AI one-key measuring instrument

PMS - MI2000 series

POMEAS

Vision Technology

AI

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PMS - MI2000 series

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Scan, learn more

One-click measurement makes your measurement easier

Based on the independent research and development i-vision AI Vision technology (CNN neural network &MV machine Vision), it realizes the object recognition, region of interest(ROI), AutoLight and intelligent focusing function, making the equipment more intelligent!

PMS- MI2000-01 makes your measurement simple. It can read all dimensions of two-dimensional parts intelligently with the help of AI software, and eliminate the shadow of artificial lighting and artificial focus on measurement.Real and objective test data can be obtained with one click, helping you free yourself from tedious measurements.

● **Can be automatically adjusted to best lighting**

Automatically set the best lighting to eliminate human error

PMS- MI2000-01 can provide a variety of lighting systems and automatically set the lighting status of each feature, to eliminate any error caused by human operation.Even new operators can use it safely.

Back light

Ring light

Camera lens system

Measured workpiece

Light source
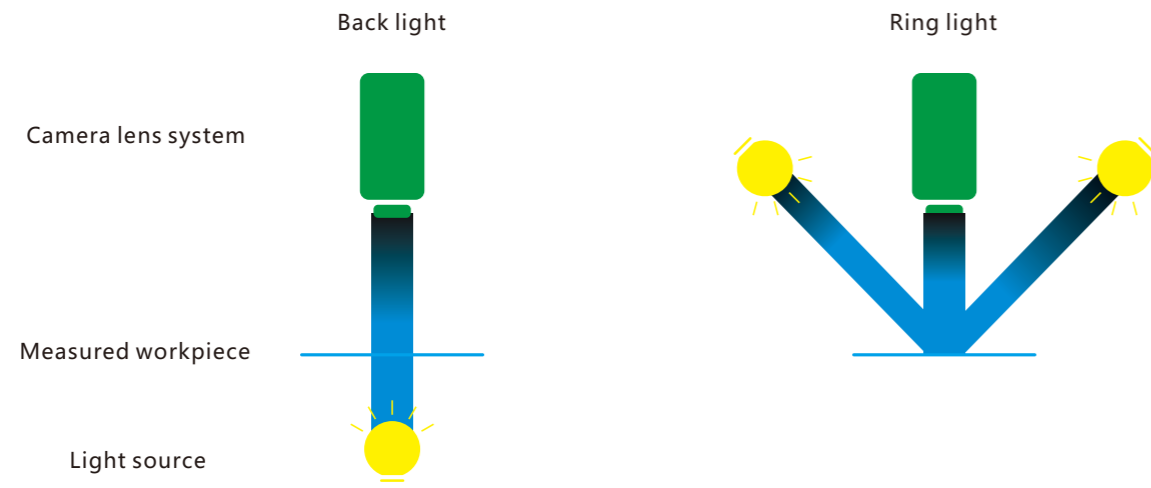
PMS- MI2000-01: according to the characteristics and location of the workpiece, the self-developed i-vision AI Vision technology (CNN neural network &MV machine Vision) can regonized the tested parts, ROI and autol lighting of the double-eight-segment ring light.
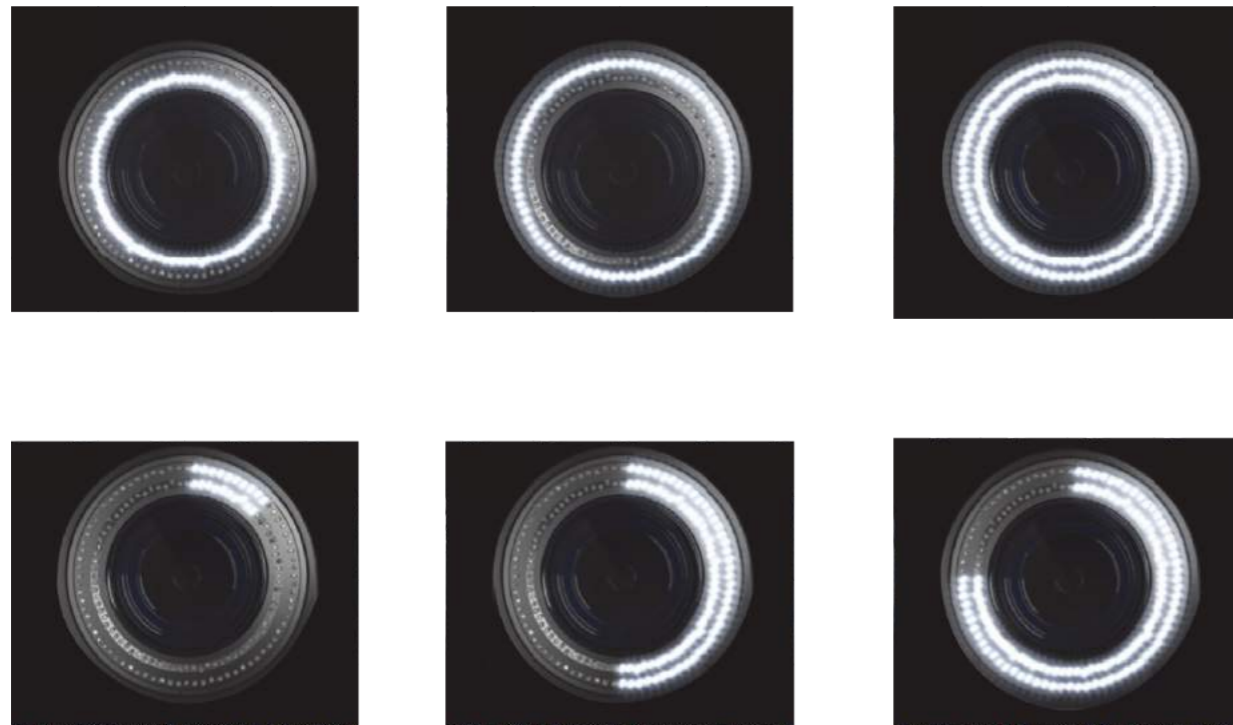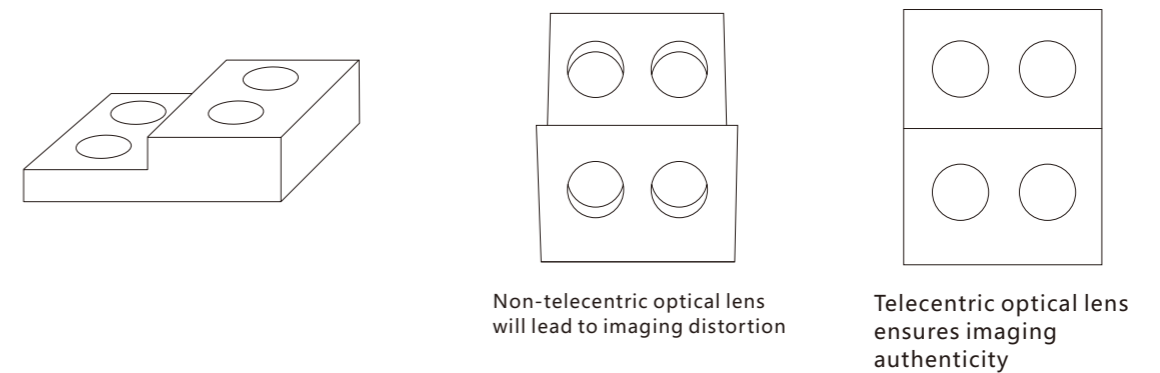
A I vision technology is adopted to realize intelligent focusing

