

## 3D AOI Series MV-3 OMNI



- 15 Megapixel-Top Camera
- 8 Projection Moiré Technology
- Blue LED Moiré System
- 8 Phase Colour Light
- 10 or 18 Megapixel Side-Viewer®

# High Tech First Class AOI

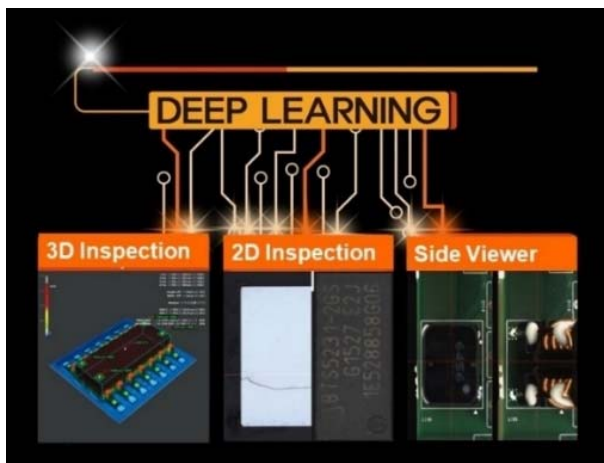
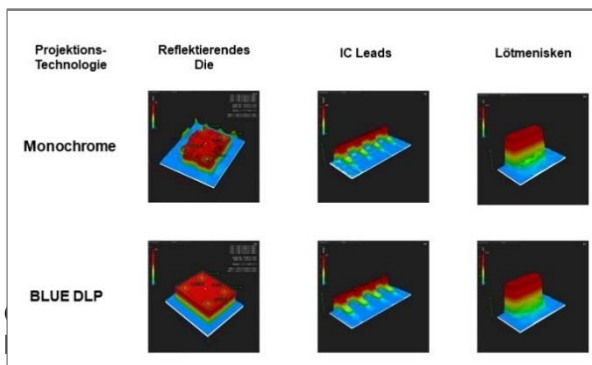
The **MV-3 OMNI** Series is a full 3D inline vision inspector with 15 Megapixel high resolution camera, Moiré 8 projections, 10 or 18 Megapixel side cameras and 8 phase coaxial color lighting system to allow inspection up to 03015 (mm) chips.

## Precise 3D Measurement

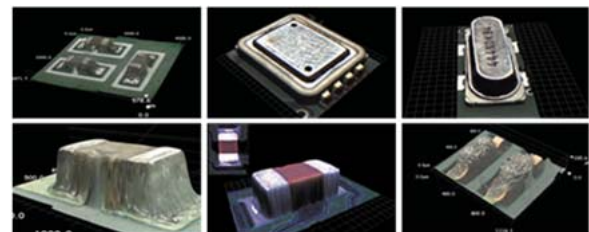
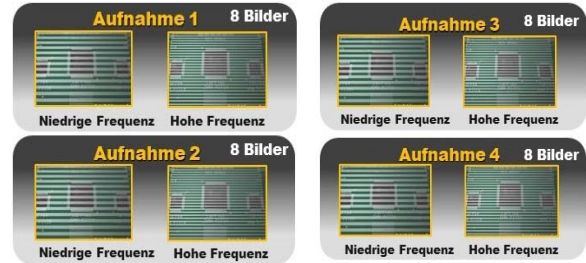
The Moiré Projection unit measures a component in 4 directions (EWSN) to obtain a 3D image for failsafe and high-speed defect detection.

## New: 8 Projection Blue LED Moiré-Technology

- Obtains 3D images without blind spots using eight 3D projections
- Various component height inspections with the combination of high and low frequency moiré patterns
- Secure characterization of 3D profiles of reflecting surfaces including dies, IC leads and solder fillets

