

TECHNOLOGICALLY ADVANCED

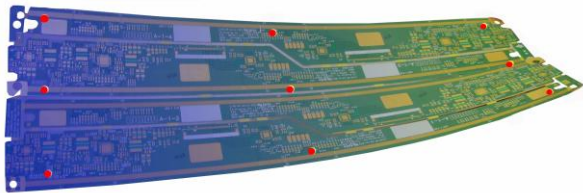
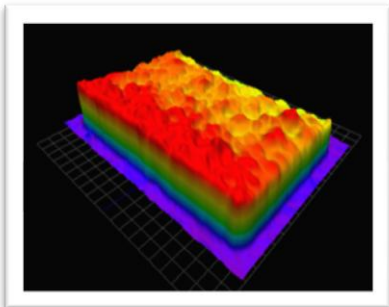
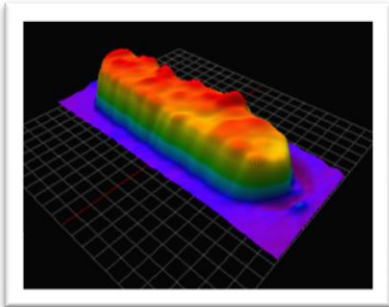
MS-15 Series

MIRTEC



CoaPress

- High Speed Precision In-Line SPI System
- Exclusive **TWENTY-FIVE MEGA PIXEL** ISIS® Vision System
- 7.7 Micron / Pixel Precision Telecentric Compound Lens Design
- 2 Micron Height Accuracy
- Precision Linear Drive Motor System
- Extremely Simple Programming and Operation
- “World Class” Global Customer Support



- **MOIRÉ** 3D Phase Step Image Processing
- Advanced Dual Probe **SHADOW FREE** Design
- Superior Solder Profile Characterization
- Absolute Repeatability and Reproducibility
- Laser PCB Warpage Compensation



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MS-15 Series Features and Specifications

Max PCB Size Range	
MS-15	50 mm x 50 mm to 510 mm x 460 mm (2.0" x 2.0" to 20.1" x 18.1")
MS-15U	60 mm x 60 mm to 660 mm x 610 mm (2.36" x 2.36" to 26.0" x 24.1")
MS-15DL (Dual Lane)	50 mm x 50 mm to 330 mm x 250 mm (2.0" x 2.0" to 12.99" x 9.84")

Image Transfer Technology			
25 Mega Pixel Camera	5,056 x 5,056 Pixels	CoaXpress Type	72 fps
		Camera Link Type	30 fps
15 Mega Pixel Camera	3,904 x 3,904 Pixels	CoaXpress Type	120 fps
		Camera Link Type	45 fps

ISIS® Vision System (FOV Size)				
25 Mega Pixel Camera	5,056 x 5,056 Pixels	Option 1	Pixel Resolution : 7.7 um	38.93 mm x 38.93 mm (1.53" x 1.53")
		Option 2	Pixel Resolution : 20 um	78.08 mm x 78.08 mm (3.07" x 3.07")
15 Mega Pixel Camera	3,904 x 3,904 Pixels	Option 2	Pixel Resolution : 15 um	58.56 mm x 58.56 mm (2.31" x 2.31")
		Option 3	Pixel Resolution : 10 um	39.04 mm x 39.04 mm (1.54" x 1.54")

3D Inspection Technology			
3D Inspection Technology	Shadow Free - Moiré 3D Phase Step Image Processing		
Height Resolution	0.1um		
Height Accuracy	Calibration Jig	2 um	
Height Repeatability	Calibration Jig	±1%	
Volume Repeatability	Calibration Jig	±2%	
Solder Height	Maximum	450 um	
	Minimum	40 um	
PCB Warpage	±5 mm		
Measurement Capability	Volume, Area, Height, X-Y Position, Bridge, Shape, Etc.		
Teaching Software	Gerb Pad	Option : e-PM SPI	

Maximum Inspection Speed				
25 Mega Pixel Camera	CoaXpress @ 72 fps	Option 1	Pixel Resolution : 7.7 um	36 cm2/sec (5.58 in2/sec)
	Camera Link @ 30 fps	Option 1	Pixel Resolution : 7.7 um	25 cm2/sec (3.875 in2/sec)
15 Mega Pixel Camera	CoaXpress @ 120fps	Option 1	Pixel Resolution : 20 um	110 cm2/sec (17.05 in2/sec)
		Option 2	Pixel Resolution : 15 um	66 cm2/sec (10.23 in2/sec)
		Option 3	Pixel Resolution : 10 um	30 cm2/sec (4.65 in2/sec)
	Camera Link @ 45 fps	Option 1	Pixel Resolution : 20 um	82 cm2/sec (12.71 in2/sec)
		Option 2	Pixel Resolution : 15 um	47 cm2/sec (7.285 in2/sec)
		Option 3	Pixel Resolution : 10 um	22 cm2/sec (3.41 in2/sec)

System Specifications			
Lens Configuration	Precision Telecentric Compound Lens Design		
Laser PCB Warpage Compensation	1um / Point		
PCB Top Side Clearance	45mm		
PCB Bottom Side Clearance	25mm (Option : 50.8 mm)		
Maximum PCB Warpage	±3mm		
Barcode System (Option)	1D or 2D Barcode Reader		
Built-in SPC	Statistical Process Control Software (Local)		
Built-in Repair	Repair Plus Software (Local)		
Teaching Software	Gerb Pad	Optional : e-PM SPI	
Robot Positioning System	X/Y Axis	Precision Linear Drive Motor System	
	Resolution	0.5um	
	Repeatability	±2um	
Power Requirements	MS-15 / MS-15U	Single Phase(s) 200~240V 50~60Hz, 1.1 KW	
	MS-15DL	Single Phase(s) 200~240V 50~60Hz, 1.5 KW	
Air Requirements	5 Kgf / cm2 (0.5 Mpa); (7 PSI)		

Machine Dimensions and Weight		
MS-15	1,250 mm W x 1,500 mm D x 1,600 mm H (49.2" x 59" x 63")	1,300 Kg (2,866 lbs.)
MS-15U	1,400 mm W x 1,560 mm D x 1,600 mm H (55.12" x 61.42" x 63")	1,500 Kg (3,307 lbs.)
MS-15DL (Dual Lane)	1,250 mm W x 1,500 mm D x 1,600 mm H (49.2" x 59" x 63")	1,400 Kg (3,086 lbs.)