

VIEWZOOM

AOI

AUTOMATED OPTICAL INSPECTION



Solucinde

VIEWZOOM

2D Automated Optical Inspection

Isee Series Inline 2D AOI



AI-powered one-click programming



Combine traditional algorithms with AI technology to minimize false detection



Advanced calibration system for reliable and consistent inspection



Proprietary multi-angle light source for complex PCB and component inspection



Flexible three stage inspecting process for enhanced efficiency



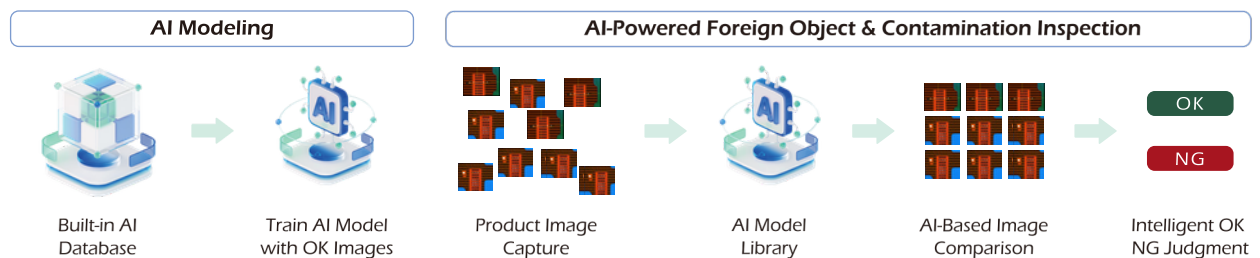
MES integration enables complete SPC data reporting

AI Innovation

AI-Driven Inspection for Zero-Defect Manufacturing

Proprietary AI Model for Comprehensive Inspection Performance

Viewzoom's AI research team specializes in developing high-performance AI models for automated visual inspection. Leveraging extensive experience in machine vision and SMT manufacturing, our proprietary AI technology is trained on large-scale inspection data collected across hundreds of manufacturing environments. The AI model continuously learns and identifies a wide range of SMT defects, from subtle anomalies to critical defects, delivering fast, accurate, and consistent inspection results while minimizing missed defects.

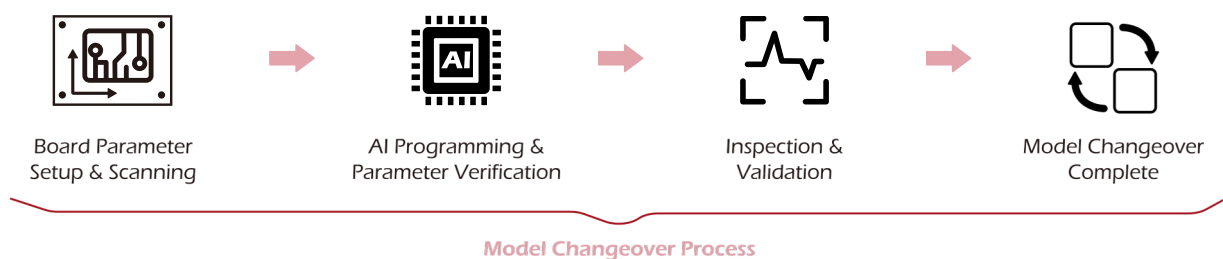


Faster Inspection. Smarter Detection. Higher Quality.

Unlike traditional 2D AOI that processes images primarily on an image-by-image basis, Viewzoom's independent AI model efficiently analyzes large volumes of inspection data in parallel, significantly reducing inspection time. Trained on extensive real-world inspection data, the AI model delivers fast, accurate, and consistent defect detection, helping manufacturers improve quality control, minimize defect escapes, and advance toward zero-defect manufacturing.

1-Minute Model Changeover for Maximum Production Efficiency

Powered by an AI-driven intelligent programming system, the Isee series supports multiple coordinate file formats and simplifies program creation for operators with minimal programming experience. With streamlined programming and parameter adjustment, model changeover can be completed in as little as 1 minute, significantly reducing setup time and keeping production lines running efficiently.



Excellent Machine Consistency Ensures Reliable Inspection

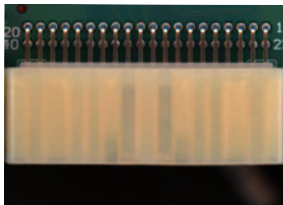
Built with advanced assembly technology and stringent manufacturing standards, the Isee series is designed to minimize machine-to-machine variation. Its standardized algorithms and inspection functions enable the same inspection program to be deployed across multiple machines, ensuring consistent inspection performance and improving program reliability and scalability. With Viewzoom's proprietary calibration system, machines can maintain a high degree of operational consistency from installation onward, ensuring uniform inspection standards and results across the production line.

