Industrial Smart One-Touch VMS

We are happy to introduce our Optike Industrial Smart One-Touch Video Measurement System and are proud to present it to you. This machine has a high level of accuracy and repeatability. The machine has a very easy user interface, using which each part's CTQ dimensions and tolerances can be setup once and used to inspect more than one part using One-Touch. Simply place parts on the work stage and click the button. It locates parts automatically placed anywhere within the system's fields of view and provides an output of parts that are okay and not okay. It also automatically records measurement results and creates detailed inspection reports for users. This user-friendly machine can be used by anyone to complete their work.

Benefits of Optike Smart One - Touch VMS

	Traditional VMM	Optike Smart One-Touch VMS	Benefits
Accuracy	More Than ± 10 - 20 μm*	Upto ± 1 μm*	More Reliable & Precise Measurements.
Repeatability	More Than ± 10 - 20 μm*	Upto ± 0.5 μm*	Stable Measurement which can be used for Machine Program Analysis
Skilled Operator	Highly Skilled Operator is required	Not Required	Once you program it will automatically Run.
Measurement Qualification	Is done manually by Operator	Automatic	Once we set the tolerances for dimension, Software will measure and give Output.
Cycle Time / Effort	Required a lot of time & Effort	Rapid within Seconds	Just place the part & within Seconds its Done.
Programming Effort	Highly Skilled Operator is required	Very Simple & Easy to use Tools	We have a good library of Tools which are veryeasy to use & 2D GD&T Parameters too.
Batch Checking	All Operations have be repeated	Measure 200 Parts at a time (Single Orientation)	Better Process Control & Increased Productivity
Software Functionality	Very Traditional & Limited	Highly Customizable & MES Integration	Many unique advantage due to innovative software platform
Long Term Reliability	Will deteriorate due to Linear Guides	Fully Optical Calibration	Our Platform is more reliable & maintain free. Optical Calibration using Bi Tele centric Lens.

![Khush Enterprises Optikē by Khush logo]

1. S1010 - Industrial Smart One-Touch VMS

- Measurement Range: **Ø 100 x 80mm**
- Accuracy: **upto +/-3µm***
- Repeatability: **upto +/-1µm***
- Product Dimensions: 580 x235 x 790 mm
- Movement Stroke: only **Z Axis** 75mm
- Glass Stage Size: 150 x150mm
- Weight: 40KG
- Max Load capacity: 5kgs
- Measurement cycle time (seconds): <2seconds
- Measurement type: **2D**

2. S2035 - Industrial Smart One Touch VMS

- Measurement Range: **300x 200mm** to **230 x 130mm**
- Accuracy: **upto +/-1µm***
- Repeatability: **upto +/-0.5µm***
- Product Dimensions: 580 x495x790 mm
- Movement Stroke: **X axis-150mm**, **Y-100mm**, **Z-75mm**
- Glass Stage Size: 318×268 mm
- Weight: 55KG
- Max Load capacity: 5kgs
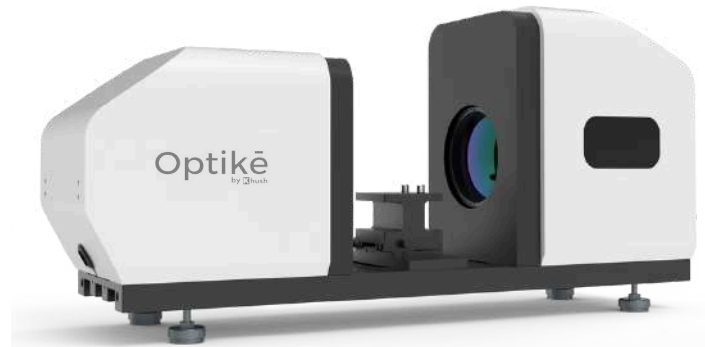- Measurement cycle time (seconds) : <2seconds
- Measurement type: 2D

