

# ALD7220 i3D Offline AOI

## LEADING THE WAY FOR INSPECTION SOLUTIONS

- ▶ i3D technology
- ▶ Easy and straightforward installation and operation
- ▶ Extremely low FA rate, high FPY, and no escapes
- ▶ 100% inspection coverage
- ▶ Ideal for inspection of 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



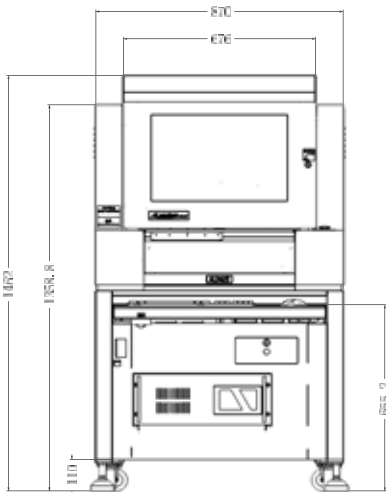
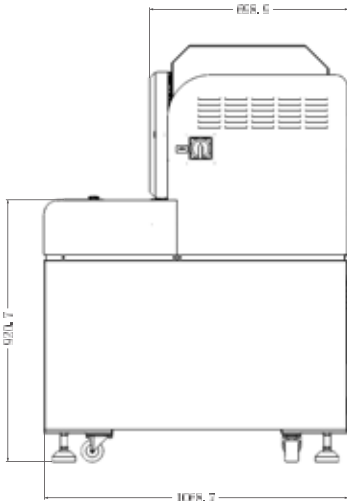
### ALD7220 - THE BEST CHOICE FOR HIGH-MIX PROTOTYPE PRODUCTION

ALD7220 is the offline AOI designed to support high-mix, low-volume production. As all other members of ALD family, ALD7220 AOI includes state-of-art i3D technology, high-speed camera and the multidirectional lighting module.

The high component top clearance makes it very suitable for after-wave soldering inspection, at the same time the system can be effectively used for the other applications after reflow, curing, pre-reflow (including paste 2D inspection) and more.

ALD7220 has a small footprint, works very quietly – easily can be integrated and used in production as well as in the lab environment. From the other side, this is the full scale AOI system delivers 100% coverage high-speed inspection with no escapes and very low false alarm rate.

In the same manner as all the ALD models, the ALD7220 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 prevention of operator errors.



Functional Specifications	
Inspection method	i3D technology
Camera	4M 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
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 (ALD7220) 620mm x 460mm (ALD7230) 870mm x 650mm (ALD7250)
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	85mm/50mm
Min component size	01005, 0.3 mm pitch
Inspection Performance	
Resolution/range/speed	15μ/pixel FOV:30.72mm x30.72mm Test speed<0.13 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	
Conveyor	Automatic clamp, manual width adjustment and board handling
X/Y driver	Screw and AC servo driver, Accuracy <10μ; PCB moves on Y axis; camera moves on X axis
Display	22 inch TFT LCD
Power Supply	AC230V 50/60Hz <1.5KVA
Compressed air	Not required
Operational conditions	10~35°C, 35 ~ 80% RH (no dew )
Dimensions and Weight	
Weight	520 kg
Dimensions	870x1060x1460mm ALD7220, 1060x1340x1460mm ALD7230, 1340x1750x1460mm ALD7250 (LxWxH)

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

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