

# AtomVision



## More smarter

Built-in deep learning, 3D and other cutting-edge advanced algorithms can realize vision application scenarios in various complex environments.



## More open and compatible

Compatible with more brand industrial cameras to satisfy diverse Application request.



## More cost-effective

A powerful visual software platform with deep learning AI algorithm and traditional CV algorithm you can get it at even around USD1000. Standardized visual products and customized solutions are both available, with better quality and higher cost performance.



## More faster in deployment

Ready-to-use, saving time in deployment; fully visual interface, can automatically switch templates, more convenient to use.



## More application

There are hundreds of application cases, and practical applications have been deployed in China, the United States, South Korea, Germany, Belgium, the Netherlands and other places.

# INTRODUCTION

**>>01** AtomVision is a one-stop machine vision software platform that integrates deep learning algorithms and traditional CV algorithms

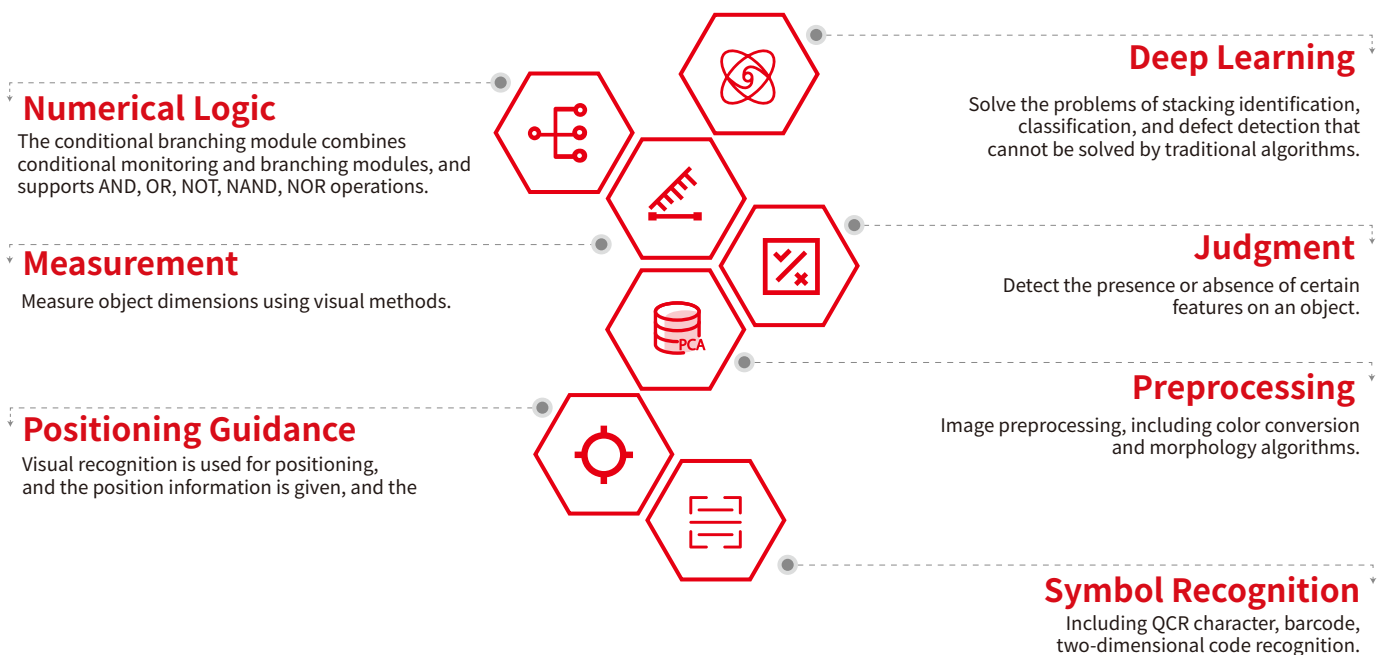
**>>02** Independent research and development, has been widely used in 3C, automobile, food, daily chemical, medical, new energy, semiconductor and other industries.