3. S2015 - Industrial Smart One-Touch VMS

- Measurement Range: **Ø 150 x 110mm** to **50 x 35mm**
- Accuracy: **upto +/-2µm***
- Repeatability: **upto +/-0.5µm***
- Product Dimensions: 650 x 335 x 885 mm
- Movement Stroke: **X axis-120mm, Y-140mm, Z-75mm**
- Glass Stage Size: 249 x 229mm
- Weight: 65KG
- Max Load capacity: 5kgs
- Measurement cycle time (seconds): <2seconds
- Measurement type: 2D

4. S4010 - Industrial Full Automatic Flash Image Measuring Equipment

- Measurement Range: **Ø 100x 80mm**
- Accuracy: **upto +/-3μm***
- Repeatability: **upto +/-1μm***
- Product Dimensions:790 x230x385 mm
- Movement Stroke: **Dual field**
- Glass Stage Size: 150 x150mm
- Weight: 27KG
- Max Load capacity: 3kgs
- Measurement cycle time (seconds) : <2seconds
- Measurement type: 2D

5. S2025 - Industrial Smart One Touch VMS

- Measurement Range: **200x 200mm** to **130 x 130mm**
- Accuracy: **upto +/-1μm***
- Repeatability: **upto +/-0.5μm***
- Product Dimensions: 580 x430x790 mm
- Movement Stroke: **X axis-120mm**, **Y-140mm**, **Z-75mm**
- Glass Stage Size: 249 x 229mm
- Weight: 55KG
- Max Load capacity: 5kgs
- Measurement cycle time (seconds) : <2seconds
- Measurement type: 2D

6. S2030 - Industrial Smart One -Touch VMS

- Measurement Range: 3**00x 210mm** to **200 x 135mm**
- Accuracy: **upto +/-2μm***
- Repeatability: **upto +/-0.5μm***
- Product Dimensions: 675 x495x885 mm
- Movement Stroke: **X axis-150mm**, **Y-100mm**, **Z-75mm**
- Glass Stage Size: 318 x268mm
- Weight: 75KG
- Max Load capacity: 5kgs
- Measurement cycle time (seconds) : <2seconds
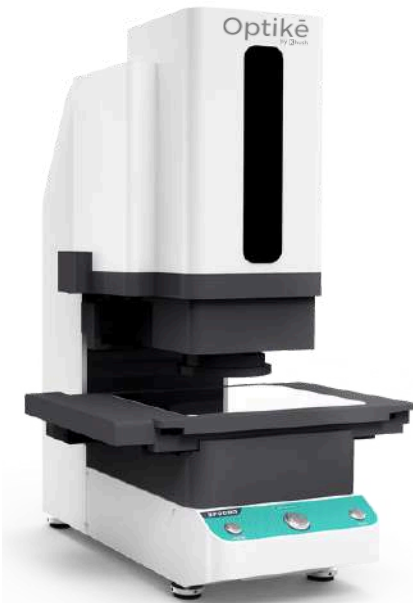- Measurement type: 2D

7. <u>S6050</u> - Industrial 2D+3D Flash Measuring Equipment

- Measurement **500x 400mm** to **430 x 350mm**
- Accuracy: **upto +/-1μm***
- Repeatability: **upto +/-0.5μm***
- Product Dimensions: 1060 x 860 x 1890 mm
- Movement Stroke: **X axis -350mm**, **Y-250mm**, **Z-200mm**
- Glass Stage Size: 318 x 268 mm
- Weight: 650 KG
- Max Load capacity: 25kgs
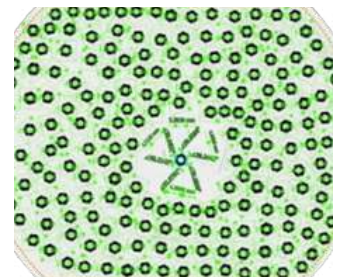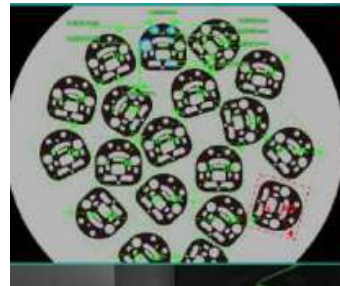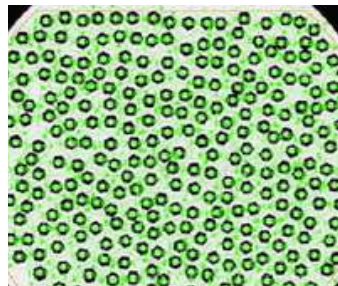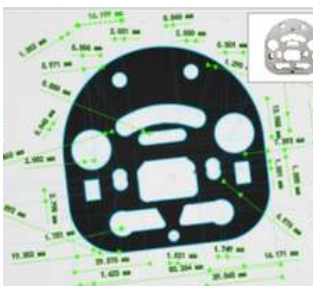- Measurement cycle time (seconds) : <2seconds
- Measurement type: 2D

