MVP 2030 DWMS

Automated Optical Inspection for Lead Frame, Die, Epoxy and Wire Inspection

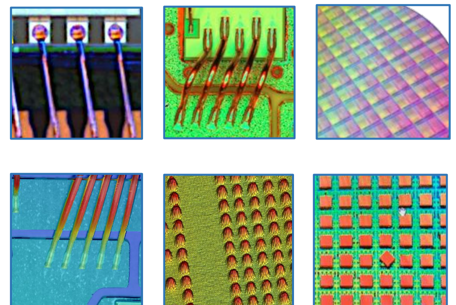
Key Features

- Highest UPH in the Industry
- High Accuracy, Highly Reliable Fully Integrated Material Handling
- Multiple Defect Handling Options including:
  - Ink Marking,
  - Wire Ripping,
  - Punch,
  - XML Map
- Leading Defect Detection
  - Au, Al, Ag, and Cu Wires
  - Wedge, Ball & Stitch Bonds
  - Crescent, Ribbon & Tape Bonds
  - Die Placement, Die Surface & Edge Damage
  - Epoxy Flow & Spread
  - Foreign Objects & Scratches
- Class 100 Clean Room Option

MVP 2030 DWMS

MVP's Latest 2030 DWMS (Die Wire Metrology System) utilizes high-resolution imaging, quad color lighting and 3D Laser Profilers to produce maximum defect, and measurement capabilities for Thin Board, Lead-Frame, Die and Wire Bond inspection.

The MVP 2030 DWMS is configured as a compact unit with MVP's own integrated lead-frame magazine loaders and unloaders. A range of inline defect identification options are also available including Ink Marking, Punching and Wire Ripping. The MVP 2030 DWMS can deliver UPH in excess of 150,000 for lead-frame applications.



MVP

MACHINE VISION PRODUCTS

MVP 2030

MVP “AOI Elevated”

Model	MVP 2030 Series		
2030 + Option	+ LP15	+ LP7	+ 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	Laser Profiler	Laser Profiler	Microscopic
3D Speed[1] (CM^2 /s)	2.6	0.5	Application Dependent
3D Sensor X-Y Resolution (um)	5	2.5	250-350nm
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	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	Xeon Processor Based Fast 1TB SSD Hard Drive - 32-256GB Memory		
Operating System	Linux based Multi-Threading Ubuntu Operating System		
Data Integration Options	SECS/GEM, AutoData, DPC		
Networking	Full network integration (TCP/IP, NFS Protocol)		
Physical			
Magazine Support[3]	Width 35-140mm, Length 145-306mm, Height 100-200mm[3]		
Lead Frames[4]	Width 28-133mm, Length 140-306mm, Thickness 0.1-1.5mm[6]		
Support Option	Center Lift, Edge Lift, Vacuum Fixture		
Transport	Linear Gripper Transport		
Defect Marking Options	Punch, Wire Removal, Ink Marker, Laser Marker		
Footprint	2026mm (79.75”) W x 1347mm (53”) D x 1718mm (68”) H (Height 2105mm with Light Tower)		
Power	208-240VAC 50/60Hz, 10A (Optional 110V)		
Air	60 PSI, 1CFM		
Weight	794 kgs (1750 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, some options can change inspectable area and board size. These include Vacuum Fixtures, Handling and Optics Options. Loader/Unloader specifications are detailed separately.
[4] Thin lead-frames or strips may need support options.
[5] Static repeatability using MVP calibration target.
[6] The length for thin strips will be a maximum of 301mm. Please check final chosen configuration for final inspection area.

MVP 2030 DWMS - Magazine loaded, Lead-frame, Die and Wire-Bond Inspection.

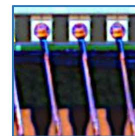
Focused on full automation, the highest quality, best defect detection and throughput, the 2030 series provide automated inspection and measurement solutions to the micro-electronic and semiconductor markets.

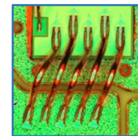
MVP’s 2030 Provides:

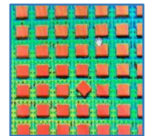
- Granite Stage Designed to Provide the Best Repeatability.
- Multiple Inspection Configurations Allow for Maximum Inspection Performance:
- New Ergonomic Design.
- New Enhanced Material Handling.
- Integrated Magazine Handlers.
- Industry Best Reliability and Throughput.
- 2D and 3D Inspection Capabilities.
- Class 100 Cleanroom Options.
- Inline Defect Identification.

Automation is key to the 2030’s flexibility. Using MVPs integrated magazine handlers and defect markers the system can provide standardized automation for all processes.

For line integration the 2030 series uses SECS/GEM, e-Maps and ELSRs to provide accurate manufacturing data.


Wire/Heights


Wedge Bond


Lead-frame

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