Based on the self-developed AI vision technology (CNN neural network &MV machine vision), intelligent focus can be realized to make the equipment more intelligent!Focus faster and more accurate!

Pms-MI2000-01 adopts intelligent autofocus function Manual operation is not required

Telecentric optical system

PMS- MI2000-01 adopts the telecentric optical lens system. Even if there is a distance difference, the shooting size will not change. No matter how far it is from the object, the precise size can be accurately captured.

Non-telecentric optical lens will lead to imaging distortion

Telecentric optical lens ensures imaging authenticity

STEPS 1 After placing

Place the workpiece freely, the software identify the position and direction automatically.

The workpiece can be placed freely. As long as it is within the range of vision, it can catch the target quickly and accurately and make precise measurement without any artificial measurement error.

Any position within the field of view is measurable

Large field measurement, whole imaging

Large field measurement, with a field of vision up to 130mmx97.8mm, can be used for whole imaging at one time and can measure multiple dimensions at the same time. Even if the measurement position is increased, it will not take measurement time.
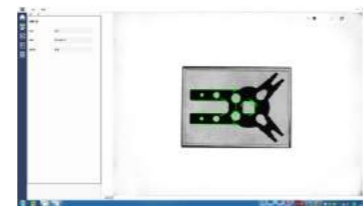
One-shot whole imaging, and can measure multiple dimensions simultaneously

Eliminate human error

Large field measurement, with a field of vision It can focus automatically according to the measured position and is equipped with intelligent light source adjustment function. No matter who makes the measurement, the size can be measured under the same conditions at any time, so as to avoid measurement error caused by different lighting conditions.

