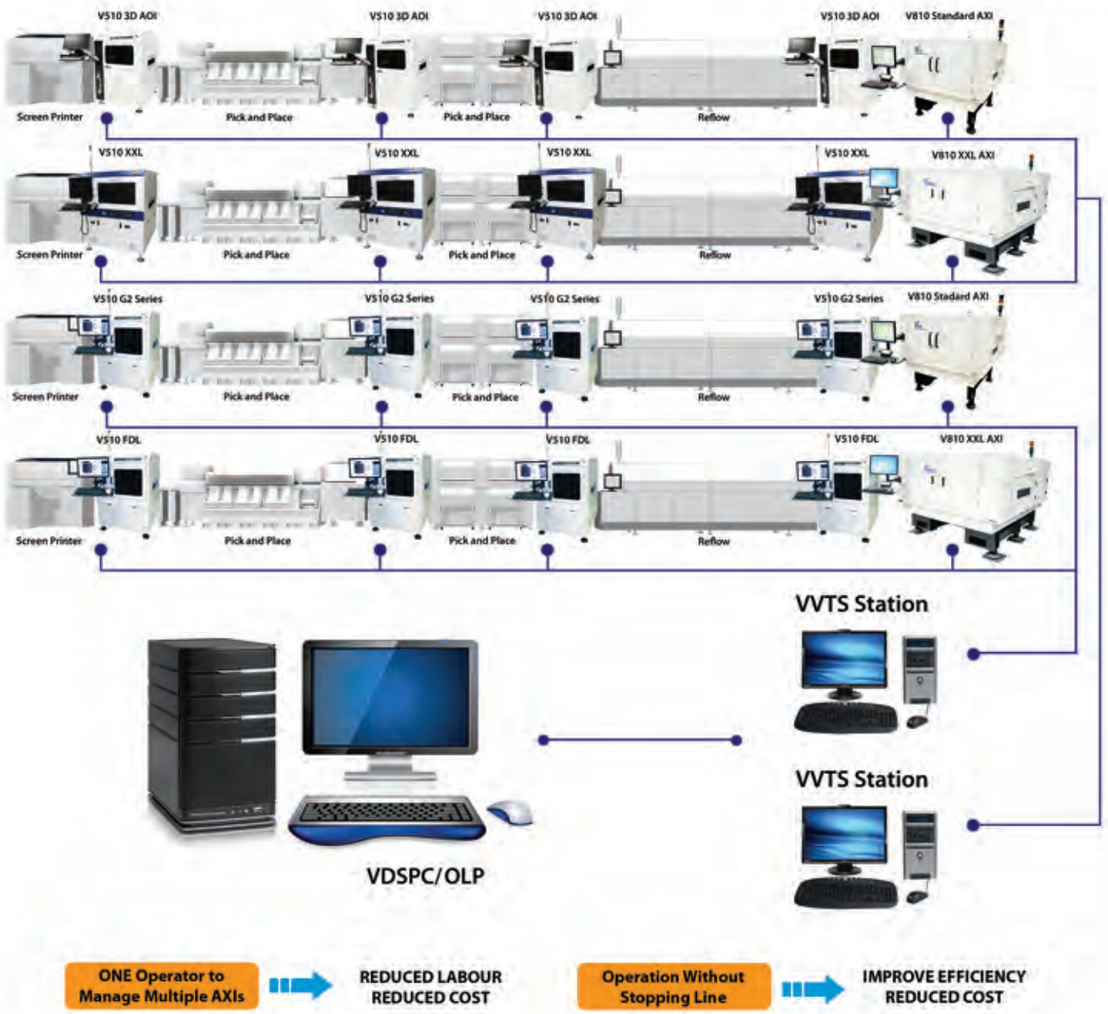
Why ViTrox's AXI?

- World Fastest AXI System for All Kinds of PCBA
- 6 Award Winnings in 4 Years
- Widest Test Coverage with New Package Type Inspection
- User Friendly Programming Environment with Package Library and Database
- Low False Calls with Ease of Maintenance
- Highly Compatible with X6000 & 5DX

Closed Loop Feedback & Monitoring

The illustrated centralized management method allows more effective defect images collections, centralized programming, as well as fine-tuning. Moreover, one operator is now possible to manage multiple production lines, and in return brings great cost-saving for the company.



