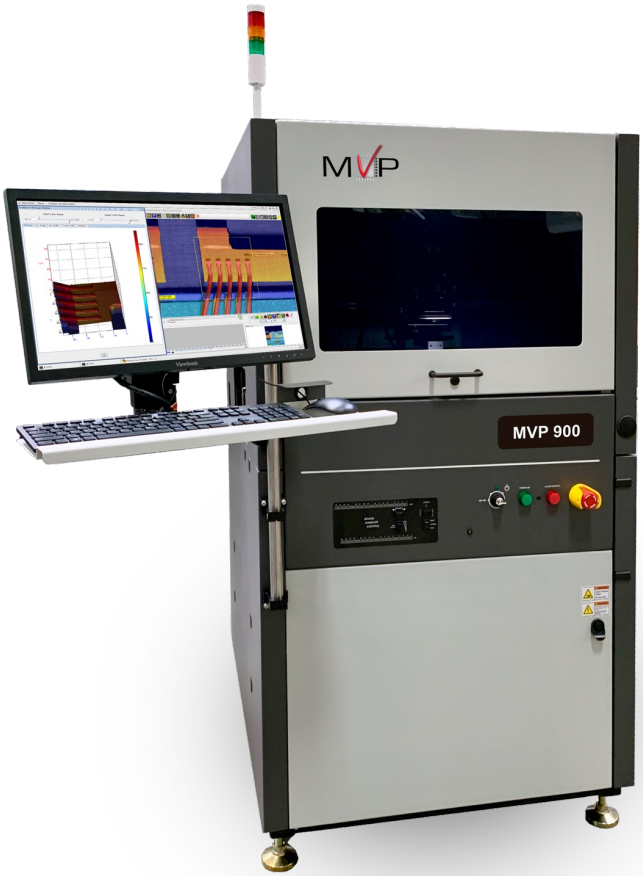
MVP 900 Series

Automated Optical Inspection for Wafer, Die, Wire-bond, Micro-Electronics and Semiconductor Inspection

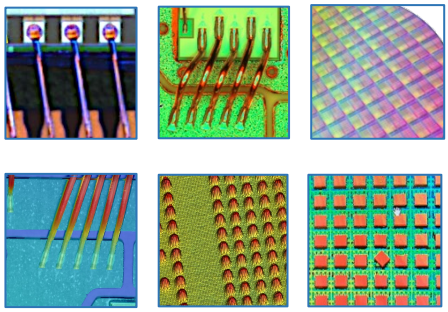


Key Features

- Class 100 Clean Room Options
- High Throughput
- Inspection Options
  - High Resolution 3D
  - Microscopic Objective
  - 100-300mm Wafer
  - Wafer Frame
  - Lead-Frame
  - Full Wire-Bond
  - Microelectronics
  - Packaging

MVP 900 Series

The 900 series is a modular AOI Inspection platform provides a range of advanced optic and handling solutions including 3D, high-resolution imaging and quad color lighting. Camera and optics are scalable to resolutions below 1 Micron. In addition, a range of custom material handling configurations are available including; magazine handling, strip handling, tray handling and wafer handling.



MVP
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MVP 900 Series

MVP "AOI Elevated"

Model	MVP 900 Series			
Version	900	+ LP7	+ LP15	+ Micro
Performance				
Inspection Capability	Wafer, Diced Wafer, Wire Bond, Lead Frame, Microelectronics, Die, Surface Inspection, Ceramics, Thick Film, Automotive, 3D Paste, Flux, Conformal, Epoxy, Glue, RF, BGA, CMM			
Programming Speed	Enhanced tools to allow you to generate programs with or without CAD			
Motion System X and Y	Precision X/Y stage with 0.5 micron positional resolution			
Optical Resolution	Options[2] from 0.3-5um			
Optics				
Optics Camera	25mp or 12mp			
Optics Illumination	White or Quad Color			
3D Optics				
3D Measuring Principle	3D Lighting	Laser Profiler	Laser Profiler	Microscopic
3D Speed[1] (CM^2 /s)		0.5	2.4	Application Dependent
3D Sensor X-Y Resolution (um)		2.5	5	250-350nm
3D Sensor Z Repeatability (um)[5]		0.3	0.4	0.5
Max Component Height (mm)	35			
Software				
Offline Program Generation	ePro			
Program Debug Environment	iPro and Validate			
SPC and Reporting	AutoData DPC - Sql based data reporting ELSR - End Lot Summary Reporting Optional: AutoData, line integration to paste systems			
CAD and Gerber Inputs	Standard, Placement, Gerber and ODB++ data import			
Defect Review	In-Line or Off-Line defect review using iRepair			
Multi-Pass	Programmable heights and lighting per pass			
Validate	Automated Program Validation			
System				
Computer	Dual Xeon Processor - Multi-Threading 1TB SSD Hard Drive - 32-256GB Memory			
Operating System	Linux based Multi-Threading CentOS Operating System			
Data Integration Options	SECS/GEM, AutoNetworker, DPC			
Networking	Full network integration (TCP/IP, NFS Protocol)			
Physical				
Inspection Envelope[3]	355mm (14") x 355mm (14")[3]			
Board Thickness[4]	0.254 - 12.5mm (0.01 - 0.5")			
Clearance	50.8mm (2")			
Conveyor Height	SMEMA			
Footprint	844mm (33.25") W x 1066mm (42") D x 1473mm (58") H			
Conveyor Length	850mm (33.46")			
Power	208-240VAC 50/60Hz, 10A (Optional 110V)			
Air	60 PSI, 1CFM			
Weight	680 kgs (1500 lbs.)			
Compliance	S2/S8 - CE - (UL Optional)			

