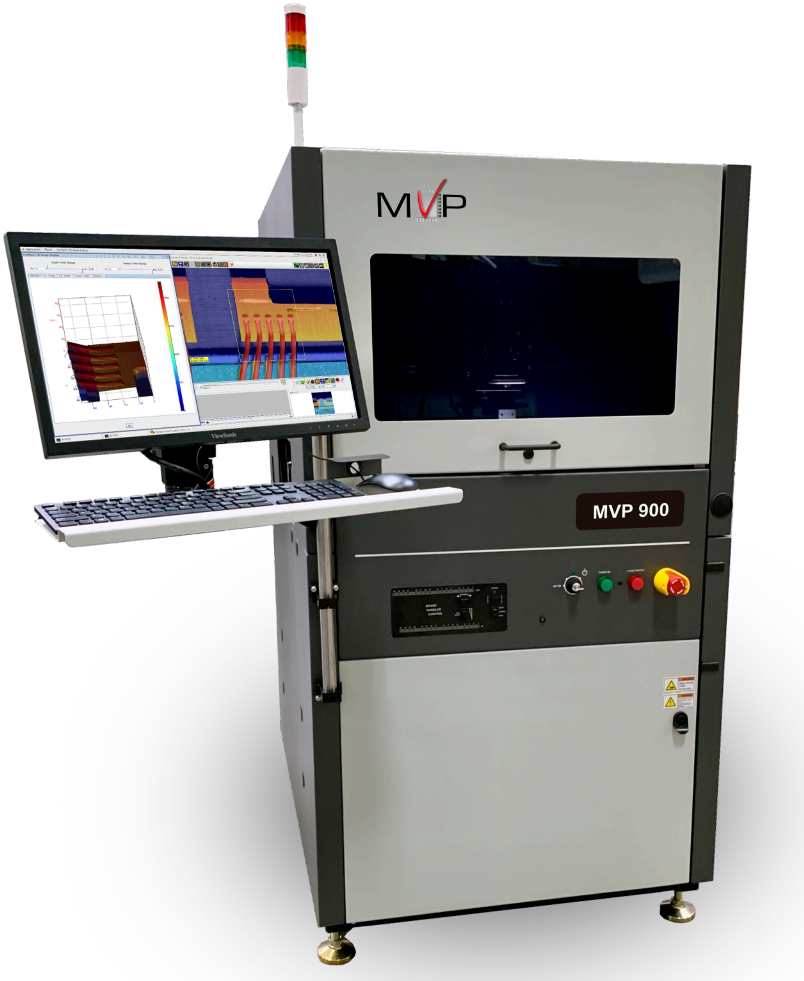
MVP 900 Series

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

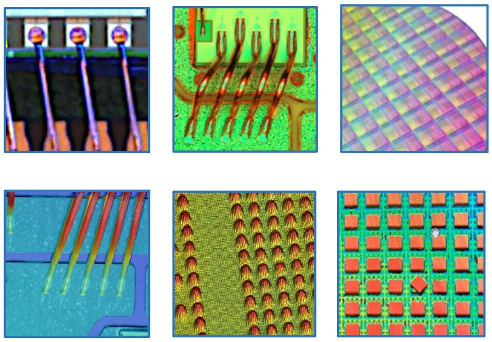


Key Features

- 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
Machine Vision Products

MVP 900 Series

Model	MVP 900 Series		
Version	LP15	LP7	CF40
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[5]	12mp		
Optics Illumination	White or Quad Color		
3D Optics			
3D Measuring Principle	Laser Profiler	Laser Profiler	Confocal
3D Speed[1] (CM^2 /s)	2.4	0.5	Application Dependent
3D Sensor X-Y Resolution (um)	5	2.5	~ 500nm
3D Sensor Z Repeatability (um)[5]	0.4	0.3	0.5
Max Component Height (mm)	35		
Software			
Offline Program Generation	ePro		
Program Debug Environment	iPro and Validate		
SPC and Reporting	Dynamic Process Control (DPC) Sql based data reporting ELSR - End Lot Summary Reporting Optional: AutoNetworker, 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 (32 Core's) 1TB SSD Hard Drive - 32GB 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	355mm (14") x 355mm (14")[3]		
Board Thickness[4]	0.01 - 12.5mm (0.01 - .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		
Air	60 PSI, 1CFM		
Weight	680 kgs (1500 lbs.)		
Compliance	S2/S8 - CE		

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.

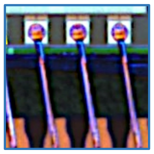
MVPs 900 platforms provide the highest resolution 2D & 3D Capabilities and optics for Semiconductor, Micro-electronics, Packaging and CMM.

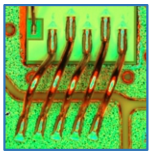
Using high resolution 3D systems, 12MP cameras, Multi-tier lighting and Multi-pass technology MVPs 900 series can provide the inspection coverage while achieving the required UPH.

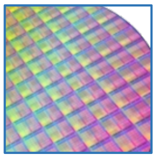
MVP's proprietary algorithms allow for inspection and metrology on all Micro-electronics.

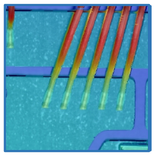
Automation is key to the 900's flexibility. Using MVPs integrated magazine, wafer, tray, and cassette handlers the system can provide standardized automation for all processes.

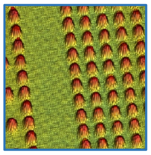
For line integration the 900 series uses SECS/GEM, e-Maps and ELSRs to provide accurate manufacturing data.

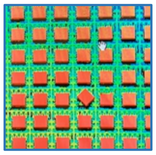

Gold Wire


Wedge Bond


Die/Wafer/Surface


Height


Bump/BGA


Lead-frame

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[1] Using maximum scan speed.

[2] Dependant 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.

900-8620

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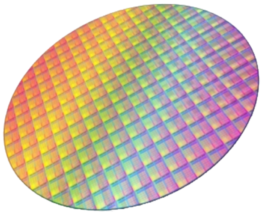
MVP 900 Series - Configurations

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)

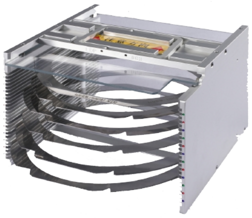
Automatically Loaded

- 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.

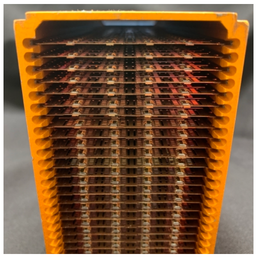
- Surface/Edge Inspection
- Bump Inspection
- Support for up-to 15” Frames with Flipper



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

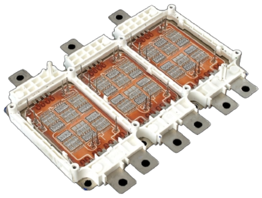
In-Line or Manual Load

- 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.