ONE Operator to Manage Multiple AXIs → **REDUCED LABOUR REDUCED COST**

Operation Without Stopping Line → **IMPROVE EFFICIENCY REDUCED COST**

V810 Series

Advanced 3D X-ray Inspection (AXI)

Superior AXI Solution for SMT Line.

2012/2014 /2015

2014 WINNER

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ViTrox ...innovating vision

www.vitrox.com

Ease of Programming

Virtual Live Images

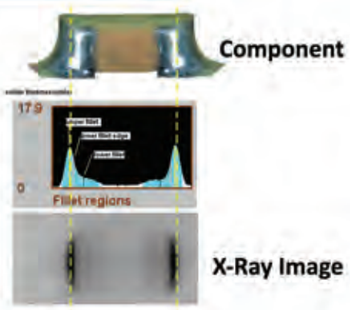
- **Custom focus region for POP**
  Reduce the setup of POP slice height and improve focus accuracy on POP.
- **Intelligent Initial Learning**
  Auto learning feature that reduces program setup time.
- **Package Library**
  Intelligently populate package information across production board.
- **Virtual Live 2**
  Failure analysis tools to view multiple slice image instantly.
- **Interactive and straight forward GUI**
  Easy programming environment for all types of users.
- **Highly compatible with 5DX and X6000**
  Recipe portability feature that greatly reduce programming effort.

Speed Improvement

5 in 1 Super Server

- **Real time PSH**
  Reduce inspection time when using PSH.
- **SUMO**
  Improve hardware utilization, improved and optimized multicore processing.
- **SPAM**
  Reduce hardware scanning path and inspection time.
- **Variable Scan Path**
  Optimize scan path to reduce cycle time, inteligently avoid the area without inspecting component.
- **64 bits IRP**
  Larger memory access helps to reduce inspection time.

Advanced Technologies

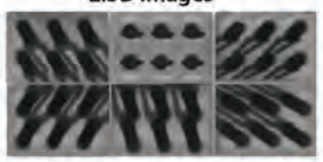


- Auto focus technology
- Intelligent artifact removal that provides excellent image on shading component.
- Ease of service and maintenance
- Fully automated diagnostic tools that provide thorough system information for troubleshooting.

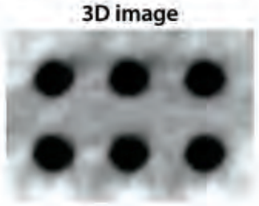
Ease of buy off

- **Point Spread Function (PSF)**
  Improve image clarity on 2.5D and help operator to make better judgement.
- **Image Enhancement**
  Improve image clarity on 2.5D inspection.
- **2.5D buy off feature (Angle view)**
  Provide most angle view images in market.
- **Auto Reject**
  Automatically reject defective joint without operator buyoff.
- **Good Image comparison**
  Effectively improve operator disposition experience.
- **Real time SPC Chart**
  Instant process feedback to production.

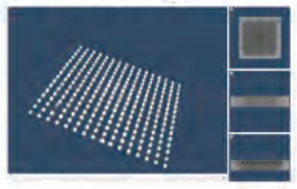
2.5D images



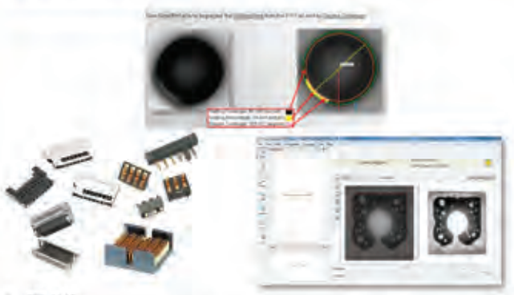
3D image



CT image



Improve Test Coverage



- **PSP 2**
  Improve accuracy and test coverage on 100% pressfit and PTH board
- **XXL Inspection board size**
  Increase inspectable size to 38"x 26"
- **New Voiding Algorithm**
  Improve the accuracy and various detection type for voiding
- **PTH Wetting**
  Fully compliance with IPC wetting standard.
- Advanced algorithm with more than 20 joint types selection.
- 10 slices for through hole component
- Additional 3 slices for BGA

