



## VR-6000

### 3D Optical Profilometer Controller



\*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

## Specifications

Model		VR-6000		
Type		Controller		
Operating System		Windows 10 Professional / Windows 11 Professional		
Head		VR-6200, VR-6100		
Field of view	Low magnification (wide field of view)	Magnification on a 15" monitor 12×	Horizontal	24.0 mm 0.94"
			Vertical	18.0 mm 0.71"
		Magnification on a 15" monitor 25×	Horizontal	12.0 mm 0.47"
			Vertical	9.0 mm 0.35"
		Magnification on a 15" monitor 38×	Horizontal	8.0 mm 0.31"
			Vertical	6.0 mm 0.24"
		Magnification on a 15" monitor 50×	Horizontal	4.5 mm 0.18"
			Vertical	4.5 mm 0.18"
	High magnification (high resolution)	Magnification on a 15" monitor 40×	Horizontal	7.6 mm 0.30"
			Vertical	5.7 mm 0.22"
		Magnification on a 15" monitor 80×	Horizontal	3.8 mm 0.15"
			Vertical	2.9 mm 0.11"
Magnification on a 15" monitor 120×		Horizontal	2.5 mm 0.10"	
		Vertical	1.9 mm 0.07"	
Magnification on a 15" monitor 160×	Horizontal	1.4 mm 0.06"		
	Vertical	1.4 mm 0.06"		
Zoom		1× to 4×		
Height measurement	Display resolution		0.1 μm	
	Height measurement range	Without Z stitching	Low magnification (wide field of view): 10 mm 0.39" High magnification (high resolution): 1 mm 0.04"	
		With Z stitching	Low magnification (wide field of view): 50 mm 1.97" High magnification (high resolution): 30 mm 1.18"	
	Repeatability (σ)	Without Z stitching	0.4 μm *1	
		With Z stitching	1.0 μm *1	
	Measurement accuracy	Without Z stitching	±2.5 μm *1	
With Z stitching		±4.0 μm *1		
Width measurement	Repeatability (σ)		Low magnification (wide field of view): 1 μm High magnification (high resolution): 0.5 μm *1	
	Measurement accuracy		Low magnification (wide field of view): ±5 μm High magnification (high resolution): ±2 μm	

		*1
Stitching function		VR-6200: Fully-automated measurement (XY automatic control + Z automatic control, $\theta$ automatic control), Automatic mapping creation, Automatic area setting *2 VR-6100: Manual measurement (XY manual operation + Z automatic control) *2
Stitching function	Motorized rotational unit	VR-6200: Supported *2 VR-6100: Not supported
XY measurable range		VR-6200: 300 × 150 mm <b>11.81" × 5.91"</b> *2 VR-6100: 92 × 86 mm <b>3.62" × 3.39"</b> *2
Stage	XY stroke	VR-6200: 278 × 134 mm <b>10.94" × 5.28"</b> (motorized) VR-6100: 70 × 70 mm <b>2.76" × 2.76"</b> (manual)
	Z stroke	69 mm <b>2.72"</b> (motorized)
	Load capacity	4.5 kg <b>9.92 lb</b>
Working distance		75 mm <b>2.95"</b>
Image receiving element		4 megapixel monochrome CMOS
Transmitter lens		Double-telecentric lens × 2
Receiver lens		Double-telecentric lens
Light sources	Observation light source	LED ring light (red, blue, green)
	Measurement light source	White LED
Data processing		Dedicated PC specified by KEYENCE
Power supply	Power voltage	100 to 240 VAC ±10%, 50/60 Hz
	Power consumption	200 VA max.
Environmental resistance	Ambient temperature	+15 to 30°C <b>+59 to 86°F</b>
	Relative humidity	20 to 80% RH (no condensation)
Weight		Approx. 4 kg <b>8.82 lb</b>

\*1 Value obtained using KEYENCE's specified standard gauge with measurement in KEYENCE's specified measurement mode (ambient temperature: 23±1°C **73.4±1.8°F**)

\*2 Measurement expansion module (VR-H4J) required

## Dimensions

\* Download CAD file or product manual for larger image/text and more detail.

### VR-6000 (Controller)

