

UNIMETRO ULTRA SERIES

CNC Automatic Vision Measurement Machine



Product Introduction:

ULTRA series is a cantilever high accuracy fully automatic vision measuring machine developed for GD&T measurement with 3 axis automatic motorized control. It equipped with automatic focusing, automatic lighting control, and automatic movement of hardware and software configuration to make the measurement of linear and geometrical dimensions quickly and accurately.

Product Characteristics:

◆ Quality details control

- Granite base and column, excellent stability;
- Aluminum work stage, make the motion control fast reacting and flexible;
- Work stage with hard oxidation surface processing anti-scratch;
- Standard with precision linear guide, grinding ball screw and AC servo motor etc., to ensure the precision and stability of the motion system;
- Integrated control system, embedded with motion control, and all signal control as illumination and linear scale reading, ensures the performance of the machine is extremely stable.

◆ High performance configuration

- XYZ three axis CNC automatic control and accurate positioning;
- 0.1 um high precision glass linear scale to ensure the positioning accuracy and measurement accuracy of the system;
- GIGA high resolution color camera to meet the needs of clear observation and accurate measurement;
- 6.5x high-resolution click zoom lens, accurate doubling and one times pixel correction only needed;
- With programmable surface 5-ring 8-division LED Cold Illumination and contour LED parallel illumination and built-in intelligent light adjustment, it can automatic control the brightness in the 8-division and realize 256 level brightness adjustment intelligently.

◆ Efficient measurement software

- With the External-Array RationalVue composite measuring software, the ULTRA series is capable to offer powerful 2D/3d composite measuring function;
- Simple and easy to understand operation interface makes measurement more simple and efficient;
- Automatic measurement program can be set to complete batch measurement efficiently and quickly.

◆ Flexible expansibility

- Multi types of non-contact sensors and fast fixturing system are for option, which can satisfy different measuring requirement from different customers
- Movable color LED ring light is available for the ULTRA series, which makes the series more flexible and powerful to different parts with different kinds of materials or shapes, offers more powerful measuring application.
- Thanks to the flexible expansibility of ULTRA series, it is compatible with touch probe, non-contact measuring sensors and robot arm, highly increase the measuring efficiency,

◆ **Product Parameter:**

Product Name		ULTRA Series Automatic Vision Measuring Machine					
Model		ULTRA 300	ULTRA 400	ULTRA 500	ULTRA 600		
X/Y-axis Travel		300x200mm	400x300mm	500x400mm	600*500mm		
Z-axis Travel		200mm (can be raised according to the requirements of customers)					
X/Y/Z-3 axis Linear Scale		Glass Linear Scale Resolution: 0.1um					
Guidance Mode		Precision linear guide, double-track double slider guide.					
Operation Mode		Joystick controller, Mouse operation, automatic detection program.					
Accuracy		XYZ-axis: $\leq 2.5+L/200\mu\text{m}$					
Repeatability		$\pm 2.5\mu\text{m}$					
Video System	CCD	High definition 1/3" Color CCD Camera					
	Lens	6.5X continue click zoom lens; Optical Magnification: 0.7X-4.5X; Video Magnification: 26X~172X(21.5"monitor)					
Field of View(mm) (D*H*V)	Magnification	0.7X	1X	2.0X	3.0X	4X	4.5X
	1/3"CCD	8.57x6.86x5.14	6.00x4.80x3.60	3.00x2.40x1.80	2.00x1.60x1.20	1.50x1.20x0.90	1.33x1.07x0.80
Illumination System	Contour	LED parallel contour illumination					
	Surface	0~255 Stepless adjustable 5-ring 8-division LED surface illumination					
Measuring Software		UNIMETRO 2D Fully Auto Measuring Software					
Load Capacity		25Kg					
Working Environment		Temperature 20°C \pm 2°C, Humidity Range<2°C/hr, Humidity 30~80%, Vibration<0.002g, <15Hz					
Power Supply		220V/50Hz/10A					
Dimension(W*D*H)		1600*780*1700	1750*920*1700mm	1900x1080x1700mm	1050*1280*1700mm		
Net Weight		380Kg	450Kg	600Kg	800kg		

* 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.