

# Enhanced First Article Inspection



*We adapt your inspection process!*

A screenshot of the EFO INSPECTION software interface. The window title is 'Project1 - Order1 "Sample2"'. The interface includes a menu bar (View, Inspection, Evaluation, Support, Window), a toolbar with icons for 'Pause', 'Continue', 'Stop', 'Good', 'All Good!', 'Unsure', 'All Unsure!', 'Failed', 'All Failed!', 'Free-hand', 'Design', 'Window', 'Part no.', 'Unselect all', and 'Selection'. Below the toolbar, there are several panels: 'Project-E Explorer' on the left showing a tree view of the project; a central panel displaying a PCB layout with component callouts for 'V512 V508', 'C149', 'C150', 'C148', and 'C101'; a 'Component-Explorer' on the right showing a list of components with status indicators; and a data table at the bottom. The table has columns for Component, X-coordinate, Y-coordinate, Angle, Part number, Description, Component design, Value, and Reason. The table shows three rows of data for component C101, with the third row indicating a 'Wrong polarity' error.

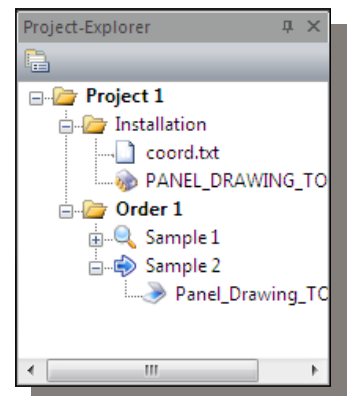
Component	X-coordinate	Y-coordinate	Angle	Part number	Description	Component design	Value	Reason
C101_1	46.2	47.8	90	71475567	100.0 NF±10 %/10 %/100.0 V	C-1206-10		
C101_2	143.1	47.8	90	71475567	100.0 NF±10 %/10 %/100.0 V	C-1206-10		
C101_3	240.0	47.8	90	71475567	100.0 NF±10 %/10 %/100.0 V	C-1206-10		Wrong polarity

# EFA Inspection<sup>®</sup> adapts your inspection process!

EFA Inspection<sup>®</sup> is the user-friendly and well-structured software for a quick and effective inspection of your first article to release the assembly line.

## Explorer-Structure

- Setup of **one** project per PCB Type
- Setup **multiple inspection orders** to one PCB Type
- **Any number of samples** per order can be set up
- Simplified setup of the samples
- **Quick access** to all previous inspections

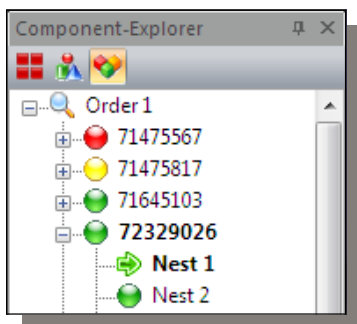


## Comprehensive adaption to your inspection process

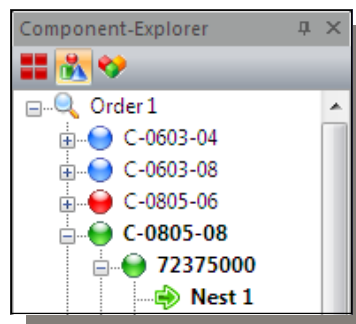
EFA Inspection<sup>®</sup> can be set up according to your established inspection process - whether you perform **part number based setup verification**, **full verification of all components** or **inspections of multiboard panels**.

The software automatically leads the operator through the entire inspection process and automatically follows a pattern depending on the selected sorting model, one component after the other.

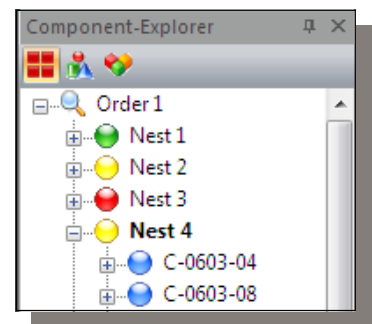
### .. by part number



### .. by component design



### .. by multiboard



## Inspection by component list

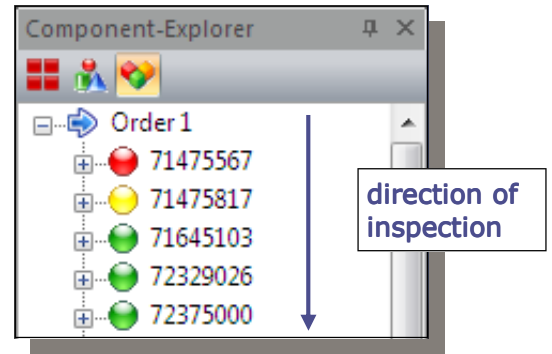
	A	E	F	H	I	J	K	L	M
0	Component	Nest	Part number	Component design	Value	Reason	User	Timestamp	
172	C201_1	001	72375039	C-0805-08		<SB>	Inspector 1	09:39:11 / 23.06.2010	
173	C201_2	002	72375039	C-0805-08		<SB> Wrong polarity	Inspector 1	09:39:21 / 23.06.2010	
174	C201_3	003	72375039	C-0805-08		<SB> Missing Component	Inspector 1	09:40:02 / 23.06.2010	