Automatic focus and lighting Settings

STEPS 2 Press one button to measure

Only press one key to measure, real automatic measurement

Realized the automatic measurement function without setting, the true sense of "after placing, it can be measured only by pressing a button".No setting is required for simple dimensional measurements, and anyone can learn to operate immediately like a vernier caliper or micrometer.


Place the measurement object on the coordinate table

Easy to measure with just one touch without setting
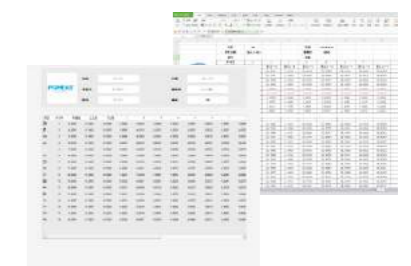
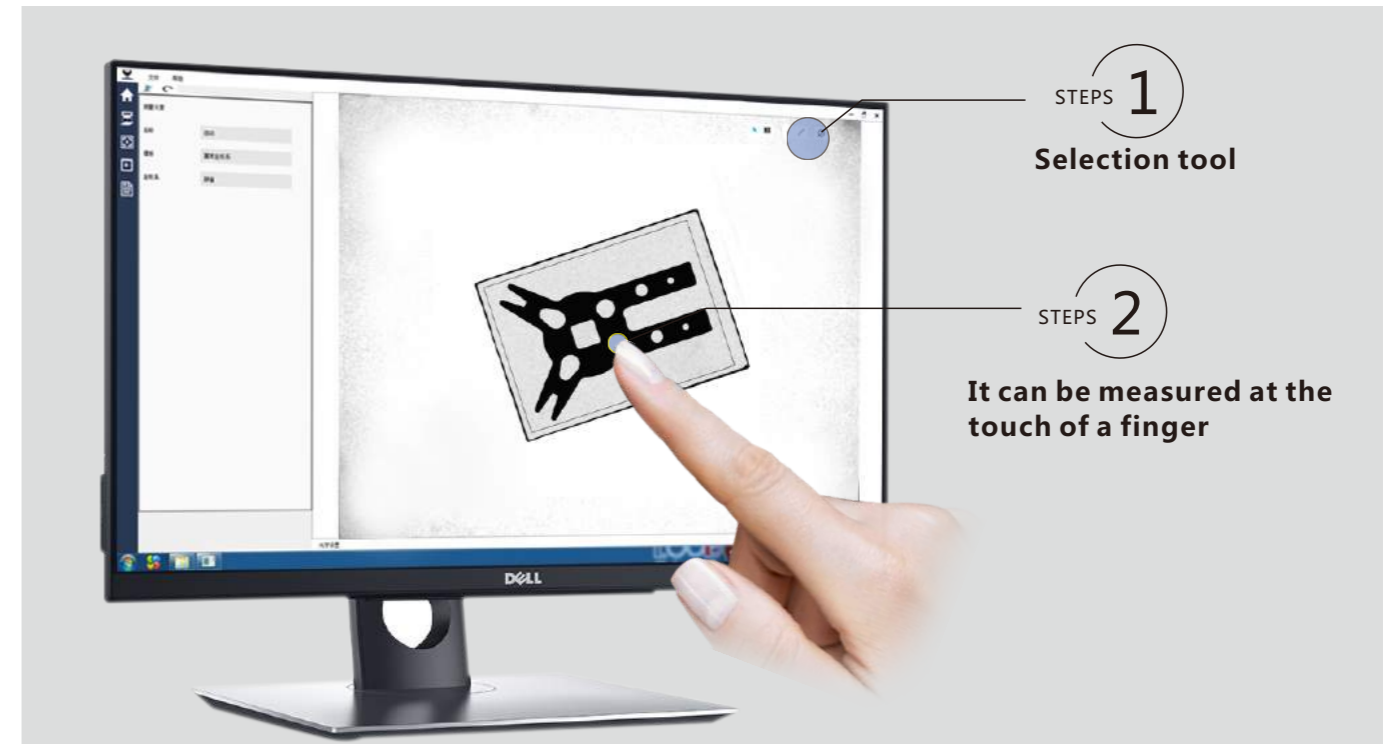### Data traceability management is simpler

All measurement results are automatically saved to the host, and can be searched according to the date of measurement, project, batch number surveyor and other information. The traceability management of data is simpler.
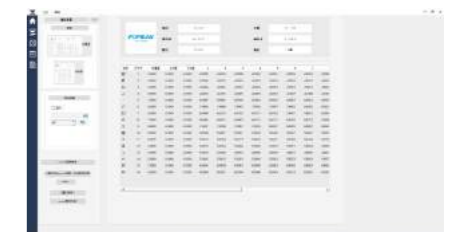
### Click one button to make the test result report

The test result report and statistical report can be made with one key, without the tedious process of data transmission and computer input. It is very simple to output the measurement data with Excel form and PDF.

