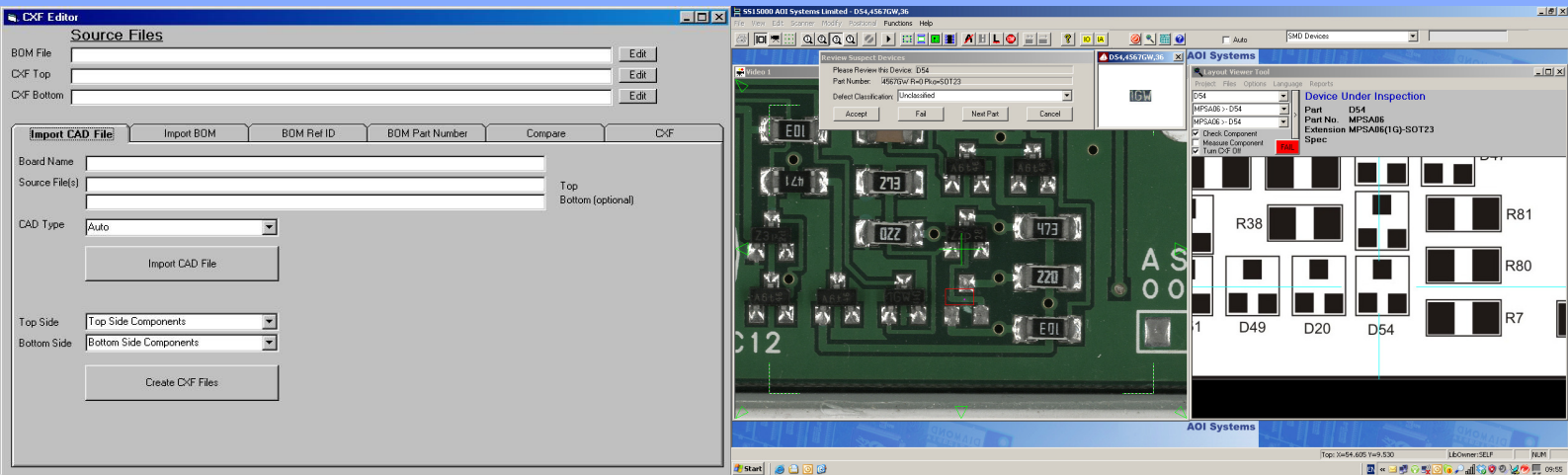


# AOI Systems Limited

## Automated Optical Inspection



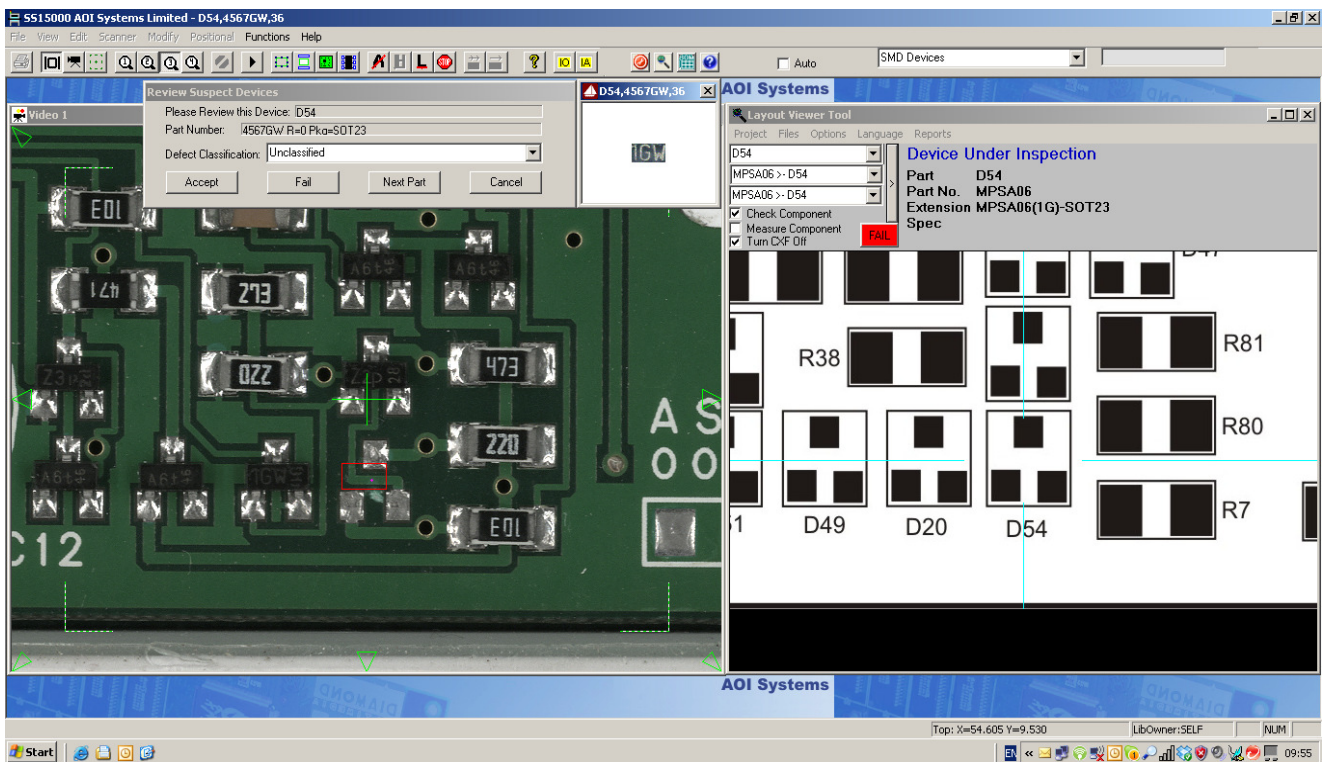
**First  
Article  
Inspection  
SS15000FA**

