

System		V810i S2 Series		
System controller	Integrated controller with 8 Core Intel Xeon processors			
Operating system	Available in Windows 8 (64 bits)/Windows 10 (64 bits)			
Test Development Environment				
User interface	Microsoft Windows based software solution with easy-to-use GUI and password-protected user levels			
Off-line test development software	Optional for off-line PC			
CAD conversion tool	Optional software available to translate CAD data to ViTrox's format			
Typical test development time	4 hours to 1.5 days to convert raw CAD file and develop application			
Line Integration				
Transport heights	865 mm - 1025 mm			
Line communication standard	SMEMA, HERMES			
Barcode readers	Compatible with most industry standard barcode readers			
Performance Parameters *				
Typical image acquisition rate	51.68 cm ² /sec (8 in ² /sec) at 19µm			
False Call rate	500 - 1000 ppm			
Minimum features detection capability				
Joint pitch ¹	0.3 mm and above			
Short width ²	0.045 mm			
Solder thickness	0.0127 mm			
Allowable Panel Characteristics **				
	V810i S2 XXL	V810i S2EX	V810i S2 XLT	
Maximum panel size	660 mm x 965 mm (26"x38")	482 mm x 610 mm (19"x24")	660 mm x 965 mm (26"x38")	
Minimum panel size	76 mm x 76 mm (3" x 3")	76 mm x 76 mm (3" x 3")	76 mm x 76 mm (3" x 3")	
Maximum panel inspectable area	654 mm x 965 mm (25.75"x38")	474 mm x 610 mm (18.7"x24")	654 mm x 965 mm (25.75"x38")	
Maximum panel thickness	12.7 mm (500 mils)	7 mm (276 mils)	12.7 mm (500 mils)	
Minimum panel thickness	0.5 mm (20 mils)	0.5 mm (20 mils)	0.5 mm (20 mils)	
Panel warp	Downside < 3.3 mm; Upside < 3.3 mm	Downside < 3.3 mm; Upside < 1.5 mm	Downside < 3.3 mm; Upside < 3.3 mm	
Maximum panel weight	15kg	4.5kg	15kg	
Board top clearance	25 mm @ 19 µm resolution	50 mm @ 23 µm resolution	50 mm @ 19 µm resolution	
	15 mm @ 13 µm resolution	38 mm @ 19 µm resolution	31 mm @ 15 µm resolution	
		38 mm @ 10.5 µm# resolution	13 mm @ 11 µm resolution	
		11 mm @ 11 µm resolution	31 mm @ 10 µm# resolution	
		11 mm @ 6 µm# resolution	13 mm @ 7.5 µm# resolution	
		* Calculated from Board Top surface	* Calculated from Board Top surface	
Board bottom clearance	80 mm	70 mm	80 mm	
Panel edge clearance	3 mm	3 mm	3 mm	
System resolution	19 µm/13 µm	23µm, 19µm, 11µm, 10.5 µm#, 6µm#	19 µm/15 µm /11 µm/10µm#/7.5 µm#	
100% Press-fit testability	Yes (With PSP2 feature)	Yes (With PSP2 feature)	Yes (With PSP2 feature)	
Maximum acceptable panel temperatures	40 Deg C	40 Deg C	40 Deg C	
Power and Environmental				
Voltage requirement	200 – 240 VAC three phase; 380 – 415 VAC three phase wye (± 5) (50Hz or 60Hz)			
Air requirement	552kPA (80 - 85 psi) compressed air			
System footprint (Width X Depth X Height)	2240 mm x 2460 mm x 1980 mm	1566 mm x 2145 mm x 1972 mm	2240 mm x 2460 mm x 1980 mm	
Total system weight	~5500 kg	~3500 kg	~6000 kg	
Tube Power	130KV and 250 uAmps			

Specifications are subject to change.

*Note:

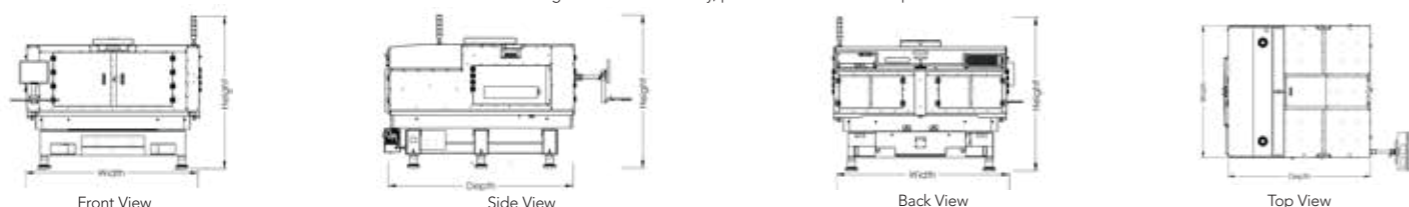
1. Assuming pad width is 50% of pitch.
2. The reported values for minimum feature detection assume that the feature is in a single plane of focus and that there are no X-ray absorbers in the X-ray path or in the immediate area of the feature other than those found in a typical multi-layer printed circuit board.