Optical and Mechanical Integration

Efficient and Outstanding Inspection Performance

High-Performance Inspection for Diverse Components

The Isee 2D AOI system is capable of inspecting components from 0201 (7 μ m) to Metric 0603 (12/15 μ m). Its proprietary 2D imaging technology, combined with mature inspection algorithms and AI-based analysis, enables comprehensive and reliable inspection of diverse component packages and sizes.



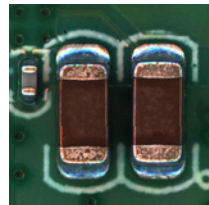
Connector



QFN



QFP



Capacitor

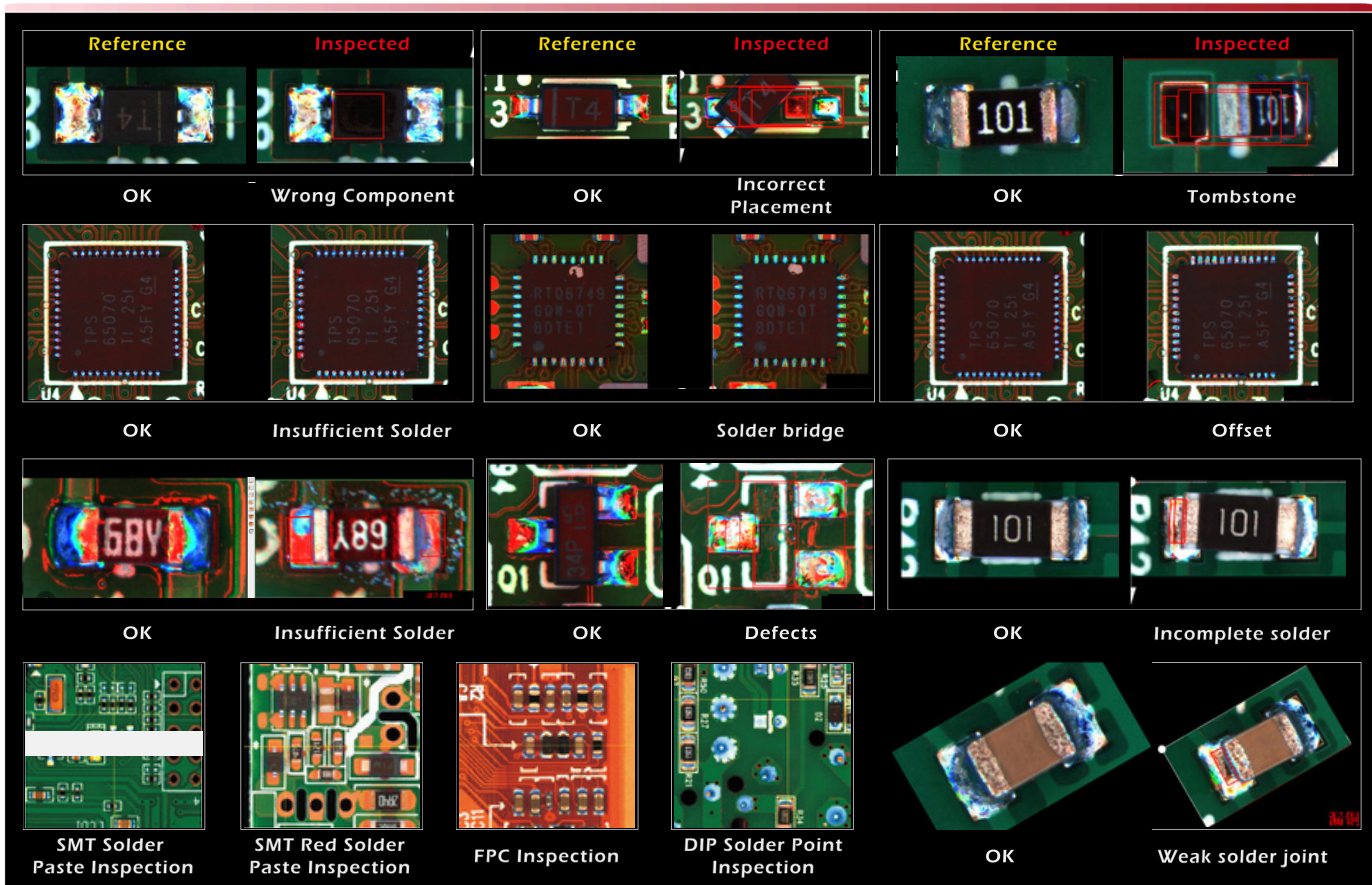


Resistor

Integrated Software and Hardware Solutions for Board Warpage

After reflow soldering, PCB warpage can affect inspection stability and measurement accuracy in 2D AOI systems. The Isee series combines optimized software algorithms with dedicated hardware design to compensate for board deformation, maintaining consistent inspection performance even under varying warpage conditions.

