

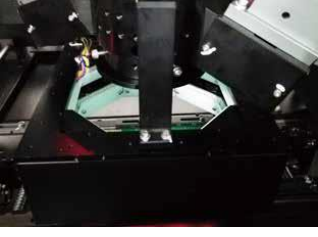


**SMT On-line 3D Solder Paste Inspection**



**Introduction:**

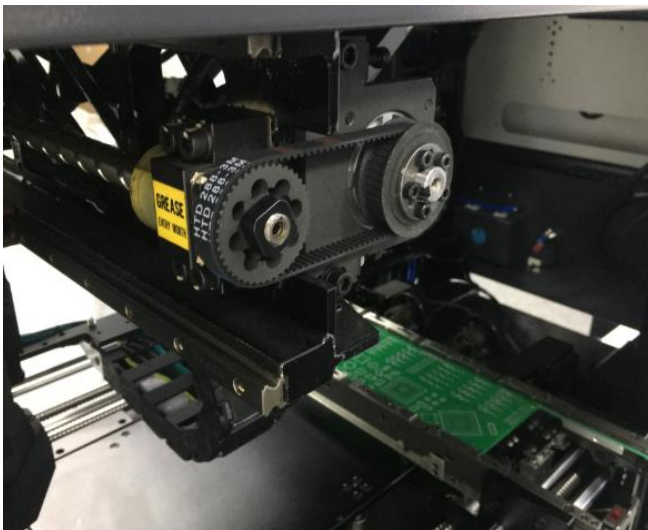
I.C.T 3D SPI can completely solve the problem of shadow and random reflection in the detection process, so that solder paste 3D detection accuracy is higher; equipped with a 5M pixel high-speed camera, detection speed is faster, the image is more delicate and rich; it is an ideal choice for high-speed and high-precision production lines.

	<p style="text-align: center;"><b>Multi-frequency PSLM</b></p> <p>The original PSLM technology emulates the cycle of the optical grating by using software. This greatly improves the accuracy and scope of application by abolishing the mechanical drive and transmission parts. (The detection height can reach to <math>\pm 1200\mu\text{m}</math>) and avoids mechanical wear and maintenance costs.</p>
	<p style="text-align: center;"><b>PHASE MODULATION PROFILERMETRY(PMP)</b></p> <p>Through the phase modulation of full light spectrum, provide a height resolution down to (<math>0.37\mu\text{m}</math>), the number of 4-8 times sampling ensure high.</p>
	<p style="text-align: center;"><b>HIGH RESOLUTION AND HIGH FRAME RATE IMAGE PROCESSING UNIT</b></p> <p>Megapixel industrial CCD camera of ultra-high frame rate ensure a steady and rapid detection of very small components and high-density mounting(008004).It provides a variety of detection accuracy of 5um,7um,8um,10um,12um,15um,18um,20um etc. It meets the customer's requirements for product diversity and detection speed.</p>
	<p style="text-align: center;"><b>Telecentric lens for static compensation</b></p> <p>I.C.T solves the problem of ordinary lens, squint and deformation by using high-cost telecentric lens and special software test algorithm, which greatly enhances the inspection accuracy and inspection ability.Achieves the industry's leading static compensation for FPC warping.</p>

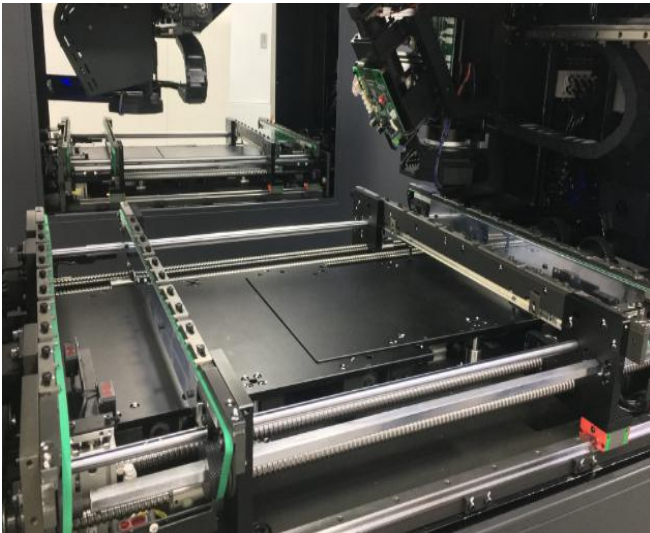
	<p style="text-align: center;"><b>2D lamp panel</b></p> <p>2D lamp panel avoids problems caused by the angle of the red RGB color distortion effect in solder; RGB tuning in Different PCB colors is more versatile ; Fulfill a variety of dispensing process testing ; greatly improve the equipment ( height ,volume , area ) repeatability accuracy.</p>
	<p style="text-align: center;"><b>ACTIVE RGB 2D LIGHT SOURCE</b></p> <p>Patented RGB Tune function takes Red, Green and Blue images and with unique filter algorithm, to solve solder bridge detection false alarm and relative zero surface uncertain issue. In the mean time, provide the 2D/3D measurements and image of printed solder paste.</p>
	<p style="text-align: center;"><b>HIGH ACCURATE HARDWARE PLATFORM</b></p> <p>High rigid grade steel frame combines with close loop servo control and high precision level ball screw makes high speed and steady positioning. Optional linear and high precision linear encode positioning system is capable measure 03015 device pad with ultra high resolution and high speed. The repeatable accuracy can down to 1um.</p>