# AOI Systems - First Article Inspection

## First Article Inspection

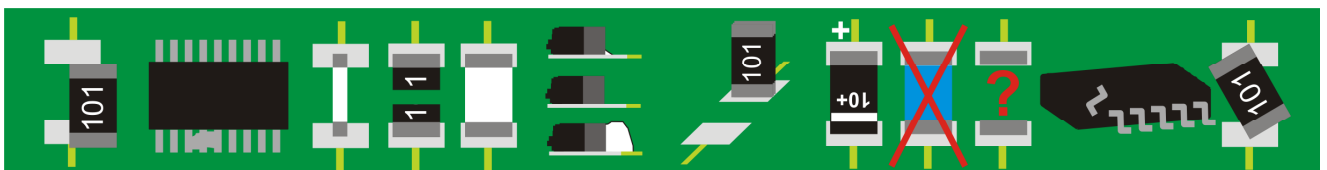
The FA-Inspector is a scanner-based optical inspection system used to automate first article inspections and subsequent production inspection tasks without programming.

The FA-Inspector has two primary modes of operation: Comparator Mode and AOI Mode. Both AOI and Comparator Modes generate comprehensive reports complete with error location marks, fault classifications including the full PCB image or XY layout for easy rework. Reports can be viewed, printed, saved or emailed to customers for rapid prototype review. Defect coverage includes, all SMT and PTH parts down to 01005, part presence/absence verification, part polarity and pin #1 orientation, part position and skew errors, laser marking, wrong part and device differences such as: labels and colour variations.



## Typical Faults Found

Find Typical manufacturing defects - Shifted, Misplaced, Billboard, Tombstone, Bridging, Inverted, Wrong Polarity, Wrong Part, Missing, Bent Lead, Skewed, No Solder, and even Damaged.



# AOI Systems - BOM Comparison Software

## BOM Comparison Tool (CXF Editor)

The CAD import facility requires only basic placement Information such as Ref ID, Part No, Package Type, X, Y and rotation. Any adjustments to scaling, rotation, polarity and positioning can be adjusted using the correct fields in the CAD exchange file. An enhancement to this feature is the BOM comparison tool which allows you to import either the CAD or Pick and place info and then compare that information to the electronic BOM.

A file will then be created with any errors between the XY and BOM files, and an import file will also be created with the merged information, automatically making the perfect document for First Article Inspection

The screenshot displays the CXF Editor software interface. At the top, the title bar reads "CXF Editor". Below it, the "Source Files" section contains three input fields: "BOM File", "CXF Top", and "CXF Bottom", each with an "Edit" button to its right. The main area is divided into two tabs: "Import CAD File" (which is active) and "Import BOM". The "Import CAD File" tab contains several fields and buttons: "Board Name" (text input), "Source File(s)" (text input), "CAD Type" (dropdown menu set to "Auto"), "Import CAD File" (button), "Top Side" (dropdown menu set to "Top Side Components"), "Bottom Side" (dropdown menu set to "Bottom Side Components"), and "Create CXF Files" (button). To the right of the "Source File(s)" field, there are labels for "Top" and "Bottom (optional)".

## Offline Inspection

Offline Inspection is made easy as the FA Inspection software allows the actual board for test to be saved in a TIFF format. The saved images and software are exactly the same as FA Inspection machine, making program creation and updates easy without impacting on the production schedule. Through time you can create the First Article Inspection on a bare board prior to the actual manufacture

