

iSCAN AOI

Automatic Optical Inspection System



The iScan Automatic Optical Inspection system offers an entry level scanner based system for the verification of assembled printed circuit boards. Using a high resolution standard flatbed scanner, iScan provides a rapid and repeatable inspection process at an affordable cost.

In recent years, Automated Optical Inspection (AOI) has become an integral tool to aid the manufacturing and quality assurance processes. AOI systems complement manual inspection and product testing. In comparison to human visual inspection, AOI is much faster, more accurate, more reliable and consistent.

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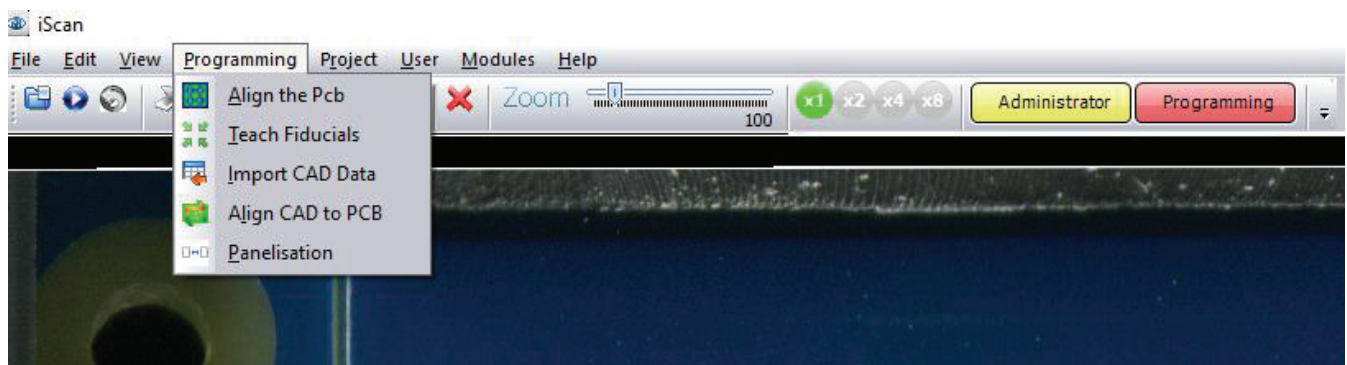
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iScan has been designed specifically to detect defects such as skewed or missing, wrong, misplaced, incorrect polarity and other imperfections. AOI is suitable for both the final inspection/quality assurance step and for use as a process monitor to identify, control and reduce the total number of defects being generated.

In addition, the iScan AOI system may be used both as a post-reflow final inspection tool to verify quality before shipment or pre-solder reflow (or wave soldering) to improve processes and reduce the cost of re-work.

Easy Programming

Using the simple step by step programming mode Cad information is easily imported and merged to the board and component images. Depending on the board complexity a new program can be created within 30 minutes.



Easy Loading

PCB's can be simply loaded to the rail slots and slid into position ready for AOI. The side rail is easily adjustable by means of a slide mechanism.

The system is also supplied with a centre board support and back rail support to ensure that the boards are positioned flat and parallel to the scanner head.

A number of slots are available at various heights to compensate for higher component clearance on top and bottom side.



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Faults Identification

Skewed, incorrect polarity, missing, tombstone, incorrect part, bridging, misplaced, bent leads. The software is also designed to allow some flexibility to identify non standard components.



Data Logging

Test data and images are stored after each test allowing for future traceability.

The screenshot shows the 'Details' log window in the iScan AOI software. It contains a table with the following columns: Date, Time, W/D, Serial Number, Project, Part Number, Reference, Action, Defect, Status, Pcb X, Pcb Y, and User. The table lists 15 test entries from May 2, 2016, showing various components and their inspection results. The last entry shows a 'PCB Skipped' status.

Date	Time	W/D	Serial Number	Project	Part Number	Reference	Action	Defect	Status	Pcb X	Pcb Y	User
5/2/2016	3:02:58 PM	11	13	MPROG0848	SEM1968	U9				1	1	Administr.
5/2/2016	3:02:58 PM	11	13	MPROG0848	XTA0055	X1				1	1	Administr.
5/2/2016	3:02:58 PM	11	13	MPROG0848	SEM1952	Q12				1	1	Administr.
5/2/2016	3:02:58 PM	11	13	MPROG0848	SEM1968	U8				1	1	Administr.
5/2/2016	3:02:26 PM	11	14	MPROG0848				PCB Skipped				Administr.
5/2/2016	3:02:26 PM	11	15	MPROG0848				PCB Skipped				Administr.
5/2/2016	3:02:26 PM	11	16	MPROG0848				PCB Skipped				Administr.
5/2/2016	3:02:58 PM	11	17	MPROG0848	XTA0055	X1				2	2	Administr.
5/2/2016	3:02:58 PM	11	17	MPROG0848	SEM1968	U9				2	2	Administr.
5/2/2016	3:02:58 PM	11	17	MPROG0848	SEM1968	U8				2	2	Administr.
5/2/2016	3:02:34 PM	11	18	MPROG0848				PCB Skipped				Administr.
5/2/2016	3:02:34 PM	11	19	MPROG0848				PCB Skipped				Administr.
5/2/2016	3:02:58 PM	11	20	MPROG0848	SEM1968	U8				2	3	Administr.

Comparator option

Using the comparator mode, the user can very quickly identify missing or misplaced through hole components. A new PCB can be scanned and visually tested against a stored golden board within minutes. Faults can be categorised and logged and linked to a rework report if required.

SPECIFICATION

Dimensions	800mm x 742mm x 310mm
Product size	640mm x 475mm
Scan area	420mm x 330mm
Component height	60mm max
Power requirements	240,110VAC 5/13 AMP
Software	i-scan Comparator software
	i- scan AOI Software
PC	Windows 10, i5 4Gb, 500Gb HD
	Icd Monitor



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