

### **Automated Optical Inspection for SPI & SMT Inspection**



#### MVP Versa, Versa Duo and Versa Pro

The Versa platforms combine 3D technologies and MVP's advanced optic systems to allow user to benefit from the superb detection of complex defects using MVPs proprietary, advanced algorithms. Configured with multiple 3D options and standard metrology capability the Versa series of solutions are ultimately flexible for SPI, Pre-Reflow, Post-Reflow or Post-Wave inspection.

## **Key Features**

- SPI and SMT Inspection
- Versa
  - High Resolution Optics
- Versa Duo
  - High Resolution Optics and Laser Profiler
- Versa Pro
  - Projector Based
- Fast Easy-To-Use
- Measurement Based AOI
- High Throughput with Proven Reliable Hardware
- 01005 Solder Joint Inspection







# **Versa Series**

#### **MVP** "AOI Elevated"

Model	Versa Series				
Version	Versa	Versa Duo			a Pro
Performance					
Inspection Capability	Paste, Pre-Reflow, Post-Reflow, Post-Wave,				
	Selective Solder, BGA, Metrology based measurement tools				
Programming Speed	Standard SPI and AOI programs are generated in 10-30 mins				
Motion System X and Y	Precision X/Y stage with 0.5 micron positional resolution				
Optical Resolution	Options <sup>2</sup> from 5-20um				
Optics					
Optics Camera	25mp or 12mp			9.5mp	
Optics Illumination	White or Quad Color Red, Blue, White				e, White
3D Measurement System					
3D Measuring Principle	3D Lighting	Laser Profiler		Quad Moiré	
3D Speed <sup>1</sup> (CM <sup>2</sup> /s)		16	2.6	13.2	2
3D Sensor X-Y Resolution (um)		12.5	5	19.6	7.8
3D Sensor Z Repeatability (um) <sup>5</sup>		0.5	0.4	1	1
Max Component Clearance (mm)	35				
Software					
Offline Program Generation	ePro				
Program Debug Environment	iPro and Validate				
SPC and Reporting	AutoData DPC - Sql based data reporting ELSR - End Lot Summary Reporting				
	Optional: AutoData, line integration to paste systems				
CAD and Gerber Inputs	Standard, Placement, Gerber and ODB++ data import				
Defect Review Multi-Pass	In-Line or Off-Line defect review using iRepair				
	Programmable heights and lighting per pass				
Validate <sup>7</sup>	Automated Program Validation				
System	Voor Processor Multi Threading				
Computer	Xeon Processor - Multi-Threading				
Operating System	1TB SSD Hard Drive - 32GB Memory Linux based Multi-Threading CentOS Operating System				
Networking	Full network integration (TCP/IP, NFS Protocol)				
Physical	i dil fie	LVV OIR IIILEGI	ation (TCF/IF	, 141 3 110101	
Inspection Envelope <sup>3</sup>	508mm (20") x 457mm (18") <sup>3</sup>				
Board Thickness <sup>4</sup>	0.254 - 12.5mm (0.015")				
Clearance	50.8mm (2")				
Conveyor Height	SMEMA				
Footprint	990mm (39") W x 1100mm (43") D x 1580mm (62") H				
Conveyor Length	996mm (39")				
Power	208-240VAC 50/60Hz, 10A (Optional 110V)				
Air	60 PSI, 1CFM				
Weight <sup>6</sup>	500 kgs (1100 lbs.)				
Compliance	CE - (UL Optional)				
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MVP Versa, Versa Duo and Versa Pro - SPI and SMT inspection.

The Versa systems deploy the highest speed interfaces, computers, optics and 3D technologies to provide the fastest inspection times without compromising defect detection.

MVP's Flying Stage combined with Quad-Color and 3D technology and allows faster inspection cycle times while increasing inspection capabilities. Additionally, with enhanced defect coverage, false rejects are minimized.

The Versa series of AOI solutions complements MVP's wide range of award winning AOI products and allow for the introduction of versatile and flexible solutions with the capability to increase performance and speed metrics at the same time.

- MVP's Fastest AOI Platform
- Flexible, Reliable and Robust Hardware
- 3D Profilers and Projectors
- Combined 2D & 3D optics packages
- SPI, SMT & Hybrid Inspection
- Easy-To-Use Performance Based Programming
- 01005 Solder Joint Inspection

<sup>1</sup> Using standard resolution, quarter range. Scan speed can be increased using larger profile steps.

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Worldwide Headquarters Vista, California, USA. +1 (760) 438-1138 sales@visionpro.com European Headquarters Fife, Scotland, UK. +44 (0) 1383 629960 saleseurope@visionpro.com Asia-Pacific Headquarters, Shanghai, P.R.C. +86.21.6115.2060 salesasia@visionpro.com

<sup>&</sup>lt;sup>2</sup> Dependent on camera and lens configurations.

 $<sup>^{\</sup>rm 3}$  Please check final chosen configuration, some options can reduce board size.

 $<sup>^4</sup>$  Flex Circuits, Non-Rigid boards will require fixturing. 12.5mm is an advisory for board thickness.

<sup>&</sup>lt;sup>5</sup> Static repeatability using MVP calibration target.

<sup>&</sup>lt;sup>6</sup> Base Versa System

<sup>7</sup> Program Dependant