■ Isee Inspection Result Examples

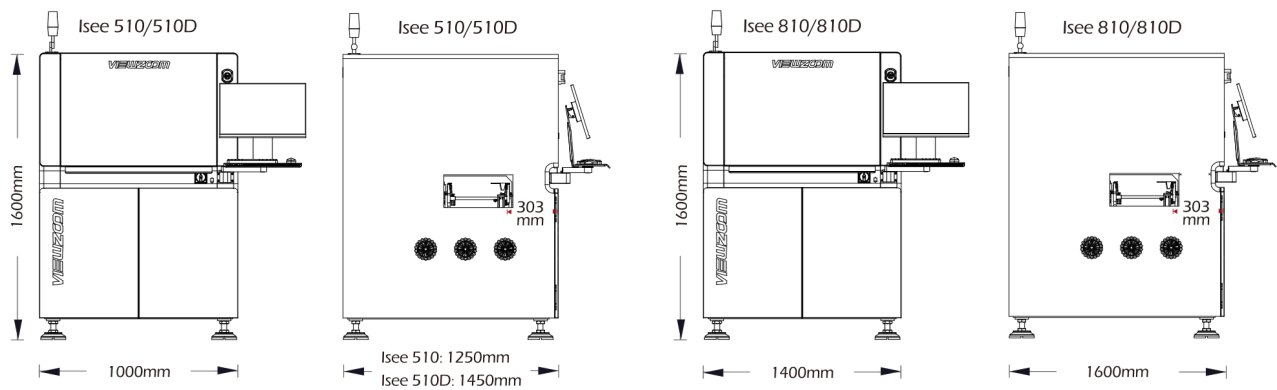


Machine Specifications

Category	Item	Isee 510	Isee 510D	Isee 810	Isee 810D
Appearance & Power	Dimension L*W*H (mm)	1000 * 1250 * 1600	1000 * 1450 * 1600	1400 * 1600 * 1600	1400 * 1600 * 1600
	Weight	1000kg	1150kg	1400kg	1450kg
	Power Requirement	200-240V AC 50/60Hz			
	Power Consumption	Standard 600W, Max. 800W			
	Air Pressure	0.5MPa 5 L/min			
Machinery & System	Transport Concept	Single lane conveyor L1 is fixed, L2 adjustable	Dual lane conveyor L1 fixed, L2, L3, L4 adjustable	Single lane conveyor L1 is fixed, L2 adjustable	Dual lane conveyor L1 fixed, L2, L3, L4 adjustable
		Three stage conveyor will automatically adjust to single stage if PCB length >180mm		Three stage conveyor will automatically adjust to single stage if PCB length > 230mm	
	Operating System	Windows 11			
PCBA	PCB Size	50 * 50 ~ 510 * 510 Max. Thickness 6mm	Same PCB 50 * 50 ~ 510 * 320 Different PCB 50 * 50 ~ 510 * 590 Max. Thickness 6mm	50 * 50 ~ 810 * 690 Max. Thickness 6mm	Same PCB 50 * 50 ~ 810 * 320 Different PCB 50 * 50 ~ 810 * 590 Max. Thickness 6mm
	PCB Flow	Left to Right, Right to Left, Left to Left, Right to Right (Adjust in Programming)			
	Max. Transport Clearance	Top 50mm, Bottom 50mm			
	Max. PCB Bending Adjustment	±4mm			
Visual Configuration	Camera Performance	Standard: 12MP 15μm Option: 12MP 12μm Option: 12MP 10μm Option: 12MP 7μm Option: 25MP 7μm		FOV: 61.4*46.0mm FOV: 49.2*36.0mm FOV: 40.9*30.7mm FOV: 28.2*20.7mm FOV: 40.0*40.0mm	Speed: 200ms/FOV Speed: 200ms/FOV Speed: 200ms/FOV Speed: 200ms/FOV Speed: 200ms/FOV
	Main Camera's Resolution	7μm、10μm、12μm、15μm (Configure according to requirements)			
	Light Source	RGB Surrounding Light + Coaxial Light + White Light			
	Min. Component Size	Metric 0201 (7μm) / Metric 0402 (10μm) / Metric 0603 (12μm / 15μm)			
	Max. Component Height	Standard: up to 20mm Option: with Z-Axis can inspect up to 35mm			
Options	Repair Working Station, MES Connection, Offline Programming, Centralized Rejudgment System, SPC Analysis, Z-Axis Movement.				