8. <u>SP3020</u> - Industrial Smart One Touch VMS

- Measurement **194x 135mm to 162 x 108mm**
- Accuracy: **upto +/-0.7μm***
- Repeatability: **upto +/-0.25μm***
- Product Dimensions: 670 x500x855 mm
- Movement Stroke: **X axis -150mm**, **Y-100mm**, **Z-75mm**
- Glass Stage Size: 318 x 268 mm
- Weight: 75KG
- Max Load capacity: 5kgs
- Measurement cycle time (seconds) : <2seconds
- Measurement type: 2D

Example work pieces measurement Pictures

999+ position can be measured at a time

200+ work pieces can be measured at a time

Measurement function

▶ **Geometric Tolerance** : Straightness, roundness, perpendicularity, parallelism, position, concentricity, symmetry, profile

▶ **Continuous Measurement** : Continuous measurement results will automatically judge OK or NG

▶ **Build a coordinate system** : Supports five coordinate system establishment methods such as point and line, line and line, can translate coordinate system, and can also establish multi-coordinate system

▶ **Special application tools** : Circumference, automatic measurement, screw measurement, fillet, C surface, curve length, slot, point position, circle diameter cross, ellipse, area.
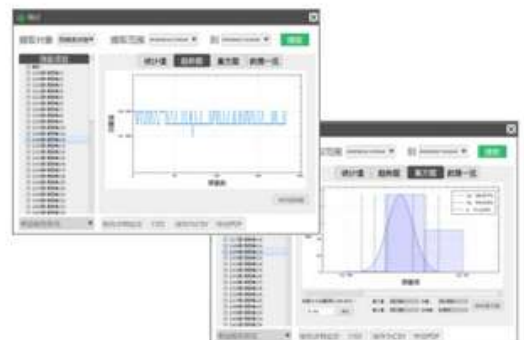
Rich statistical Program

1.The measurement results are saved automatically

All measurement result are saved into project file automatically. The number of OK and NG, NG rate, σ. 2σ, 3σ can be calculated automatically according to the saved results. Meanwhile, date, time and lot number can be saved automatically, so as to facilitate the extraction of measurement results in the past period.

2.Tendency chart

The abnormality of the production equipment and production process can be monitored through the regular change trend of the measured value, such as the monotonic change of the measured value, the periodic change.
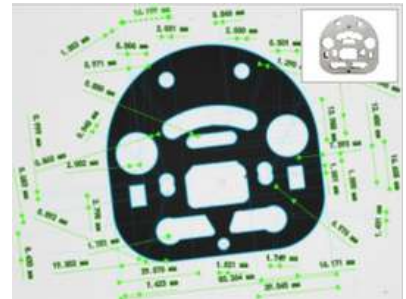
3.Histogram

It can reflect the status and distribution of product quality fluctuations, and transmit information about process quality more intuitively, which can be used to judge and test product quality and failure rate
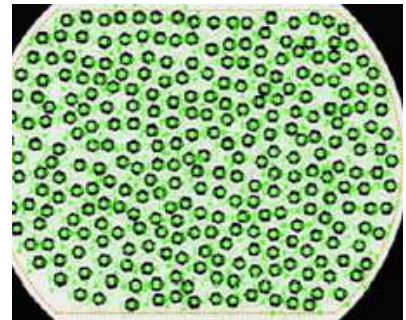
High efficiency

