

Automated
Optical
Inspection

3D SPI

Solder Paste Inspection

The Vi TECHNOLOGY® **3D SPI** applies the Moiré fringe theory to measure true 3D volumes of solder paste on PCB's during assembly. This is a complete solution with a unique 3D measurement method and Fast Absolute Height Profilometry system. It offers full PCB absolute warp measurement and absolute height measurement of solder paste, adhesive or any other deposits.



*The fastest 3D system
at zero shadow effect*

- ▶ On-the-fly 3D image acquisition
- ▶ 100% inspection: height, volume, shape, area, bridge, position
- ▶ Full warp measurement and compensation
- ▶ Real-time Statistical Process Control (SPC) capability
- ▶ Real time SPC for process monitoring

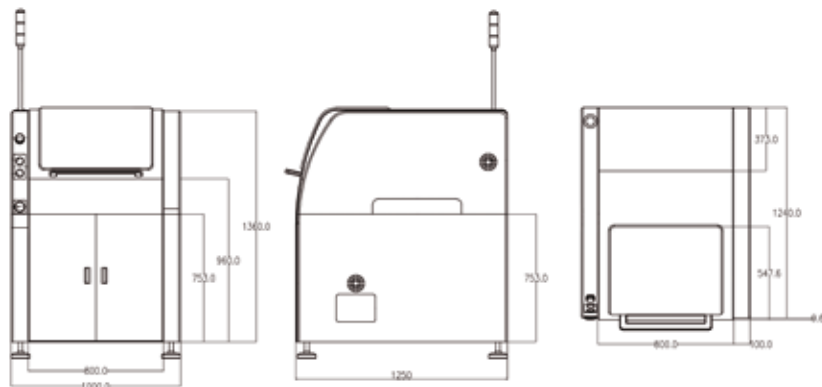
The Vi TECHNOLOGY® 3D-SPI solution for high-speed at the highest level. Powerful SPC tools, real-time feedback with flexible, immediate reports all with the easiest system available to use. Optimize your printing process and by default your production yield and quality; the built in unique measurement technology of this system is unsurpassed.

SPECIFICATIONS

TYPE

Mechanical system (dimensions in mm [inches])	
Maximum board dimensions	510 [20] x 460 [18]
Board thickness (minimum to maximum)	0.4 to 5 mm [0.01 to 0.19]
Clearance under camera	25 [0.98]
Clearance under board	25 [0.98]
Clamping system edge	3 [0.12]
PCB warpage	Maximum ± 3.5 [0.13]
System accuracy and repeatability (measurement at 21°C \pm - 1°C)	
Measurement repeatability (3 σ)	Height: < 1.5 μ m at standard certification target Volume: < 2 % at standard certification target
Measurement accuracy	Height: < 3 μ m at standard certification target
Measurement resolution	Height: 0.1 μ m Area: 20 μ m
% Gage R&R	< 10%
Average inspection speed	
Inspection speed	20 cm ² /sec (without shadow effect)
Inspection items	
Inspection items	Height, volume, shape, area, bridge, position
Measurable object size	Length: 160 ~ 30 000 μ m Height: 50 ~ 500 μ m
Software	
Operating system	WINDOWS XP Professional, screen 17" TFT LCD
Embedded SPC- software	Real-Time Lite version of integrated solution
Gerber programming	Offline Programming from Gerber & CAD data One seat included with first machine
Gerber programming – VI-3D-GPS	Additional offline Gerber seats as required
Offline full machine software – VI-3D-SPI-SFT	Offline machine software – requires scan files from a machine
Optional SPC software	
SPC Station – VI-3D-SPC (Pre-installed PC, ready to connect)	Fully featured integrated SPC solution
SPC Server – VI-3D-SPC-SVR (Software & primary license dongle)	Online machine database with real-time & extended SPC functions
SPC Client – VI-3D-SPC-CLT (Software & secondary remote license)	As station full real-time & extended functions – requires PC
SPC Client – VI-3D-SPC-CLT (Software & secondary remote license)	Full SPC software for remote working, extended functions – requires PC
Communication	
Upstream / downstream	SMEMA / JEDEC standard
Power supply	
Electrical supply	220 V, 50 / 60 Hz
Pneumatic supply	5 bar
Equipment dimensions in mm [inches]	
Machine dimensions W x D x H	1 000 [39.37] x 1 250 [49.21] x 1 490 [58.66]
Weight	1 080 kg
Transport height	950 \pm 50 [37.4 \pm 2] (option 850 \pm 50 [33.5 \pm 2])
Other	
Working temperature	5 - 30°C

DIMENSIONS



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