Machine Dimensions

Unit:mm



VIEWZOOM

3D Automated Optical Inspection

Venus Series Inline 3D AOI



Venus 510 \ 810 \ 510D \ 810D Front View



Side View

■ Venus 2000



Venus 2000 Front View



Side View

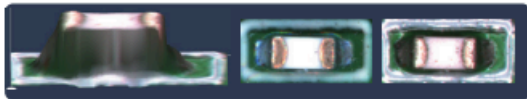
2D+3D

Advanced Inspection Performance



Comprehensive Inspection for Diverse Components

The Venus 3D AOI combines 7 μm and 12 μm imaging resolution with advanced 3D imaging, conventional algorithms, and AI technology to accurately detect a wide range of component defects. It delivers enhanced detection capability and reliable inspection results.

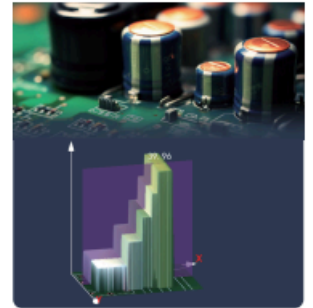


Comparative 2D/3D Imaging of Subtle Defects



Extended Inspection Range for Component up to 35mm

Advanced optical and 2D/3D inspection technologies overcome conventional detection range limitations, enabling reliable inspection of components up to 35mm in height.



High-Resolution Component Imaging Analysis Diagram



Integrated Hardware & Software for PCB Warpage Compensation

PCB warpage after reflow can affect 3D AOI inspection stability. Optimized hardware and software solutions compensate for board deformation, ensuring consistent inspection accuracy and repeatable results.

AI Innovation

Intelligent Programming & Flexible Inspection



AI-Powered Programming in Just 5 minutes

The Venus series features a built-in AI programming system that enables operators to quickly create inspection programs with minimal programming experience. Through PCB scanning and automatic parameter verification, model changeovers can be completed in as little as 5 minutes.



Board Parameter Setup & Scanning

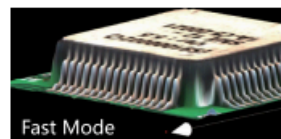


AI-Powered Programming & Parameter Verification

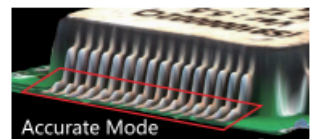


Inspection

Model Change Process



Fast Mode



Accurate Mode

Fast Mode: Higher Speed
Accurate Mode: Optimized for detail



Precision Mode Switching for Diverse Inspection Requirements

Venus supports multiple inspection modes, enabling users to optimize inspection speed and accuracy according to different production requirements.



Exceptional Equipment Consistency for Reliable Inspection

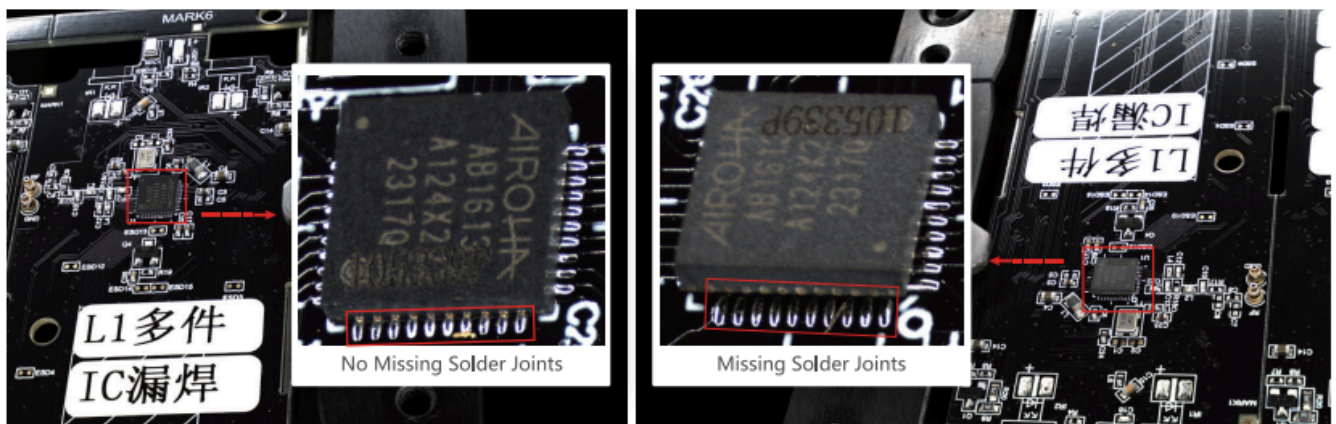
Built with precision assembly, stringent manufacturing standards, proprietary algorithms, and a self-developed calibration system, the Venus series minimizes machine-to-machine variation. This enables consistent program execution and inspection standards across multiple machines, ensuring high repeatability, reliable results, and scalable production performance.