999+ positions can be measured at a time

As shown in the figure, different features of work piece can be measured simultaneously, and 999 positions can be measured for once programing.
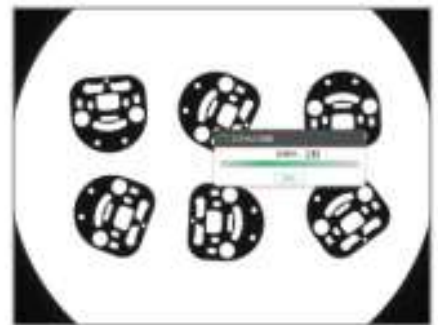

200+ work pieces can be measured at a time

As shown in the figure, multiple work pieces can be arranged and measured with one key simultaneously, and each work piece can be measured at different positions. Integrated barcode operator, support multi-workpiece 1D or 2D code measurement, while measuring the size, the scanning result can be bound to the data, simplifying the manual scanning process.

1 s to complete a measurement

Measurement can be completed in 1s. The measurement result is clear, the measurement working hours can be reduced greatly, and the efficiency can be improved.

Operation process of the Machine

▶ Simple operation process
Place work piece One-key measurement

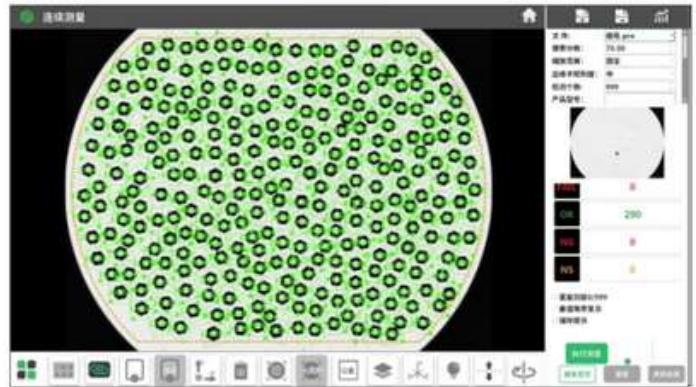

▶ Automatic measurement
The self-developed automatic measurement operators can realize simultaneous measurement of width, hole, ring, included angle and other elements, so it is easy to operate and fast in measurement.

▶ Practical auxiliary tools for measurement
27 auxiliary operators can fit intersection point, vertical line, tangent line and tangent circle, and simplify complicated measurement according to the auxiliary elements such as edge. When adding auxiliary elements, it can draw directly, simple to operate, and improve the programming speed greatly
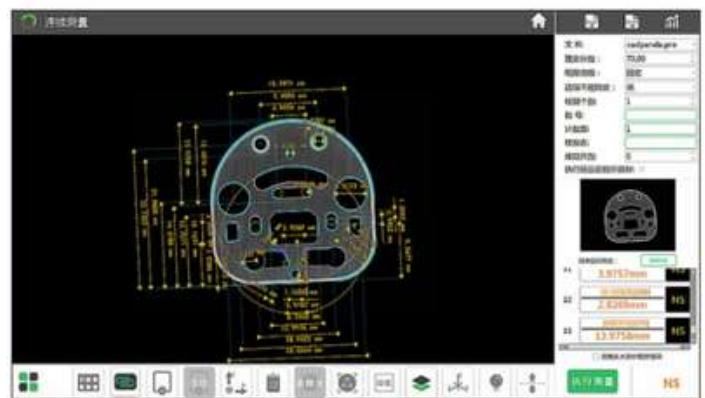
Measurements

Testing requirements: Lots of workpieces batch measurement quickly Solution: Smart series, one-key measurement, deal with 999+dimension, 200+ workpieces batch measurement in few seconds.

Lots of workpieces to test together by one-key measurement, each workpiece includes many dimension, the result will show in 1s, greatly shorten measure time, increase the efficiency, can count test qty, automatically.

CAD Import function

Testing requirements: The all dimension of the workpiece Difficulty: Lots of dimensions to be programmed which will takes long time Solution: Choose CAD import function. Import the CAD file, only need few procedures to program all dimensions of the workpiece easily.

CAD import function adapt to Auto CAD and Zhong-Wang different version files. The fast and convenient import function increase the programming efficiency greatly and reduce the technical reliance on the Operators.