Specifications

System	V810 S2	V810 S2 XXL
System controller	Integrated controller with Dual 8 Core Intel Xeon processors	Integrated controller with Dual 8 Core Intel Xeon processors
Operating system	Window 8 (64 bits)	Window 8 (64 bits)

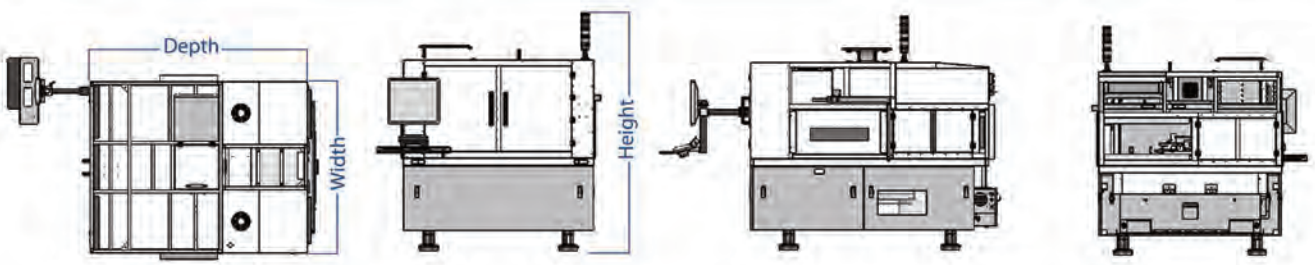
Test Development Environment	
User interface	Microsoft Windows based software solution with easy-to-use GUI and password-protected user levels
Off-line test development software	Optional for off-line PC
Test sight developer	Optional software available to translate CAD data to ViTrox's format
Typical test development time	4 hours to 1.5 days to convert raw CAD file and develop application

Line Integration	V810 S2	V810 S2 XXL
Transport heights	823 mm - 980 mm	934 mm - 998 mm
Line communication standard	SMEMA	
Barcode readers	Compatible with most industry standard bar code readers	

Performance Parameters *	
Total panel test cycle time Typical Image Acquisition Rate	51.68 cm^2/sec (8 in^2/sec) at 19um
False call rates	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 **	V810 S2	V810 S2 XXL
Maximum Panel size	457mm X 609mm (18"x24")	660mm X 965mm (26"x38")
Minimum Panel size	76mm X 76mm (3" x 3")	76mm X 76mm (3" x 3")
Maximum Panel inspectable area	434mm X 610mm (17.1"x24")	654mm X 965mm (25.75"x38")
Maximum Panel thickness	4mm (160mils), 7mm (280mils) with carrier 3.5mm (140mils)for Dual magnification system	12.7mm (500mils)
Minimum Panel thickness	0.5mm (20mils)	0.5mm (20mils)
Panel warp	Downside < 2.0mm; Upside < 1.0mm	Downside < 3.3mm; Upside < 3.3mm
Maximum Panel weight	4.5kg	15kg
Minimum Panel weight	0.03kg	0.03kg
Board top clearance	25mm @ 19um resolution, 15mm @ 13um resolution, 10mm @ 11um resolution ** Calculated from **belt** surface*	25mm @ 19um resolution, 15mm @ 13um resolution ** Calculated from **board** Top surface*
Board bottom clearance	50mm	80mm
Panel edge clearance	3.0mm	3.0mm
Panel width tolerance	+/-0.7mm	+/-0.7mm
System resolution	19um/11um	19um/13um
100% Press-fit testability	Yes (With PSP2 feature)	Yes (With PSP2 feature)
Maximum acceptable panel temperatures	40 Deg C	40 Deg C

Power and environmental	V810 S2	V810 S2 XXL
Voltage requirement	200 - 240 VAC three phase; 380 - 415 VAC three phase wye (±5) (50Hz or 60 Hz)	
Air requirement	552 kPA (80 psi) compressed air	
System footprint (Width X Depth X Height)	1520mm X 1940mm X 1890mm	2240mm X 2460mm X 1980mm
Total system weight	~3300kg	~5500kg



* 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.

** 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.