4D (Option)

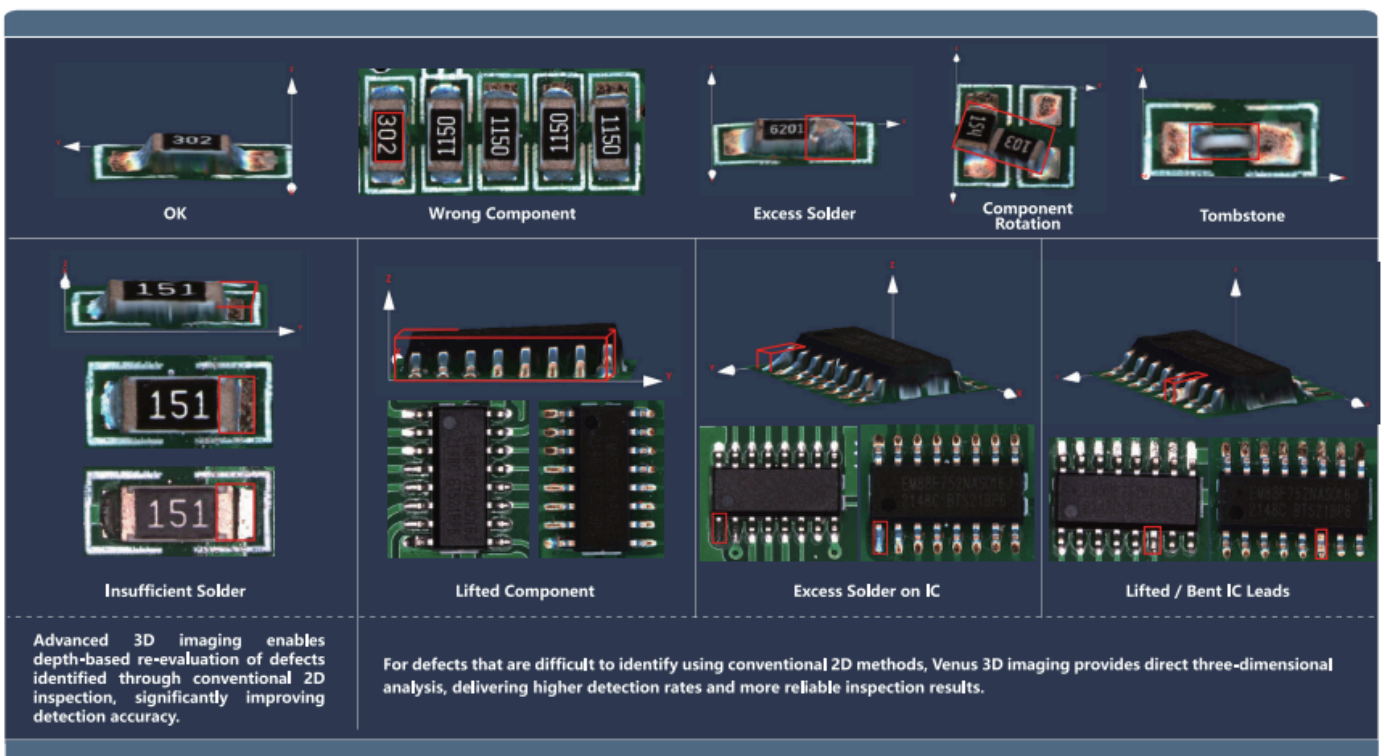
2D+3D Imaging with 4 Side View Cameras

In addition to the standard 2D + 3D imaging system, the optional 4D (4-Direction) imaging solution adds four side-view cameras to capture components from four directions. Combined with the 3D projection system, this multi-angle imaging architecture significantly reduces blind spots and enables more comprehensive inspection of component sidewalls, QFN solder joints, exposed copper, and other difficult-to-detect defects. The 4-direction side-view imaging provides enhanced inspection coverage and more complete component analysis, making it ideal for complex components and applications requiring detailed inspection from multiple viewing angles.

