and intelligent inspection software, it can achieve fast and accurate detection of various defects and stains on the surface of the object.

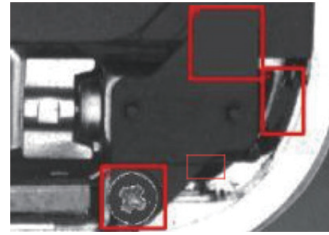
- Accurately detect the shape and contour defects of the workpiece, which can overcome the interference of burrs, colors and noise.
- Reliable comparison tool for standard parts, locate small differences in workpieces.
- Automatic and fast defect detection, improve production efficiency, reduce defective rate, save raw materials, and reduce average cost.
- Cooperate with automatic production line, high integration, realize automatic detection and automatic processing.



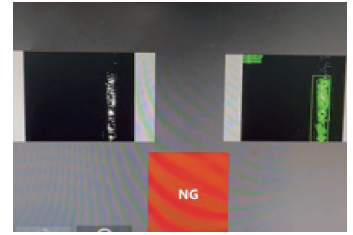
Tablet Defect



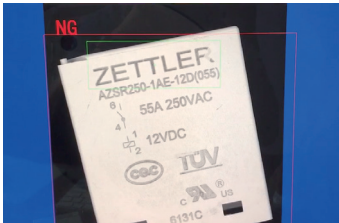
Disability Detection



Artifacts Defect



Textile Defect



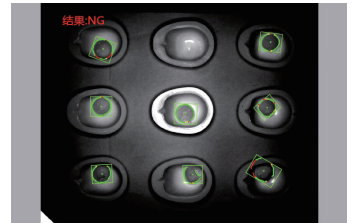
Printing Defect



Metal Surface Scratches



Dirt Detection

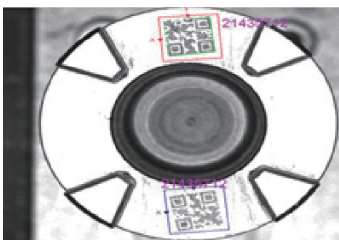


Missing Installation Detection

■ Identification Tools

Using industrial cameras, combined with external light source control can realize rapid identification of the measured code.

- The OCR algorithm based on deep learning can adapt to the recognition of complex background, low contrast, deformation and other characters.
- Machine vision barcode reading has excellent reading ability, which can accurately and quickly read barcodes and characters on various packaging materials, so as to verify product information in real time.
- Identify 1D code and 2D code of multiple formats, different positions, angles, and illumination, and can effectively overcome the impact of image distortion.
- Provides continuous, accurate and high-speed reading ID information required for component tracking, and supports multiple VeriCode symbologies identification.



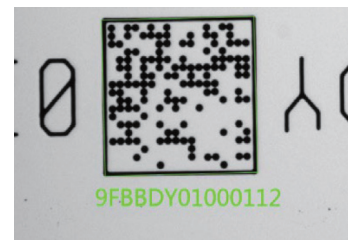
QR code recognition



Character recognition



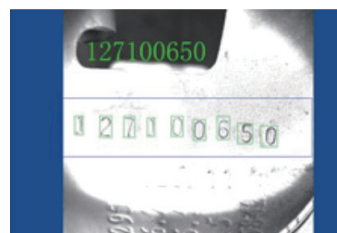
Bar code recognition



VeriCode



QR code recognition



Character recognition



Bar code recognition



VeriCode

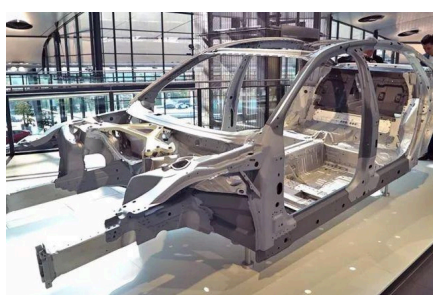
Platform tool list

Toolbox	List of tools
Collection	Local Image、Camera、 Save Image
Calibration	N point Calibration、 Calib Transformation、 Scale Transformation、 Distortion Calibration、 Distortion Correction
Location	Fast Match、 Match、 BLOB、 Caliper、 Position Correction
Geometric Find	Find Circle、 Find Line、 Find Edge、 Find Peak、 Find Rectangle、 Caliper Corner、 Find Parallel
Measurement	Point to point Measurement、 Point to Line Measurement、 Line to Circle Measurement、 Line to Line Measurement、 Line to circle Measurement、 Circle to circle Measurement、 Spacing Detection、 Intensity Measurement、 Pixel Count、 Histogram Tool
Recognition	Bar code Recognition、 QR Code Recognition、 OCR recognition、 VeriCode
Counterpoint	Camera Mapping、 One Point Counterpoint、 Point Set Counterpoint、 Line Alignment
Image Processing	Image combination, Image morph, Image binarization, Image filter, Image enhancement, Image Compute, Image sharpness, Image fixture, Shadow correction, Ring Expansion、 Affine transformation, Polar unwarp, Image Normalization, Copy fill, Frame mean
Color Processing	Color Extraction、 Color Measurement、 Color Conversion
Defect Detection	Character Defect Detection、 Arc Edge Defect Detection、 Linear Edge Defect Detection、 Arc-pair Defect Detection、 Line-pair Defect Detection、 Edge Combination Defect Detection、 Edge-pair Combined Defect Detection、 Edge Model Defect Detection、 Edge Pair Model Defect Detection
Logic	Condition Detection、 Branch Module、 Branch String、 Logic、 Format、 Variable calculation、 String Comparison、 Group、 Time Consuming
I/O Communication	TCP、 UDP、 Serial、 IO、 ModBus、 Send Data、 Receive Data

Application Industry



Courier / Logistics



Car manufacturer



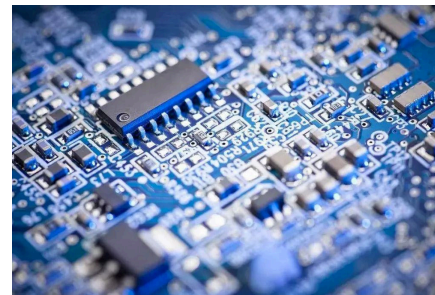
Food/Drug Production



Print



Drone



Semiconductor

Vision And More Available

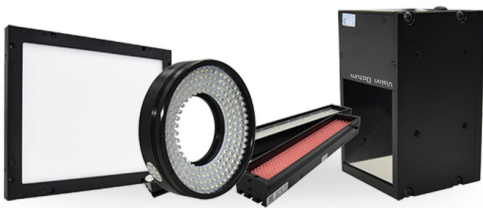
让工业更智能，让视觉更简单！



Industrial Camera



Industrial Lens



Lights



System Solution



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