**Features:**

1. The lens of professional lens design makes the image more uniform and delicate, and greatly improves the stability of detection.
2. It can be imported into Gerber file programming, or can be used to edit and debug money from image editing mode.
3. The multi direction 3D projection method can effectively solve the detection error caused by the shadow effect in the solder paste detection process.
4. The operation system improves the result recognition and processing function according to the user level interface structure.
5. High precision programmable black and white moire fringe, the highest measuring accuracy 0.67um.
6. Based on accurate 3 dimensional measurement data, operators can optimize the whole project in a short time.



The fringe rays are projected and collected, and multiple images are taken at one time for comprehensive calculation. Strobe, constant light, instant exposure, Multiple exposure, 10 channels High precision light source control.



Compact structure, minimum footprint, monorail dual rail  
PCB optional.



Integral casting structure, FPC compatible, PCB can be up to  
1200\*500mm.

**Specification:**

Model		I.C.T-S400	I.C.T-S400D	I.C.T-S1200
Photo				
PCB Direction	PCB Size	55*55 ~460*460mm (470*500 as option) (630*686 as option)	55*55 ~450*310mm Dual (470*310 Dual as option) (630*310 Dual as option)	55*55 ~ 1200*650mm
	Rail Fixed	front fixed (back fixed as option)	1 front fixed, 2'3'4 moved rail	front fixed (back fixed as option)
	PCB Thickness	0.5 ~ 7.0mm		
	PCB Weight	≤5.0kg		
	Conveyor Adjustment	Manual/Automatic		
	Conveyor Height	900±20mm		
	PCB Direction	Left ~ Right(Right ~ Left)		
Measurem ent System	Measure Type	Height,Area,Volume,Offset,Bridge,Shape(missing print,insufficient tin, excessive tin, bridging, offset, mal-shapes, surface contamination)		
	Paste Height	0 ~ 550um		
	Accuracy	XY (Resolution):10um		

	Repeatability Height	≤1um (4 Sigma), volume/acreage:<1%(4 Sigma)		
	Min Pad Pitch	≥100um		
	Measure Principle	3D white light PSLM PMP(Programmable Spatial Light Modulation, Phase Measurement Profilometry)		
	Inspection Head Quantity	1		
	Camera Pixel	5M, (10M/12M as option)		
	Optical Resolution	4.5um/5um/6um/8um/10um/12um/15um/16um/18um/20um		
	Minimum Chip	01005 (03015/008004 as option)	0201	
	Detection Speed	0.35 ~ 0.5s/FOV		
Software System	Language	English		
	Program Mode	Off line or on line		
	Program Time	5 ~ 10min		
	Data Type	Gerber Data 274D/274X, Scan PCB		
	SPC & Process Monitoring	Standard SPC		
	Drive Mode	Servo Drive		
Machine Direction	Power	AC220,50/60Hz,1KVA		
	Air Pressure	0.35 ~ 0.6Mpa		
	Machine Dimension	W1000*D1150*H1530mm	W1000*D1350*H1530mm	W1730*D1420*H1530mm
	Weight	965kg	1200kg	1600kg
Option	One person controls more machines,Network SPC(Software only), 1D / 2D Barcode scanner,out-line programming software, UPS continuous power supply.			

\* I.C.T keeps working on quality and performance,specifications and appearance may be updated without particular notice.

YouTube video link: [https://youtu.be/qBIPr\\_hpeo](https://youtu.be/qBIPr_hpeo)

**Thanks for choosing I.C.T.**  
**I.C.T looks forward to win-win cooperation.**  
**Thank you.**