■ 4-Direction Imaging Defect Analysis Examples



■ Venus Inspection Result Examples



Machine Specification

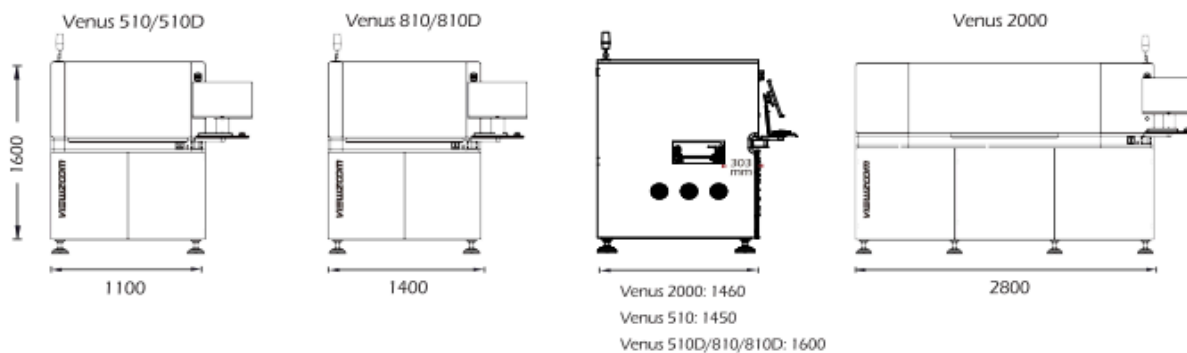
Model Name	Venus 510	Venus 810	Venus 510D	Venus 810D	Venus 2000
Dimension L*W*H (mm)	1100*1450*1600	1400*1600*1600	1100*1600*1600	1400*1600*1600	2800*1460*1600
Weight	1100kg	1400kg	1250kg	1450kg	2200kg
Power Consumption	Standard 500W, Max. 800W		Standard 600W, Max. 850W		Standard 800W, Max. 1.2KW
Air Pressure	0.5MPa 5 L/min		0.5MPa 10L/min		
Transport Concept	Single lane with three stage conveyor (front rail fixed, rear rail adjustable), PCB Length >230mm will automatically switch to single stage		Dual lane with three stage conveyor (1st rail is fixed, L2 & L3 & L4 adjustable), PCB Length>230mm will automatically switch to single stage		Single lane with three stage conveyor (front rail fixed, rear rail adjustable) PCB Length >850mm will automatically switch to single stage)
PCB Size (mm)	L50 * W50~ L510 * W510mm Max.Thickness 6mm	L50 * W50~ L810 * W690mm Max.Thickness 6mm	* Same PCB: L50*W50~ L510*W320mm Max.Thickness 6mm * Different PCB: L50*W50~ L510*W590mm Max.Thickness 6mm	* Same PCB: L50*W50~ L810*W320mm Max.Thickness 6mm * Different PCB: L50*W50~ L810*W590mm Max.Thickness 6mm	L50*W50~L2050*W510mm Max.Thickness 10mm
Camera Performance	Standard: 12MP 12μm (Use for Venus 510 / 810) Standard: 12MP 15μm (Use for Venus 510D / 810D / 2000) Option: 12MP 7μm Option: 21MP 10μm Option: 21MP 7μm		FOV: 48.9*36.7 mm FOV: 60.8*45.6 mm FOV: 32.7*24.5 mm FOV: 51.2*40.9 mm FOV: 33.3*26.6 mm		Speed: 450ms/FOV Speed: 450ms/FOV Speed: 450ms/FOV Speed: 450ms/FOV Speed: 450ms/FOV
PCB Flow	Left to Right, Right to Left, Left to Left, Right to Right (Adjust in programming)				
Options	Repair Working Station (Hardware), MES Connection, Offline Programming, Centralized Rejudgment System, SPC Analysis, 8 3D Projector, 7μm Camera Lens, 4 Side View Cameras				

Other Specification

Side Camera	20M *4 (Optional)	Numbers of 3D Projector	Standard: 4 Option: 8	Light Source	RGB surrounding light + coaxial light + white light
Max. Component Height	Up to 35mm		Min. Component Size	Metric 0603 (Standard 12μm / 15μm) Metric 0201 (Option 7μm)	
Max.Transport Clearance	Top 50mm, Bottom 50mm	Max. PCB Bending Adjustment	±4mm	Track Height above the Ground	900±50 mm
Power Requirements	200-240V AC 50/60Hz		Operating System	Windows 11	

Machine Dimension

Unit: mm



3D Automated Optical Inspection

Venus Large Size Series Inline 3D AOI



Venus 1200 \ 1500 \ 2000



2D+3D

Advanced Inspection Performance



Comprehensive Inspection for Diverse Components

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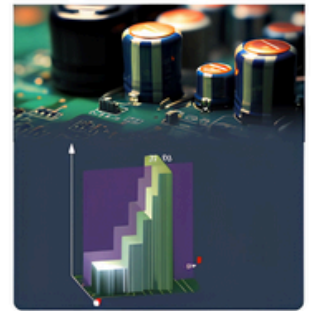


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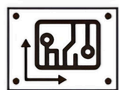
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Board Parameter Setup & Scanning

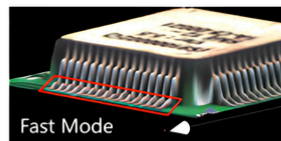


AI-Powered Programming & Parameter Verification

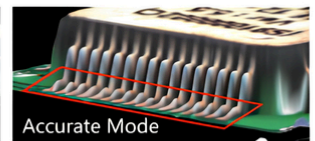


Inspection

Model Change Process



Fast Mode



Accurate Mode

Fast Mode: Higher Speed
Accurate Mode: Optimized for detail



Precision Mode Switching for Diverse Inspection Requirements

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Exceptional Equipment Consistency for Reliable Inspections