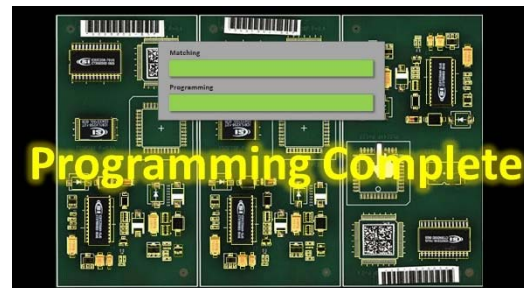


## 32 Images



## Automatic Programming with ATT (Automatic Teaching Tool)

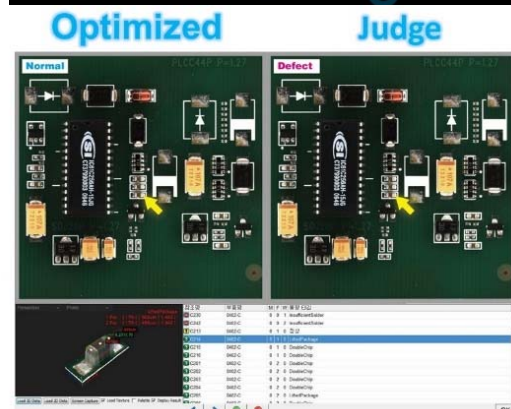
Programming and optimization with one click



One Click Programming



One Click Optimization



Result

## High Resolution 15 Megapixel Camera

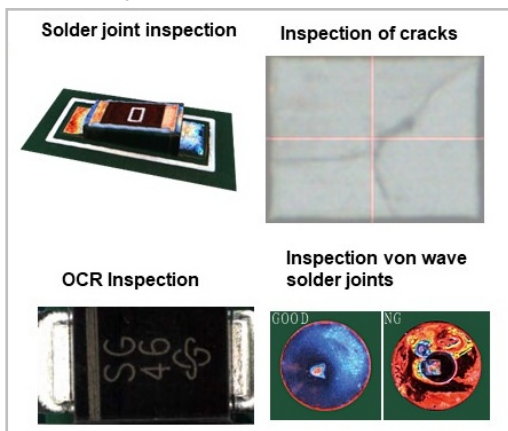


Our next generation high speed CoaXPRESS transmission method to allow 4 times more data transmission and 40% increased process speed in comparison to i.e. Camera Link. The main advantages at a glance:

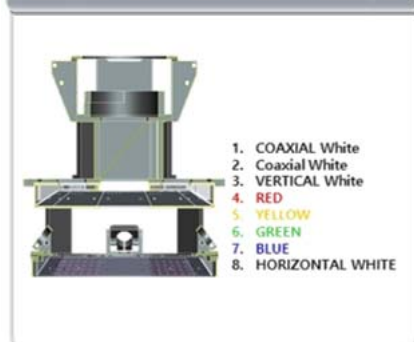
- Brilliant images
- Increase of the inspection speed by large field of view (FOV)
- Secure inspection as well of smallest components (i.e. 03015)

## 8 Phase Colour Light for a precise inspection

- Precise solder joint inspection by use of different colour light combinations
- Recognition of cracks with coaxial light for CSP components with diffuse reflections
- Complete OCR by using different lighting combinations, inspection of wave and selective solder joints



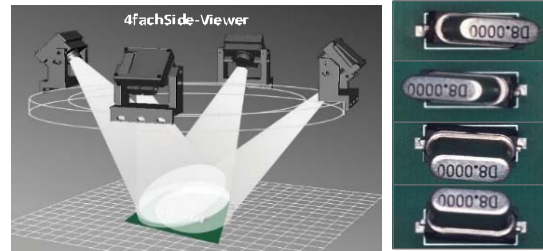
### Composition of the 8 Phase Colour Light



## 10 oder 18 Megapixel Seitenkameras

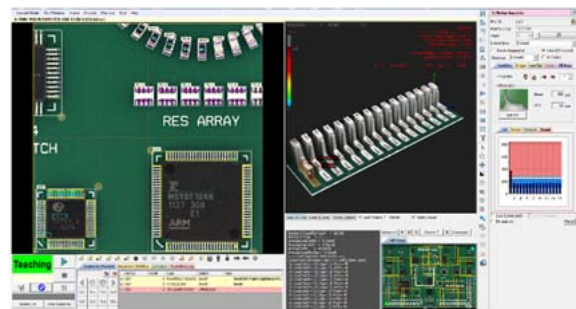
Use of four cameras from all four directions:

- 4 Side cameras (north, south, east, west)
- The only possibility for a J-lead-inspection
- Perfect post-control of critical components



## Easy to use interface:

- Intuitive user interface
- Easy operation by automatic programming and an extensive library
- Memory minimization by compressed defect images



## Intellisys® System

By means of a premature trend analysis as well as remote control substantial costs can be saved.