#2x2 binning camera configuration. Hardware upgrade is required on old system.

**Note:

1. Panels are handled on width edges. Panels with edge cut outs may require the use of a carrier.
2. Maximum panel size dimensions and weight must include carrier if applicable.
3. Smaller panels are possible with the use of panel carriers.
4. With panels of this thickness, imaging results can be affected by PCBA layout.
5. Measured from the bottom of the panel including a maximum warp.

This V810i S2 series image is for reference only, please refer to the actual product.



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V810i S2 Series
Advanced 3D X-Ray Inspection (AXI)





WHAT IS V810i S2 Series?

The smart V810i system that provides the best in class top board clearance and industry 4.0 equipped features for quality-assured inspection results.

BENEFITS

- A complete solution for large form factor board.
- Rapid programming to support low mix high volume and high mix low volume inspections.
- Advanced defect verification offers quality inspection result.
- Smart Factory M2M communication through V-ONE.
- Expanded global sales and support coverage.
- Recommended by renowned Tier 1 CM and OEM.

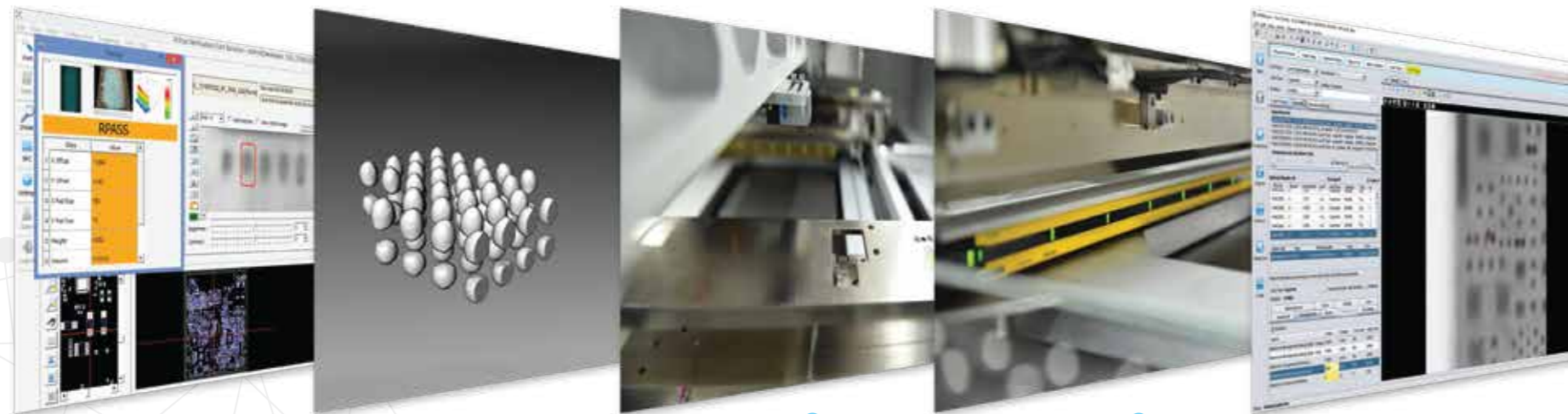
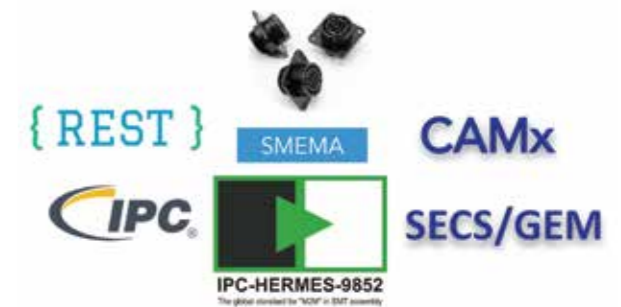
V810i S2 Series WITH V-ONE



V-ONE enabled customizable data analytics feature to help users monitoring process performance and improving production quality.

COVERAGE

Eligible to various M2M connectivity initiatives such as IPC-CFX, IPC-HERMES-9852, SECS/GEM, CAMX, REST and SMEMA.



API-AXI Linkage Image

Algebraic Reconstruction Technique (ART)

Panel In Place (PIP)

Curtain Sensor

SOFTWARE FEATURES

- Lightning Programming with new interface design.
- X-ray Radiation Monitoring and System Alert to avoid overexposure of sensitive components.
- Algebraic Reconstruction Technique (ART) for better image quality.
- Process & inspection feedback between ViTrox machine to maximize buyoff effectiveness.