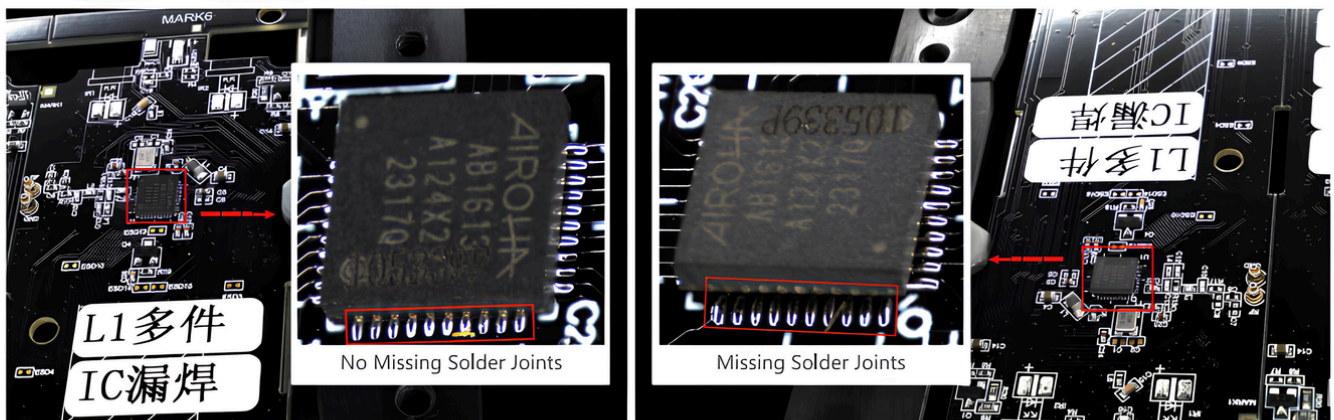
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4D (Option)

