

# UNIMETRO PEAK SERIES Compact Type Automatic Vision Measurement Machine

UNIMETRO®



## Product Introduction:

- Full automatic Vision measuring machine with compact design
- Economic universal vision measurement scheme
- Excellent image optical system
- High adaptability to a variety of measuring sensors
- The flexible application scenarios
- Powerful measurement software

#### ◆ Simple and stable:

In the design process of PEAK series, we always implement the simple and stable design concept. We reduce unnecessary mechanical parts, integrate all electronic components into the mechanical structure, optimize wiring, and ensure the stability and maintainability of the machine.

#### ◆ Economical vision measurement solutions:

The simple and integrated design allows us to manufacture machines at a lower cost while maintaining high measurement accuracy and optimal performance. Users can enjoy the advantages of high efficiency and low cost.

#### ◆ Excellent imaging system:

Compared with similar products on the market, PEAK series provides a better imaging system, allowing users to obtain clearer and sharper edge images. On the basis of a large number of basic theoretical research, we have selected a high pixel industrial digital camera to ensure high image quality, high frame rate and stable measurement.

#### ◆ Powerful software:

PEAK series configuration powerful UNIMETRO / INSPECT measurement software

- ✓ Recommended operation interface, complete measurement function;
- ✓ Weak edge detection, supporting multi-sensor programming;
- ✓ Auto focus and focus measurement function.



## Product Characteristics:

### Quality details control

- The high-precision granite base of grade 000 is adopted to ensure the high stability and accuracy of the machine;
- Aluminum alloy worktable, hard anodizing surface treatment, to ensure high dynamic performance and long service life of the machine, fast and flexible action control, durable and beautiful;
- Integrated control system, embedded motion control, lighting, linear scale reading and other signal control, to ensure that the machine performance is extremely stable.

### High performance configuration

- XYZ three axis automatic precise positioning control;
- The z-axis adopts high-precision linear guide and servo motor control system to realize automatic focusing, eliminate the error of artificial focusing, and improve the measurement accuracy and stability;
- 0.5um high-precision glass ruler ensures that the accuracy of the machine  $\leq 2.5 + L / 100\mu\text{m}$ ;
- High precision toothless polished rod and fast moving locking device are used to ensure the return error of worktable within 2um;
- Gigabit high-resolution color camera ensures clear image quality without distortion and meets the needs of clear observation and accurate measurement;
- 0.7-4.5x high resolution manual zoom lens;
- It adopts programmable surface three ring and eight partition LED cold lighting and contour led parallel lighting, and built-in intelligent dimming, which can automatically control the brightness of 8 zones and realize 256 level brightness adjustment intelligently.

### Flexible expansibility

- A variety of non-contact sensors and fast fixing systems can be selected to meet different measurement requirements of different customers;
- The flexible expansibility of peak series is compatible with touch probe, non-contact measurement sensor and manipulator, which greatly improves the measurement efficiency.



## Product Parameter:

		PEAK Series Full CNC Vision Measuring Machine	
Model		PEAK 300	PEAK 400
X/Y axis range		300x200mm	400x300mm
Z-axis range		200mm (can be increased according to customer demand)	
Linear scale		High precision glass grating ruler, accuracy: 0.5um	
Control System		Joystick control, mouse operation, automatic detection program	
Measuring Accuracy		$\leq 3+L/200\mu\text{m}$	
Repeatability		$\pm 3\mu\text{m}$	
Image system	Camera	Industrial grade color CCD camera	
	Lens	0.7-4.5X High resolution manual zoom lens	
Illumination	Contour light	LED parallel contour light source (optional with green light source)	
	Surface light	Programmable LED 8-zone ring surface light (optional: 40 zone annular light, coaxial light, lifting color light source)	
Magnification		18-195X (According to the different models of the selected camera, its magnification will change; the actual magnification is subject to the actual measurement data)	
Field of View		8.1~1.3mm (According to the different matching schemes of camera and lens, the field of view will change accordingly, and the actual field of view is subject to the measured data)	
Measuring Software		UNIMETRO 2D/INSPECT Full Automatic Vision Software	
Working distance		90mm	
Max Loading		25Kg	
Power supply		220V/50Hz/10A	
Dimension(W*D*H)		810*610*1055mm	960*710*1075mm
Weight		330Kg	380Kg

\* L is measuring length(mm), the mechanical accuracy of Z-axis and focus accuracy is related to the surface of the workpiece.

\* Magnification is approximate value, it is related to the dimension of monitor and resolution.

\* Field of view(mm) = (diagonal\*Horizontal\*Vertical)

\* 0.5X or 2X objective is optional available, and realize image magnification: 13X~86X or 52X~344X.