HARDWARE FEATURES

- Advanced curtain sensor and outer barrier sensor for better board detection and protection.
[Only applicable to S2 XLT]
- Latest Hybrid Panel in Place (PIP) mechanism for board edge protection.
[Only applicable to S2 XLT & S2EX]
- Multiple Resolution and motorized X-ray tube for optimum cycle time.
[Only applicable to S2 XLT & S2EX]

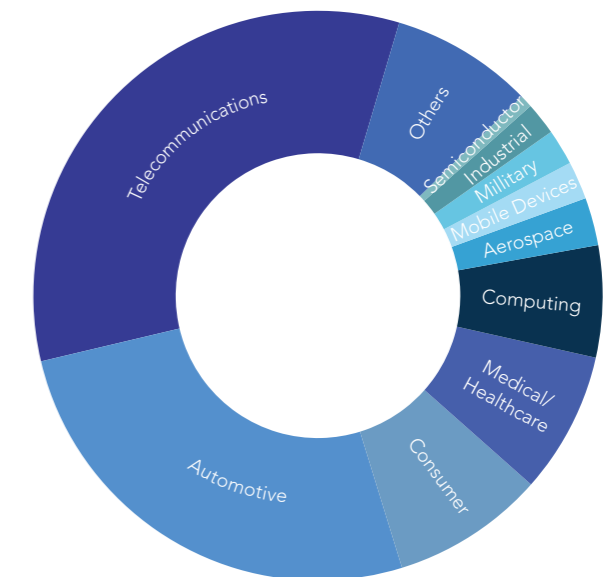
PROGRAMMING FEATURES

- Support up to 26 types of extensive industry CAD format.
- 8 Steps Easy Programming from Scratch to Perfect.
- Over 100 robust algorithms threshold and 22 preset joint types for different production environments.
- High Compatibility of Recipe Conversion with minimum effort.
- Constant algorithms improvement for Head in Pillow detection.

Easy Programming

INDUSTRIES

Certified with ISO 9001: 2015, CE, and TUV, ViTrox's products are well designed and manufactured to deliver reliable and high-quality performance to fulfill the stringent requirements in various industries such as Telecommunications, Semiconductor, Automotive, Medical/ Healthcare, and more.



System		V810i S2 XLW
System controller	Integrated controller with 8 Core Intel Xeon processors	
Operating system	Available in Windows 8 (64 bits)/Windows 10 (64 bits)	
Test Development Environment		
User interface	Microsoft Windows based software solution with easy-to-use GUI and password-protected user levels	
Off-line test development software	Optional for off-line PC	
CAD conversion tool	Optional software available to translate CAD data to ViTrox's format	
Typical test development time	4 hours to 1.5 days to convert raw CAD file and develop application	
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False Call rate	500 - 1000 ppm	
Minimum features detection capability		
Joint pitch ¹	0.3 mm and above	
Short width ²	0.045 mm	
Solder thickness	0.0127 mm	
Allowable Panel Characteristics **		
Maximum panel size	1321mm x 1321mm (52" x 52")	
Minimum panel size	127mm x 127mm (5" x 5")	
Maximum panel inspectable area	1321mm x 1301mm (52" x 51.2") *Dual Stage Inspection with External Rotator	
Maximum panel thickness	10mm (394 mils)	
Minimum panel thickness	1.5mm (59 mils)	
Panel warp	<2mm downward, 1mm upwards (without PSP), <3mm downward, <1.5mm upwards (with PSP)	
Maximum panel weight	25kg	
Board top clearance	50mm @ 19um 31mm @ 15um 14mm @ 11um <i>* Calculated from Board Top surface</i>	
Board bottom clearance	80 mm	
Panel edge clearance	10 mm	
System resolution	19um/15um/11um	
100% Press-fit testability	Yes (With PSP2 feature)	
Maximum acceptable panel temperatures	40 Deg C	
Power and Environmental		
Voltage requirement	200 – 240 VAC three phase; 380 – 415 VAC three phase wye (± 5) (50Hz or 60Hz)	
Air requirement	828kPA (120psi) compressed air	
System footprint (Width X Depth X Height)	3300mm x 3300mm x1990mm	
Total system weight	~11000 kg	
Tube Power	130KV and 250 uAmps	

*Note:

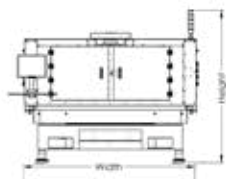
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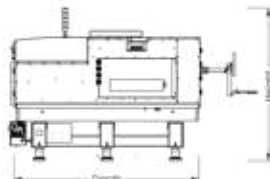
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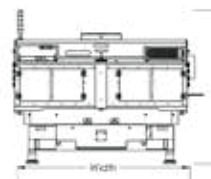
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Front View



Side View



Back View



Top View

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