Simple operation,
It can be measured by touch

R 10.0000

By controlling the aVision software on the touch screen, will experience a new way of marking dimensions for the operator.In many applications there is no need to use a keyboard or mouse

STEPS **1**

Selection tool

STEPS **2**

It can be measured at the touch of a finger

Subpixel processing

In order to achieve wide vision and high-precision measurement, and pursue extreme image processing technology, an pixel is segmented to below 0.01 for edge detection.

Without subpixel processing   Subpixel processing
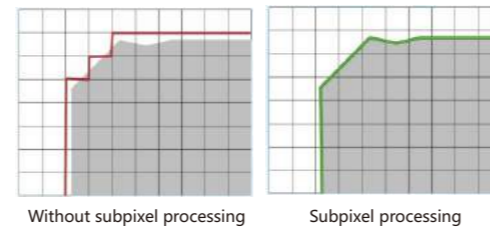
Fitting processing

Using more than 100 measurement points, the least square method is used for fitting to identify "lines" or "circles".

Automatic identification of "line", "circle" and other profiles

## Automatic recognition of rough edges and defects

When the measuring position contains rough edges or defects, it can be excluded from the fitting process as an abnormal point on the basis of automatic identification. In addition, when the rough edges and defects are larger than the threshold value, the measurement can be stopped.
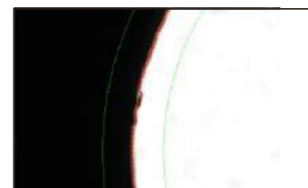
Automatic recognition of rough edges and defects

CNN neural network and deep learning function

The software adopts the independently developed AI vision technology and use CNN neural network and deep learning function to make the measurement more accurate and precise.
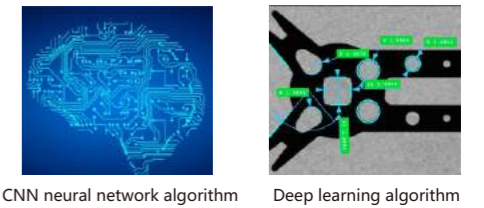
CNN neural network algorithm   Deep learning algorithm

## Easy to understand and operate menu

Just select the measurement content from the menu and click the measurement point on the screen. Frequently used point, line, circle and arc measurement items and Angle measurements are all centered on a marker. Even first-time users can get started right away.

Measurement feature   Picker tool   Output tool

Display measurement results directly

The measurement results are projected directly next to the size arrow. The value color indicates whether it is within the tolerance range. The green value represents OK and the red value represents NG.
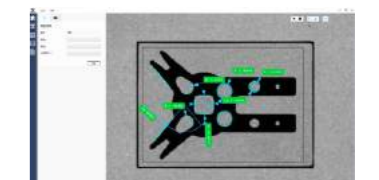
The measurement results are projected directly next to the size arrow
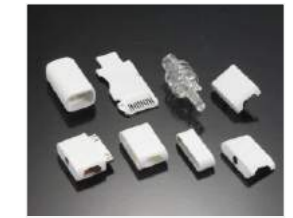
Electronics

