

ALD7120 i3D Offline AOI

LEADING THE WAY FOR INSPECTION SOLUTIONS



- ▶ i3D technology
- ▶ Extremely low FA rate, high FPY, and no escapes
- ▶ 100% inspection coverage
- ▶ Ideal for inspecting 0201 and 01005 components, 0.3 mm pitch
- ▶ Fast and accurate inspection
- ▶ Shadow-free, warpage-free solution, insensitive to board color
- ▶ Fast programming, intuitive user interface
- ▶ Effective quality verification
- ▶ Process control for defect prevention
- ▶ High MTBF, low maintenance cost

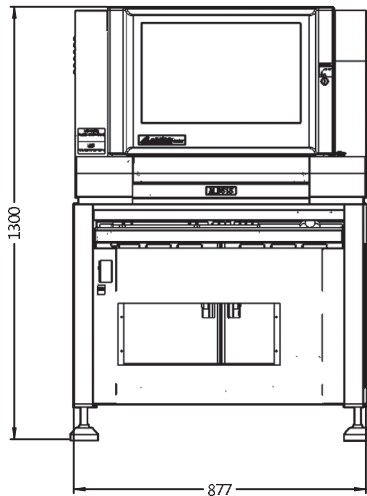
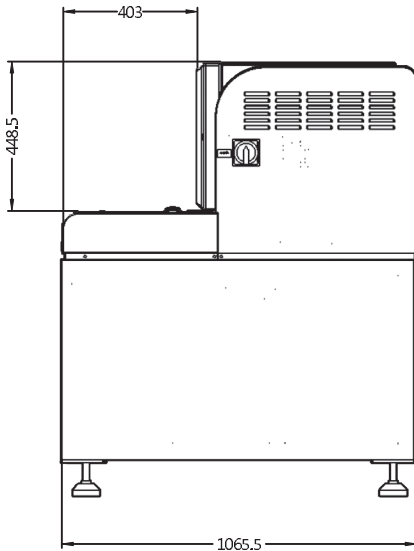
THE BEST CHOICE FOR LOW VOLUME PRODUCTION

The ALD7120 is the offline AOI system specifically designed for small and medium size SMT shops, as well as being able to provide prototype inspection in large factories. As all other members of ALD family, the ALD7120 AOI includes state of the art i3D technology, a high-speed camera and a multidirectional lighting module. The system has a small footprint, works very quietly, can be integrated easily and is suitable for use in production as well as in the lab. At the same time ALD7120 is the full-scale AOI machine and it delivers 100% coverage high-speed inspection with no escapes and a very low false alarm rate.

The ALD7120 can be used in different kinds of applications, such as TH component inspection, glue pad contamination and more. Component marking and color inspection is part of the standard tests for all components on the board.

The ALD7120 does not require any hardware modification in order to switch between the reflow, pre-reflow, wave or glue applications. Together with the ALeader FAI application ALD7120 gives a perfect solution for the first item inspection process. In the same manner as all the ALD models, the ALD7120 has a vast range of capabilities and is designed to overcome all PCB inspection challenges, including: shadows, various component colors, transparency, board warpage and many more. The system also offers support to offline programming and debugging.

Features such as integrated barcode reading, various traceability options and software process controls are also available. The repair station delivers a clear image of the defect and a good sample, which allows fast verification and prevents operator errors.



Functional Specifications	
Inspection method	i3D technology
Camera	5M pixel high-speed camera
Lighting system	Multi directional lighting module
Program creation	CAD file import, central library, part number links, auto programming
Applications	Post reflow, pre-reflow (including 2D paste inspection), wave soldering glue inspection
Operating system	Windows 10 Professional 64 bit
Inspection Board Specifications	
PCB type	All colors and all pad finishes
PCB size range	Min 50mm x 50mm, Max 430mm x 330mm (ALD7120) 620mm x 460mm (ALD7130) 870mm x 650mm (ALD7150)
PCB warpage	<5 mm, warpage-free technology
PCB thickness range	0.3mm to 5mm
Clamping system edge clearance	Top 3.5mm, Bottom 3.5mm
PCB weight	Up to 3kg
Underside/Topside clearance	60mm/30mm
Min component size	01005, 0.3 mm pitch
Inspection Performance	
Resolution/range/speed	15μ/pixel FOV:38.4mm x30.9mm Test speed<0.2 sec/FOV
Inspection coverage	100% inspection coverage, all components are inspected for all types of the defects: missing, misalignment, billboard, up-side-down, tombstone, damaged, wrong component, lifted leads, open, insufficient/excessive solder, shorts, wrong component, polarity, solder balls, etc...
Shadow effect	Shadow-free technology
Component color	Component color and transparency do not affect system performance, but can be used for wrong component inspection
OCV/OCR	Standard on each machine
Double side check	Identifies and automatically changes side
Features and Options	
Special features	Supports auto-change program, multi-boards (include bad mark) and multi-program inspection modes
Barcode system	Auto read barcode with camera - 1D and 2D; External reader reads back side barcode(option)
Server mode	Central server multiple machines data handling
Remote control	Remote control through TCP/IP for verification, system operation and program adjustment
Additional Options	SPC, repair station, Offline program, External barcode scanner Support applications - Site Dashboard, First Article Inspection, Package Link
Hardware	
X/Y driver	Screw and AC servo driver, Accuracy <10μ; camera moves X axes, conveyor moves Y axes
Display	22 inch TFT LCD
Power Supply	AC230V 50/60Hz <0.8KVA
Compressed air	Not required
Operational	10~35° C, 35~80% RH (no dew)
Dimensions and Weight	
Weight	300 kg
Dimensions	870x1060x1300mm ALD7120, 1060x1340x1460mm ALD7130, 1340x1750x1600mm ALD7150 (LxWxH)

Above specifications are subject to change without notice. Images used in the brochure are for illustrative purposes only

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