**>>03** The software includes five functions of guidance, positioning, identification, measurement and detection.

**>>04** A new generation of user-friendly operation interface, graphical wizard, code-free programming.

**>>05** An open platform that supports customized functions.

# ALGORITHM TOOLS



# VISION CONTROLLER

Model	AtomVision-CV-PLUS	AtomVision-DL-2-PLUS	AtomVision-3D-PLUS	AtomVision-DL-3-PL
	AtomVision-CV-MAX	AtomVision-DL-2-MAX	AtomVision-3D-MAX	AtomVision-DL-3-MAX
Introduction	2D CV Algorithm	AI Algorithm	3D CV Algorithm	3D AI Algorithm
Supported Cameras	Area Array Camera 2D Line Scan Camera		3D Laser Sensor 3D Structured Light Camera TOR Sensor	
Extension	Support network port expansion, I/O expansion, graphics card expansion, image acquisition card expansion and other functional modules.			

# VISION HARDWARE



Area Array Camera



2D Line Scan Camera



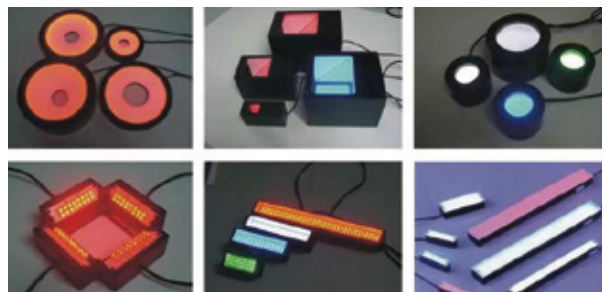
3D Laser Sensor



3D Structured Light Camera



Industrial Lens



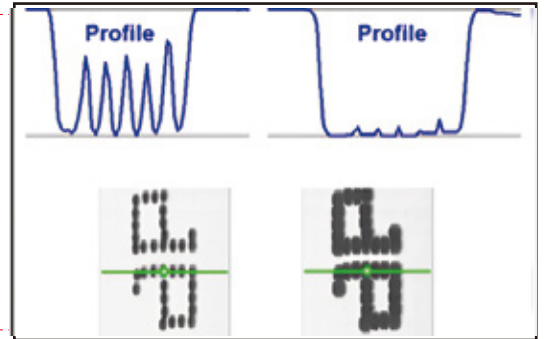
Visual Light Source

# Algorithm Application Cases



## Image Processing

Logical operations, grayscale and color transformations, shading correction, grayscale morphology, geometric transformations, polar transformations.



## Image Analysis

Profile processing, histogram statistics, blob analysis, area masking, contouring.



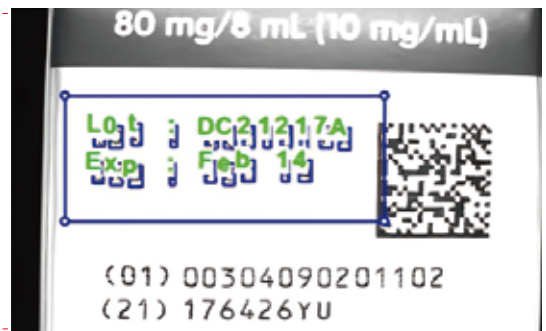
## Edge Testing

Automatic edge detection, outlier suppression, point model fitting, powerful sub-pixel measurements.



## Character Recognition

Font training, deskewing, automatic segmentation, typographic character recognition and validation.

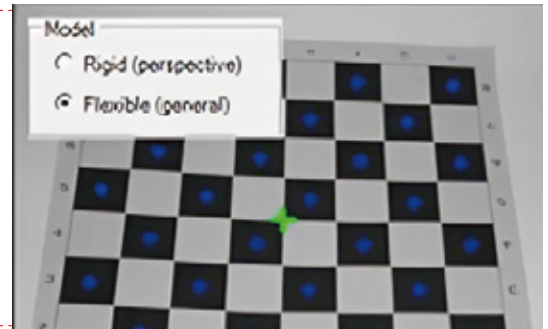


# Algorithm Application Cases



## Image Calibration

Zoom, isometric, correlation, perspective and distortion transformations.



## Pattern Matching

Model training, sub-pixel position, rotation and scaling.



## Barcode Reading

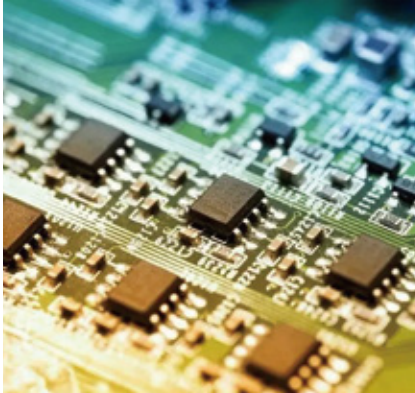
Automatic code placement, recognition and decoding, scaling and rotation invariant.