Machinery
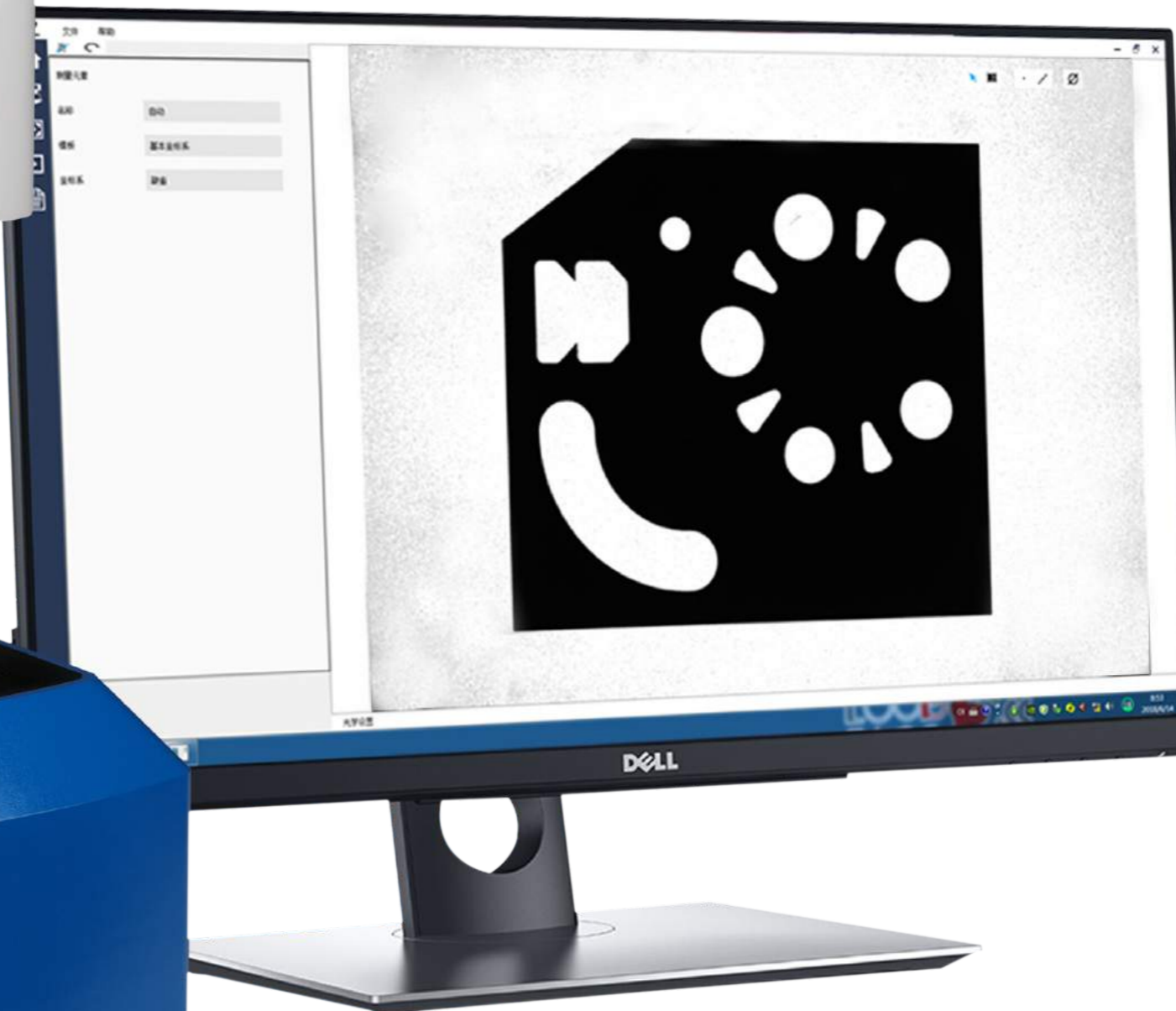

Mobile phone

Hardware

Packaging

Health care

car

Mould

Application field

PMS- MI2000-01 is very suitable for the measurement of distances, radius, angles, arcs and other dimensions. Applicable to electronic, mechanical processing, metal parts, plastic processing, automobile and other industries. Common workpieces include stamping parts, injection parts or laser cutting parts.

Parameter table

Code	PMS-MI2000-01	
lens	Bitelecentric lens	
Working distance	130mm	
Sensor	1.1 inch 12-megapixel black and white CMOS	
Measuring range	130mm*97.8mm	
The Z axis stroke	70mm	
display	23.8 "10 point touch IPS screen	
Accuracy of measurement	±5μm	
Repeat accuracy	±5μm	
Lighting system	Back light	Parallel light
	The ring light	Area 2x8 ring lighting
Recommended environment	environment temperature	18℃--35℃
	environment humidity	20%--80%RH
The power supply	AC 220V 50Hz	
Weight	About 35 kg	
software	AVision 3.02	
Computer configuration	Intel I5 CPU 8G memory	
External output	Output PASS, FAIL, and NULL	
Basic measuring function	Point, line, circle, arc, Angle, distance	
Auxiliary function	Intersect, parallel, divided, perpendicular, tangent	
geometric tolerance	Position tolerance, dimensional tolerance and dimensional tolerance	

Outline dimension specification drawing

unit：mm

465.58

310

845.25

184.05

510