## Specifications

<b>Model</b>		MV-3 OMNI	
<b>Min. / Max. PCB size</b>		50 x 50 mm - 450 x 390 mm	
<b>OMNI-VISION®3D/2D inspection technology</b>			
<b>3D-Inspection Technology</b>		Multi Frequency Moiré-Technology	
<b>2D-Inspection Technology</b>		ISIS®VisionSystem	
<b>Height Resolution</b>		± 3 µm	
<b>Max. Component height 3D</b>		25 mm	
<b>Inspected item</b>	2D Inspection	Missing Component, Misalignment, Polarity, Tomb Stone, Manhattan, Turn Over, Wrong Component, Scratch, Solder Ball, Foreign Body, Shift, Tilt, Height, Position, Lifted Package, Lifted Chip, Lifted Lead, BGA Ball, Wave Solder, Selective Solder, Laser Solder, Robot Solder, OCR, etc	
	3D Inspection	Missing Component, Height, Position, Lifted Package, Lifted Chip, Lifted Lead, Solder Fillet, Excessive Solder, Insufficient Solder, Open Solder, Double Chip, Manhattan, Tomb Stone, Tilt, Dimension, Foreign, etc .	
<b>ISIS®VisionSystem (Field of View)</b>			
<b>15 MP Camera</b>	3.904x3.904Pixel	Option 1 (15 µm)	FOV:58,56 mm x 58,56 mm
		Option 2 (10 µm)	FOV:39,04 mm x 39,04 mm
<b>3D/2D Max. Inspection speed</b>			
<b>15-Megapixel-Kamera</b>	CoaXPress @120 fps	Option 1 (15 µm)	0,80 Sek./FOV/42,60 cm²/Sec.
		Option 2 (10 µm)	0,80 Sek./FOV/18,90 cm²/Sec.
<b>2D Max. inspection speed</b>			
<b>15-Megapixel-Kamera</b>	CoaXPress @120 fps	Option 1 (15 µm)	0,32 Sek./FOV/107,16 cm²/Sec.
		Option 2 (10 µm)	0,30 Sek./FOV/50,80 cm²/Sec.
<b>System Specifications</b>			
<b>Lens configuration</b>		Telecentric Precision Lens	
<b>Projection system</b>		DLP (Blue)	
<b>Lighting System</b>		8 Phase Colour Light	
<b>Side Viewer® Camera System - optional</b>		Four digital 10 or 18 Megapixel Colour Cameras	
<b>Software Standard</b>		Built-In SPC, Built-In Repair, Smart Debugger	
<b>Software Option</b>		RRS, IRS, OLTT, SPC Server System, ePM-AOI	
<b>PCB Top Clearance</b>		45 mm	
<b>PCB Bottom Clearance</b>		50 mm	
<b>Min. Clearance for PCB clamping</b>		3 mm	
<b>PCB Thickness</b>		0,5 mm – 3 mm	
<b>Max. PCB Warpage</b>		± 3 mm	
<b>Max. PCB Weight</b>		4 kg	
<b>Smallest Component</b>	15 Megapixel	Option 1(15 µm)	0603 Chip (mm) / 0201 Chip (inch) / 0,4Pitch (mm)
		Option 2(10 µm)	03015 (mm)/ 00905 Chip (inch) / 0,3 Pitch (mm)
<b>Power Requirements</b>		Single Phase(s) 200 - 240V, 50 – 60Hz,1,1KW	
<b>Air Pressure</b>		5 Kg/cm²(0,5 MPa)	
<b>Dimensions and Weight (incl. Table)</b>			
<b>Dimensions (mm)</b>		1.005 (B) x 1.200 (T) x 1.520 (H)	
<b>Weight</b>		Ca. 350 kg	