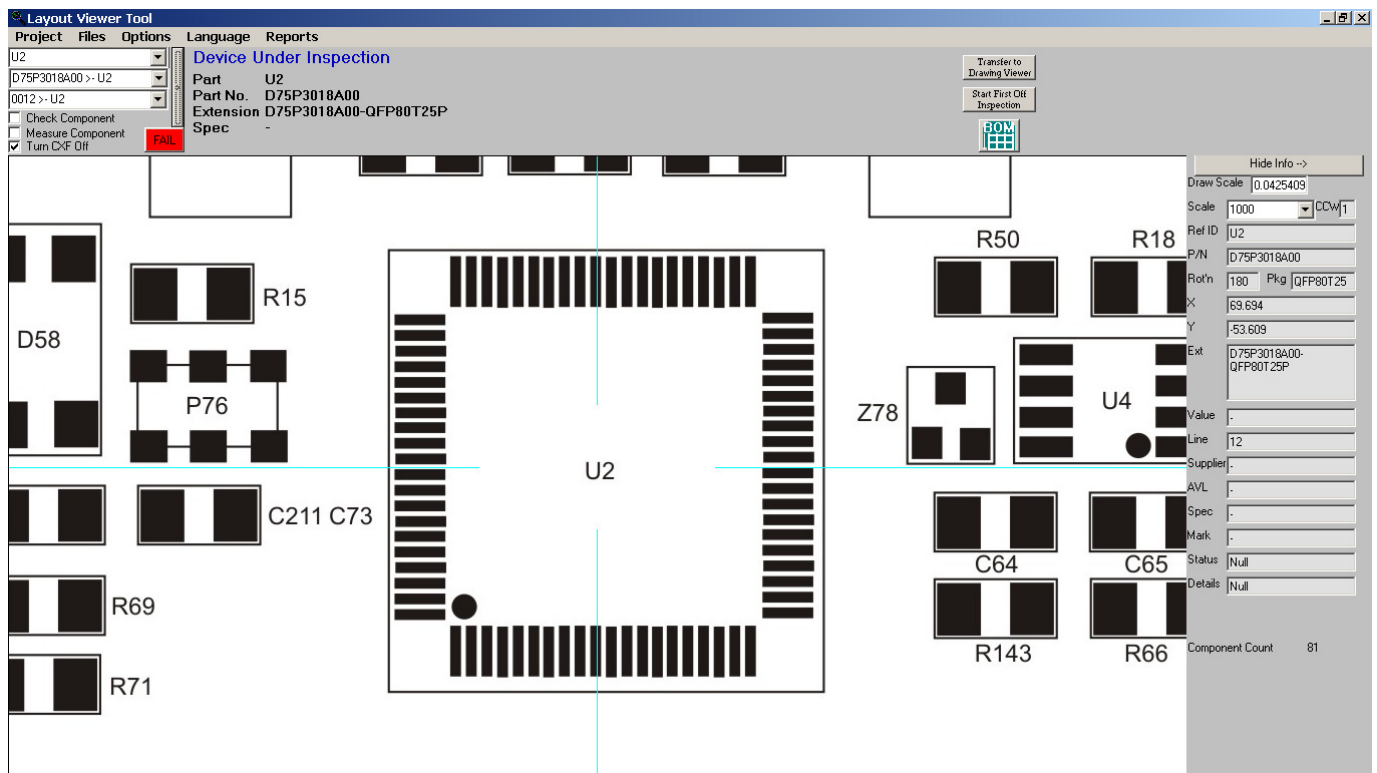
# AOI Systems - Layout Viewer Tool

## Board Layout Viewer

The layout viewer is another simple but very effective electronic tool that ensures that the inspection is being carried out is correct to not only to the BOM and XY Positions, but also polarity enabled devices have been placed in the correct orientation.

The software simultaneously displays the layout position and the position on the actual board, displaying the correct orientation and pin 1 position.

The PDF or JPG of the layout is loaded into the software, the XY information is then overlaid so that the actual board and the Layout file are the same size.



## CAD Editor (Layout Viewer Tool)

CXF Layout Viewer tool is similar to the layout viewer, but the major difference being you can view all the details about each devices either by walk thru mode or by search mode. The CAD editor was originally designed for the AOI facility of the software, but is now being used by some customers as a simple First Article Inspection. This method however does not automatically create inspection routines for future First Article or production runs

# AOI Systems - Specification

	<b>A3 System</b>	
<b>Board Size</b>	630mm x 495mm	
<b>Inspection Area</b>	420mm x 300mm	
<b>Component Height</b>	Up to 50mm	
<b>Resolution</b>	20 Microns	
<b>Lighting</b>	Cold Cathode	
<b>Power Requirements</b>	110.240 Vac 5/10 A	
<b>PC</b>	Pentium Dual Core 3.00 Ghz	
	2 Gb RAM	
	200 Gb Hard Drive	
	DVD/R	
	Network Card	
	LCD Monitor	
<b>Operating System</b>	Windows 2000, XP, Vista, 7	
<b>Software</b>	ScanSpection Comparator Software	
	ScanSpection AOI Software	
	FA , BOM & CAD Viewer Software	
<b>Dimensions (mm)</b>	700mm x 555mm x 305mm	
<b>Options</b>	Offline Programming	
	Offline Inspection	

**AOI Systems Limited**

**Automated Optical Inspection**

Unit P Minerva Works

Johnstone

Renfrewshire

PA5 8HP UK

Tel: +44 (0) 141 416 5113

[info@aoisystems.com](mailto:info@aoisystems.com)

[www.aoisystems.com](http://www.aoisystems.com)