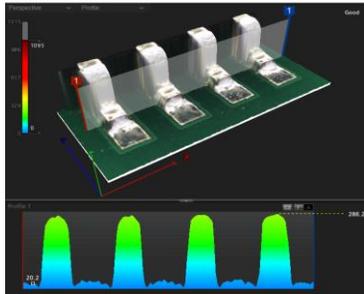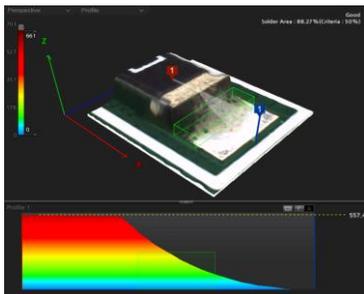# MIRTEC

MV-3 OMNI MARK-II
Desktop 3D AOI Series

- ► Exclusive 15MP/25MP CoaXPress Camera System
- ► OMNI-VISION® 3D Digital Tri-Frequency Moiré Technology
- ► Leading-Edge12 Projection **BLUE** DLP Design
- ► Precision Compound Telecentric Camera Lens
- ► Eight Phase Color Lighting System
- ► 18MP CoaXPress SIDE-VIEWER® Color Camera System
- ► Programmable Z-Axis Multi-Focus System
- ► INTELLI-PRO® Automatic Programming Software
- ► Multi-Functional AOI-SPI Fusion Technology
- ► INTELLISYS® Industry 4.0 Intelligent Factory Automation System

3D Lead Co-Planarity Inspection

3D Solder Fillet Inspection

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MV-3 OMNI MARK-II Desktop 3D AOI Series Specifications

Standard Features:

- Intel® Multi-Core PC, 32" Flat Screen LCD Monitor, Windows 11™ OS, HDD, Mouse & Keyboard, Network LAN Card.
- OMNI-VISION® 3D Digital Tri-Frequency Moiré / 12 Projection **BLUE** DLP Design - 25mm 3D Capability (45mm w/ Optional Z-Axis and GPU).
- Semi-Automatic PCB Support System.
- Advanced Eight (8) Phase Color LED Lighting System
- Pre and Post Reflow Inspection Capability.
- Automatic Teach Tool (ATT) Software - Automatic Programming Using Centroid Data.
- Comprehensive Package Type Library - Provides Simple "Drag and Drop" Component Programming.
- Local System Software: Repair Plus Software, Statistical Process Control (SPC) Software.

Options:

- 15 Mega Pixel or 25 Mega Pixel CoaXPress Top-Down Color Camera System (See Specifications).
- SIDE-VIEWER® Camera System - Quantity (4) 18MP CoaXPress Side-Angle Color Cameras. (See Specifications).
- Programmable Z-Axis Multi-Focus System - Provides Optimal Focus Level for Taller Devices.
- Top-Side PCB Clearance: Standard - 45mm (1.77 in.) / Option - 70mm (2.76 in.).
- CAD Import Software: Option 1 - ePM-AOI Gerber Import Software / Option 2 - Valor Gerber Import Software w/ ODB++
- AOI-SPI Fusion Technology - Provides Both AOI and SPI Capability in a Single Platform.
- 2D Bar Code Reader Options: Gun Type and Camera Type.
- Remote PC - Software Purchased Separately.
- Remote Software: Repair System Software, Statistical Process Control (SPC) Software, Off-Line Teaching Software (OLTT).
- Total Remote Management Software (TRMS) - Requires Server Software for Remote PC and Client Software on All Machines.
- INTELLI-TRACK® Process Control Software - Requires Server Software for Remote PC and Client Software on All Machines.
- SVN Multi-System Version Control Software - Requires Separate PC Server.

System Specifications:

(Subject to change without prior notice)

PCB Inspection Area	
MV-3 OMNI MARK-II	50 mm x 50 mm to 480 mm x 400 mm (2.0" x 2.0" to 18.9" x 15.75")

Vision System (FOV Size)			
15MP CoaXPress: (3,904 x 3,904 @ 120 fps)	Option 1	Pixel Resolution: 15 um	58.56 mm x 58.56 mm (2.31" x 2.31")
	Option 2	Pixel Resolution: 10 um	39.04 mm x 39.04 mm (1.54" x 1.54")
25MP CoaXPress: (5,120 x 5,120 @ 72 fps)	Option 1	Pixel Resolution: 7.7 um	39.42 mm x 39.42 mm (1.55" x 1.55")

OMNI-VISION® Inspection Technology	
3D Inspection Technology	OMNI-VISION® 3D Digital Tri-Frequency Moiré / 12 Projection **BLUE** DLP Design
2D Inspection Technology	15MP / 25MP CoaXPress Camera System
Maximum 3D Inspection Height	15MP / 15 um → 25 mm (0.984") @ ±3 um / 45 mm (1.77") @ ±3 um with Z-Axis and GPU 15MP / 10 um & 25MP / 7.7 um → 20 mm (0.79") @ ±3 um / 40 mm (1.575") @ ±3 um with Z-Axis and GPU
2D Inspection Item	Missing Component, Wrong Component, Mis-Alignment, Skewed Component, Polarity, Tombstone, Solder Bridge, Flipped Device, Solder Ball, Etc
3D Inspection Item	Component Height, Position, Lifted Package, Lifted Lead, Solder Fillet, Excessive Solder, Insufficient Solder, Solder Bridge, Open Solder, Etc

Additional Specifications	
Lens Configuration	Precision Telecentric Compound Lens Design
Lighting System	Eight Phase Color Lighting
SIDE-VIEWER® Camera System	Quantity Four - 18MP CoaXPress Side-Angle Color Cameras
PCB Surface Clearance	Top-Side Clearance: 45 mm (1.77") ; Option 70 mm (2.76") / Bottom-Side Clearance: 100 mm (3.94")
PCB Edge Clearance	Top-Edge Clearance: 3 mm / Bottom-Edge Clearance: 3 mm
Maximum PCB Warpage	±5 mm
Maximum PCB Weight	Standard: 3 Kg (6.61 Lbs.)
PCB Thickness Range	Standard: 0.5 mm - 3 mm / Optional: 3 mm - 5 mm
Minimum Component Inspection	0402 Chip (mm) / 01005 Chip (in) / 0.3 Pitch (mm)
Robot Positioning System	Precision Closed Loop AC Servo Drive, Resolution: 1 um / Repeatability: ±10 um
Power Requirements	Single Phase 200~240V 50~60Hz; 1.1 KW, Breaker Capacity: 13 Amp

Machine Dimensions and Weight		
MV-3 OMNI MARK-II	990 mm L x 1,425 mm W x 1,675 mm H (38.98" x 56.1" x 65.94")	550 kg (1,212.54 lbs.)