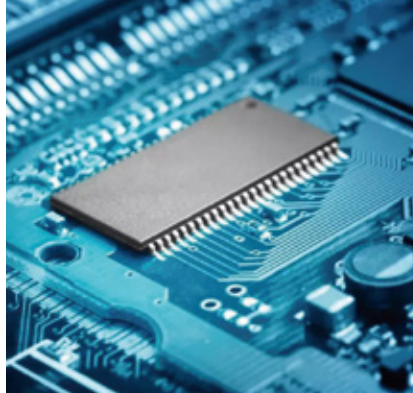
# Industry Applications and Cases.

## Industry Application

Customized solutions according to the characteristics and needs of different industries.



3C



Semiconductor



AUTO



Hardware



Medicine



Rubber & Plastic



Agriculture

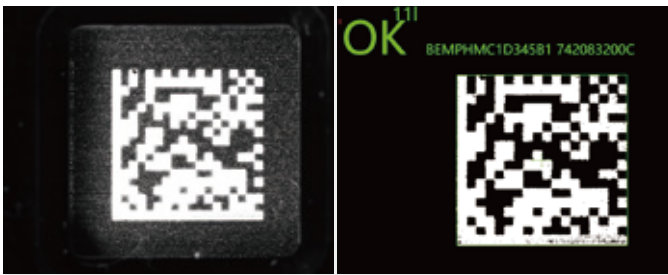


New Energy

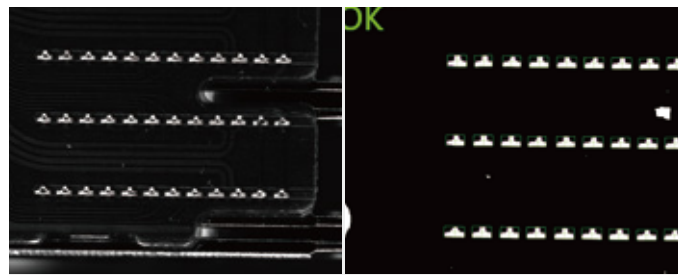


Household

### Cases in 3C

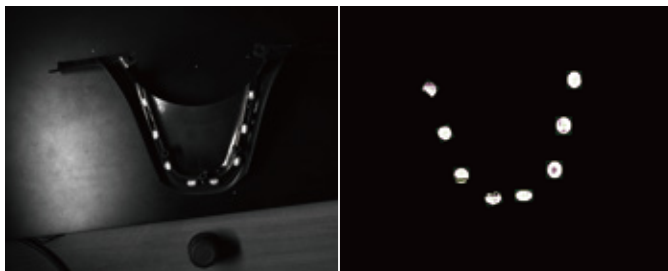


QR Code Reading

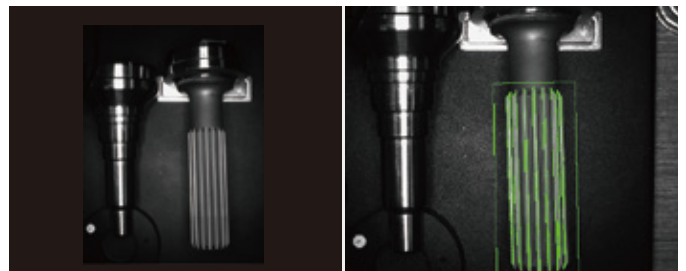


Solder joint detect if have or not and count

### Cases in Auto.

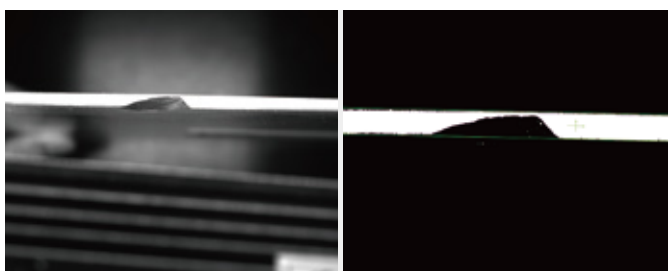


Steering wheel ultrasonic welding spot detect exist or not

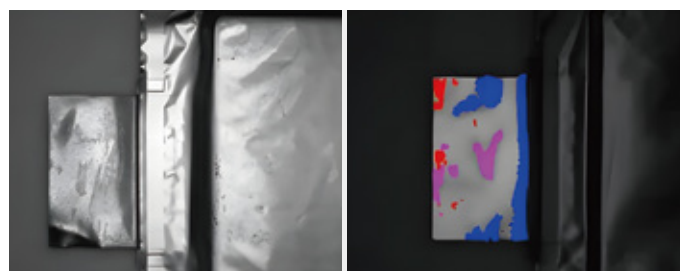


Visual inspection of connecting shafts appearance