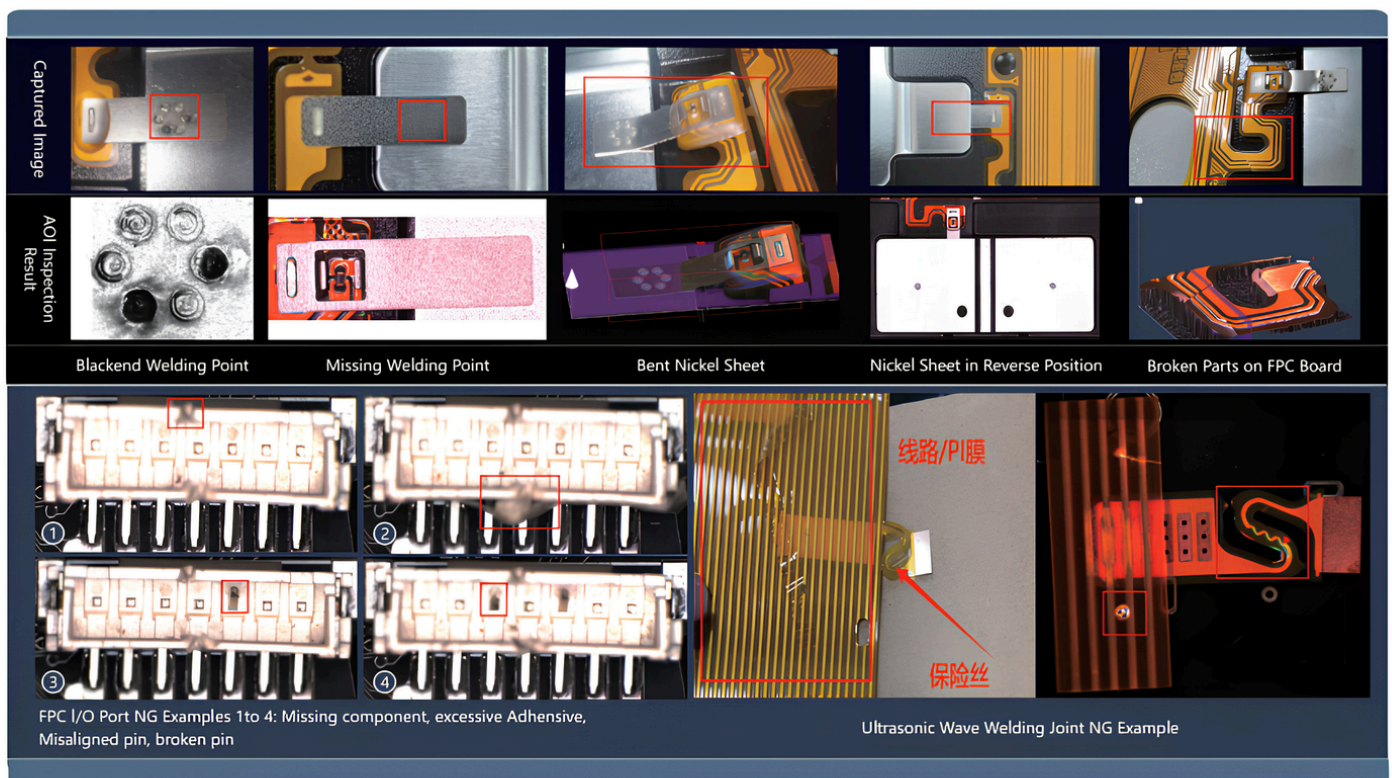
2D+3D Imaging with 4 Side View Cameras

In addition to the standard 2D + 3D imaging system, the optional 4D (4-Direction) imaging solution adds four side-view cameras to capture components from four directions. Combined with the 3D projection system, this multi-angle imaging architecture significantly reduces blind spots and enables more comprehensive inspection of component sidewalls, QFN solder joints, exposed copper, and other difficult-to-detect defects. The 4-direction side-view imaging provides enhanced inspection coverage and more complete component analysis, making it ideal for complex components and applications requiring detailed inspection from multiple viewing angles.

■ 4-Direction Imaging Defect Analysis Examples



■ Venus Inspection Result Examples

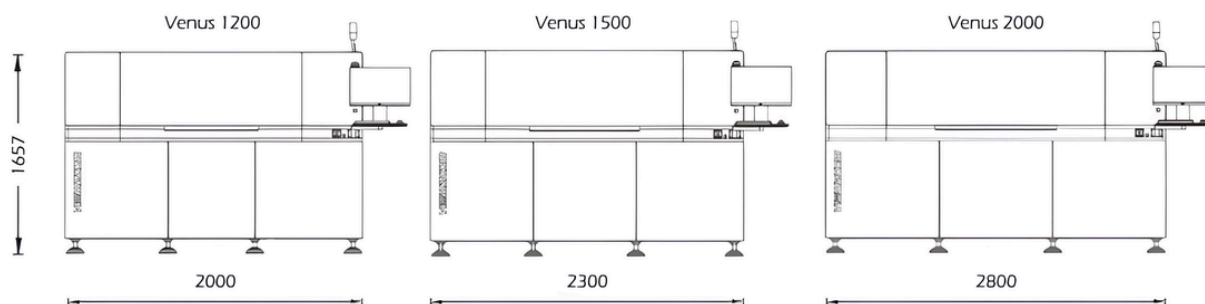


Machine Specifications

Model Name	Venus 1200	Venus 1500	Venus 2000		
Dimension L*W*H (mm)	2000mm * 1458mm * 1657mm	2300mm * 1458mm * 1657mm	2800mm * 1460mm * 1600mm		
Weight	1600kg	1800kg	2200kg		
Power Consumption	Standard 800W, Max. 1.2KW				
Air Pressure	0.5MPa 10L/min				
Transport Concept	Single lane conveyor (front track L1 is fixed, rear track L2 can be adjusted)		Single lane with three stage conveyor (front rail fixed, rear rail adjustable) PCB Length >850mm will automatically switch to single stage)		
PCB Thickness	10mm				
PCB Size (mm)	50mm * 50mm ~1250mm * 510mm	50mm * 50mm ~1550mm * 510mm	50mm * 50mm~2050mm * 510mm		
Camera / Resolution / Field of View / Speed	Standard: 12MP 15μm FOV: 48.9*36.7 mm Option: 12MP 12μm FOV: 60.8*45.6 mm Option: 12MP 7μm FOV: 32.7*24.5 mm Option: 21MP 10μm FOV: 51.2*40.9 mm Option: 21MP 7μm FOV: 33.3*26.6 mm		Speed: 450ms/FOV Speed: 450ms/FOV Speed: 450ms/FOV Speed: 450ms/FOV Speed: 450ms/FOV		
PCB Flow	Left to Right, Right to Left, Left to Left, Right to Right (Adjust in programming)				
Options	Repair Working Station (Hardware), MES Connection, Offline Programming, Centralized Rejudgment System, SPC Analysis, 8 3D Projector, 7μm Camera Lens, 4 Side View Cameras				
Common Parameters for Venus Series Devices					
Side Camera	20M *4 (Optional)	Numbers of 3D Projectors	Standard: 4 Option: 8	Light Source	RGB surrounding light + coaxial light + white light
Max. Component Height	Up to 35mm		Min. Component Size	Metric 0603(Standard 12μm / 15μm) Metric 0201(Option 7μm)	
Max.Transport Clearance	Top 50mm, Bottom 50mm	Max. PCB Bending Adjustment	±4mm	Operating System	Windows 11
Power Requirements	200-240V AC 50/60Hz		Track-to-ground Height	900±50 mm	

Machine Dimension

Unit: mm





CONTACT



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