[1] Using maximum scan speed.
[2] Dependent on camera and lens configurations.
[3] Please check final chosen configuration and some options can reduce board size.
[4] Flex Circuits, Non-Rigid boards will require fixturing. 12.5mm is an advisory for board thickness.
[5] Static repeatability using MVP calibration target.

MVP 900 Series - Wafer, Die and Wire-Bond Inspection and much more.

Focused on Quality, Metrology and Automation, the 900 series provide automated inspection and measurement solutions to the semiconductor, micro-electronics and high-reliability markets.

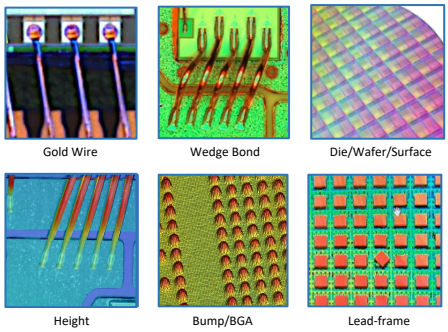
MVPs 900 platforms provide the highest resolution 2D & 3D Capabilities and optics for Semiconductor, Micro-electronics, Packaging and CMM.

Using high resolution 3D systems, 12MP cameras, Multi-tier lighting and Multi-pass technology MVPs 900 series can provide the inspection coverage while achieving the required UPH.

MVP's proprietary algorithms allow for inspection and metrology on all Micro-electronics.

Automation is key to the 900's flexibility. Using MVPs integrated magazine, wafer, tray, and cassette handlers the system can provide standardized automation for all processes.

For line integration the 900 series uses SECS/GEM, e-Maps and ELSRs to provide accurate manufacturing data.



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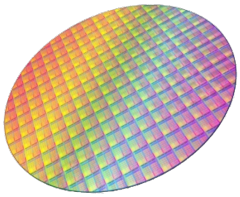
MVP 900 Series - Configurations

MVP 900 W - (Wafer 100-300mm)

Manually Loaded Wafer Inspection.

- Surface Inspection
- Bump Inspection
- Support For 100, 150, 200 and 300mm Wafers



MVP 900 DW - (Film Frame – Diced Wafer)

Manually Loaded Diced Wafer Inspection.

- Surface/Edge Inspection
- Bump Inspection
- Support for up-to 15” Frames

MVP 900 ALW - (Wafer 100-300mm)

Automatically Loaded

- Surface, Bump Inspection
- Support For 100, 150, 200 and 300mm Wafers
- 3rd Party Handlers
  - SMIF, FOUP

MVP 900 ADW - (Film Frame – Diced Wafer)

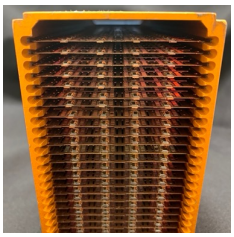
Automatically Loaded from Cassette.

- Surface/Edge Inspection
- Bump Inspection
- Support for up-to 15” Frames with Flipper

MVP 900 DWMS - Die Wire Metrology

Automatic Load from Magazine Loaders

- Lead-Frame Inspection
- Die/Wire Inspection
- Highest throughput
- Defect Marking



MVP 900 Mil-Spec - Die and Wire

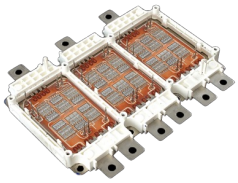
In-Line or Manual Load

- Wire bond Inspection
- 1.67um Resolution
- Laser Profiler for Loop Height
- RF Module Inspection
- Mil-Spec 883

MVP 900 AMS - Automotive Focused

In-Line or Manually loaded

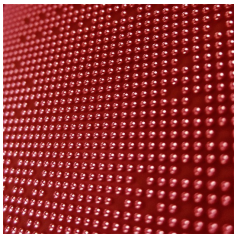
- Wedge Bond Inspection
- Highest Throughput
- Laser Profiler for Loop Height
- Full Module Traceability with AutoData.



MVP 900 T and 900 TS - In Tray Inspection

Loaded from Tray Stacker or In-Line

- Available Part Sorter (TS) BGA Inspection
- Die Inspection
- JEDEC, Auer, Waffle Tray Support.



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