### Cases in New Energy

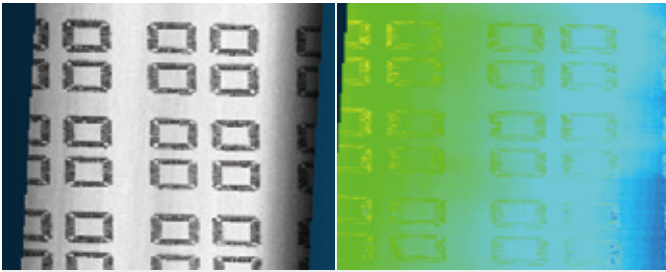


Photovoltaic glass defect detection

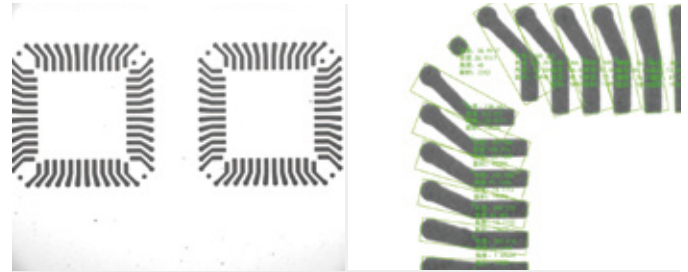


Power battery polar detection

### Cases in Semiconductor Industry



Thickness detection of ceramic sheets

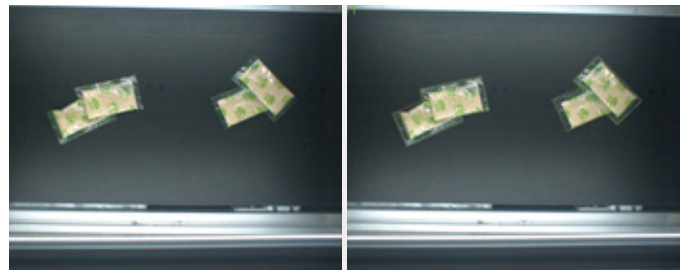


Through-hole inspection of ceramic sheet

### Cases in Food and Daily Chemical

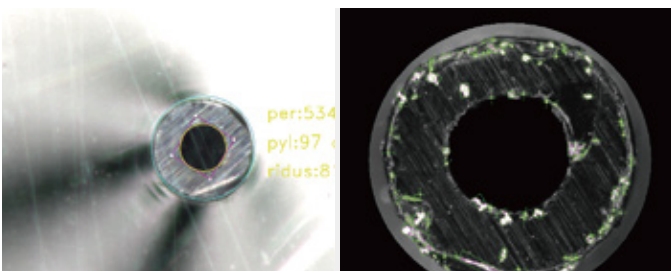


Distinguishing and positioning identification of the upper and lower stacked bags of seasoning.

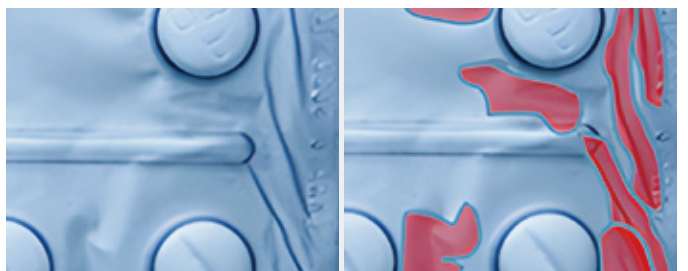


Distinguishing and positioning identification of the upper and lower stacked bags of soy flour.

### Cases in pharmaceutical



Medical injection tube burr and defect detection



Drug board defect detection