

# QC Measurement Handler

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QC measurement system meets semiconductor requirement for package dimension measurement for leaded packages. User friendly and simple setup operation enable quick setup of new package and editing or parameter, threshold and specification range. Advance Vision Measurement Algorithm provides fast detection and computation of measure result that is tedious for conventional projectors.

Allocating system provides line to perform measurement allows immediate adjustment to production as well as trend analysis to optimize mold and stamping process. The pass fail criteria indication on screen and on report provides accurate and precise criteria failure location and its results. The system provides platform for QA Sampling gate to measure and document the dimensions prior shipment will allow better control of products shipped to customers.

Report printing features provides printout of the measurement data for documentation and ease process control

### Features

- Small foot print fits the system into any product floor or QA Room
- Quick and tool-less nest conversion
- Up to 5 Units automated measure
- Fast and precision measurement with accuracy up to 0.01 mm (0.0004 in)
- Measure vast variety of leaded semiconductor packaging dimensions
- Complete features reporting generation and GR&R computation
- Tool-less Nest Conversion
- Low Pressure Sensor, Air Gun, UPS



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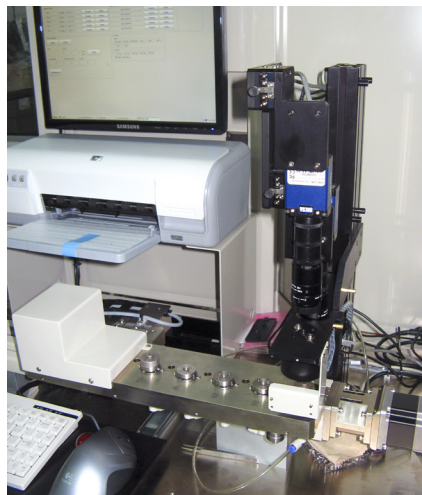
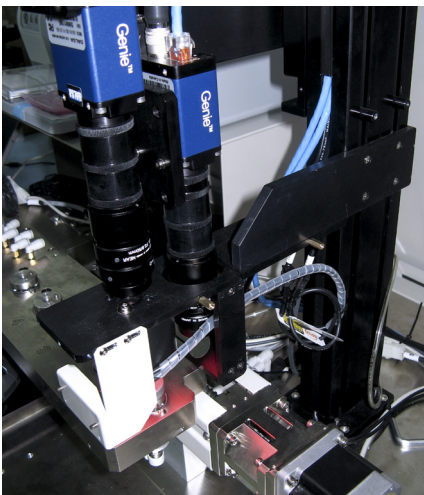
## Specifications

<b>Motion System</b>	X Type	Stepper motor, ball screw drive
	X Resolution	0.002 mm (0.00008 In.)
	X Accuracy	±0.05/L300 mm (+- 0.002/L12In.)
	X Repeatability	± 0.025 mm (0.001 In.)
	X Travel	450 mm (18 In.)
	Z Type	Stepper motor, ball screw drive
	Z Resolution	0.002 mm (0.00008In.)
	Z Travel	70 mm (2.8 In.)
	Theta Type	Stepper Motor, belt driven
	Theta Resolution	0.036°
	Theta Accuracy	±0.144°
Theta Repeatability	±0.072°	

<b>Measurement Stage</b>	5Pcs Vacuum Nest	
	Accuracy	See table
	Packages	See table
	Configuration	See table
	GR&R	< 10%
	Time	< 100 s per device (typical criteria)

## Applications

<b>Vision and Lightings</b>	Camera Resolution	Pattern recognition system aligns device under measurement to correct orientation.
	Field of View	See table
	Lightings	Dome, Low angle, side and back lighting; 255 level independent control for each channel
	Optic Configurations	Small; Standard; Large Package See table



# QC Measurement Handler - Application

## Package, Measurement Criteria & Accuracy

Criteria*	View	Small Package (2-5mm)			Standard Package (4-12mm)			Large Package (4-12mm)		
		Package (Pin)	Range (mm)	Accuracy (mm)	Package (Pin)	Range (mm)	Accuracy (mm)	Package (Pin)	Range (mm)	Accuracy (mm)
		FOV 5mm (0.127 In.)			FOV 12mm (0.305In.)			FOV 5mm (0.127 In.)		
Body Width	Top	SC-59 (3)	0.5 ~ 4.0	0.5 ~ 4.0	SOIC-N (14~16)	4.0 ~ 10.0	0.025	SC-72	4.0 ~ 30.0	0.050
Body Length	Top	SC-70 (3~6)	0.5 ~ 4.0	0.5 ~ 4.0	SOIC-W (16~28)	4.0 ~ 10.0	0.025	TO-126	4.0 ~ 30.0	0.050
Body Thickness	Top	SC-95 (3~6)	0.5 ~ 4.0	0.5 ~ 4.0	SSOP (16~28)	4.0 ~ 10.0	0.025	TO-202	4.0 ~ 30.0	0.050
Lead Length Lead	Top	SC-96 (3~7)	0.1 ~ 2.0	0.1 ~ 2.0	TSSOP (20~38)	0.1 ~ 6.0	0.025	TO-218	0.1 ~ 15.0	0.050
Width	Top	TSOP (6)	0.1 ~ 2.0	0.1 ~ 2.0	TQFP (48~80)	0.1 ~ 6.0	0.025	TO-220	0.1 ~ 15.0	0.050
Lead Pitch	Top	SOT-23 (2~8)	0.1 ~ 4.0	0.1 ~ 4.0	LQFP(48~80)	0.1 ~ 10.0	0.025	TO-247	0.1 ~ 10.0	0.050
Lead Tweeze	Top	SOT-89	0.1 ~ 1.0	0.1 ~ 1.0	MQFP	0.1 ~ 6.0	0.025	TO-252	0.1 ~ 15.0	0.050
Lead Slant	Top	SOIC (8)	0.1 ~ 1.0	0.1 ~ 1.0	TO-252	0.1 ~ 6.0	0.025	TO-263	0.1 ~ 15.0	0.050
Lead Spread	Top	MSOP (8~10)	2.0 ~ 4.0	2.0 ~ 4.0	TO-263	2.0 ~ 10.0	0.025	ITO-220	5.0 ~ 30.0	0.050
Lead Standoff	Top	TSSOP (8~16)	0 ~ 1.0	0 ~ 1.0	SC-72	0 ~ 2.0	0.025	SOT-32	0 ~ 2.0	0.050
Lead Co-plan	Top		0 ~ 1.0	0 ~ 1.0		0 ~ 2.0	0.025		0 ~ 2.0	0.050
Lead Flat Part	Top		0 ~ 2.0	0 ~ 2.0		0 ~ 4.0	0.025		0 ~ 4.0	0.050
Lead F Part Angle	Top		-8 ° ~ 8 °	-8 ° ~ 8 °		-8 ° ~ 8 °	2 °		-8 ° ~ 8 °	2 °
Odd Dimensions	Top		0.1 ~ 4.0	0.1 ~ 4.0		0.5 ~ 10.0	0.050		0.5 ~ 30.0	0.050

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