Product model			S1010	S2015	S2025	S2030	S2035	SP3020	S6050	S4010
Measurement range (mm)	Wide field		φ100x80	φ150x110	200x200	300x210	300x200	194x135	500x400	φ100×80
	Small field		/	90x35	130x130	200x135	230x130	162x108	430 × 350	/
Measurement accuracy (μm)	No Splicing	Wide field	±7·①	±5·②	±3·③	±5·③	±7·①	±2·⑧	±3·⑧	±3·①
		Small field	/	±2·③	±1·④	±2·③	±1·④	±0.7·⑫	±1·⑧	/
	With Splicing	Wide field	/	/	±(5+0.02L)·③	±(7+0.02L)·⑦	±(5+0.02L)·⑩	±(4+0.02L)·⑬	±(5+0.02L)·⑫	/
		Small field	/	/	±(3+0.02L)·⑥	±(4+0.02L)·⑨	±(3+0.02L)·⑩	±(2.7+0.02L)·⑭	±(3+0.02L)·⑧	/
Repetition accuracy (μm)	No Splicing	Wide field	±1	±1	±1	±1	±1	±1	±1	±1
		Small field	/	±0.5	±0.5	±0.5	±0.5	±0.25	±0.5	/
	With Splicing	Wide field	/	/	±2	±2	±2	±2	±2	/
		Small field	/	/	±1.5	±1.5	±1.5	±1.25	±1.5	/
Product dimension (mm)			580X235x790	650x335x885	580x430x790	575x495x885	580x495x790	670x500x855	1060x860x1890	790×230×385
Optical lens			Single-field dual-telecentric lens	Dual-field dual-telecentric, low distortion lens				Dual-field dual-telecentric, low distortion lens+FA lens	Dual-field dual-telecentric lens	Single magnification dual-telecentric lens
Weight of platform (kg)			Approx.40	Approx.65	Approx.55	Approx.75	Approx.55	Approx.75	Approx.650	Approx.27
Load-Bearing(KG)			5						25	3
Illumination system				Transmission light: Telecentric Parallel illumination (Green light); Surface light: 4-zone medium and low angle ring lighting (White light); Surface light: Ring (low angle) illumination (green light); Coaxial light (optional): Epi-illumination (white light)				Transmission light: Telecentric Parallel illumination (Green light); Surface light: 4-zone medium and low angle ring lighting (White light); Surface light: Ring (low angle) illumination (green light); Coaxial light: Epi-illumination (white light)	Transmission light: Telecentric Parallel illumination (Green Light); Surface light: High angle lighting (white light); Surface light: 4-zone medium and low angle ring lighting (White light); Surface light: Ring (low angle) illumination (green light); Coaxial light (optional): Epi-illumination (white light)	Telecentric parallel light source (green light)
Measurement data			2D measurement							
Output data			With the function of report output and statistics							
Placement of work piece			Allow free placement of single or multiple work pieces, and realize one-key measurement							one-key measurement
Power requirement			220V~, 50Hz, 600W						220V~, 50Hz, 1400W	220V~, 50Hz, 600W
Environmental requirement			Temperature: 20°C±2°C, relative humidity: 30%-80%, vibration: <0.002g, less than 15Hz							
									Optional: pedal, coaxial light, CAD import function, Data transmission software MES transfer function, Automated remote control function. Optional: Chromatic confocal sensor, suitable model (S2035, S6050)	

[remark]

Based on focal position and environment temp. at +20±1°C

Based on focal position, environment temp. at+ 20±1°C and coordinate platform less than 2kg, L refers to the amount of movement (mm) of coordinate platform

① Within φ80 × 64mm	④ Within 16×13mm	⑦ Within 270×189mm(4 corners R60)	⑩ Within 207×117mm
② Within φ120×88mm	⑤ Within 180×180mm	⑧ Within 180×121mm	⑪ Within 35×28mm
③ Within φ40×28mm	⑥ Within 117×117mm	⑨ Within 270×180mm	⑫ Within 10×6mm

⑬ Within 174×121mm
⑭ Within 146×97mm
⑮ Within 73×49mm

⑯ Within 16×12mm
⑰ Within 450×360mm
⑱ Within 387×315mm

Existing Users of Industrial Smart One-Touch VMS- S1010 : 20+ Satisfied Users and 3+ satisfied Customers.