The screenshot shows a table with columns: Component, Nest, Part number, Component design, Value, Reason, User, and Timestamp. The table contains three rows of inspection data. Below the table, there is a status bar with icons for Protocol, Good, Unsure, Failed, Unvalued, Nest 1, C-0805-08, and 72375039.

## Part number based inspection / setup verification

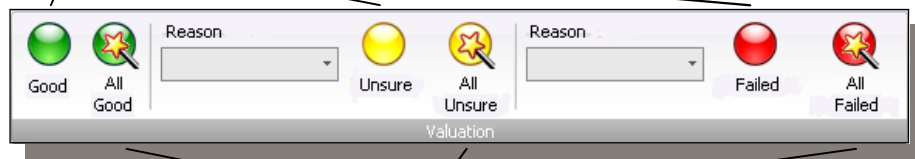
### Automatic advance

All components one after the other - sorted by part number - are automatically indicated in the window of the image file.



### Reliable valuation

Individual valuation of a specified number of components per part number

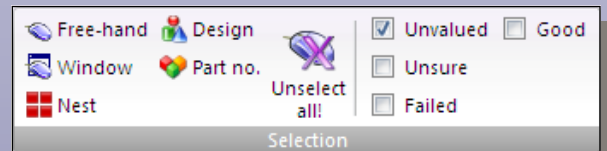


En bloc valuation of all remaining components of a part number - activated only after reaching the specified number of individual valued components

## Inspection in expert mode

### Manual advance

In expert mode, the automatic method is deactivated and the components can manually be selected in groups, marked and valued together.



Selection of grouping and marking the components in the image file

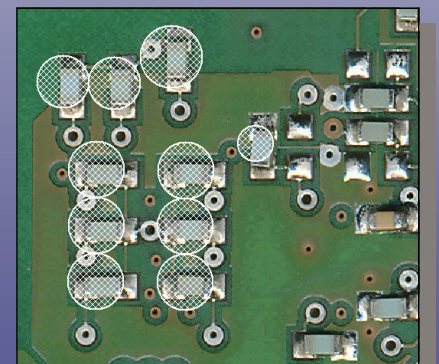
### Fast evaluation

Group evaluation of all selected components



Current overview of the inspection progress

Component	X-coordinate	Y-coordinate	Angle	Part number	Component design	Value	Reason	User	Timestamp
0									
1	C001_1	88.7	39.7	270	73343610	C-0603-08			
2	C001_2	165.6	39.7	270	73343610	C-0603-08			



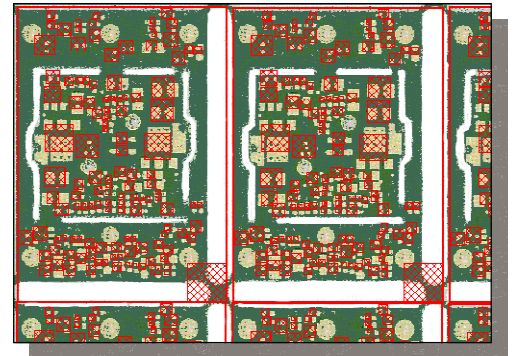
Marked components of a free-hand selection

## Innovative functions

EFA Inspection® has been equipped with a variety of innovative functions for a fast, simple and traceable inspection.

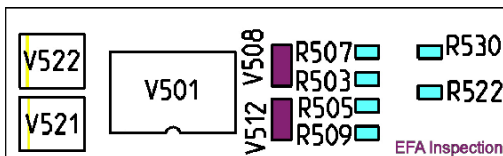
### Automatic component- and multiboard-detection

With the correct data from the imported coordinate file, all components and all the single circuits of multiboard PCB panel will be **automatically detected**.

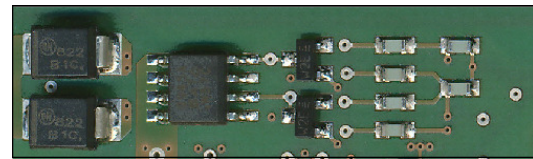


### Overlay function

The schematic drawing can be superimposed transparently over the image file of the PCB - so all relevant information about orientation, polarity, etc. is available in **one single window**.

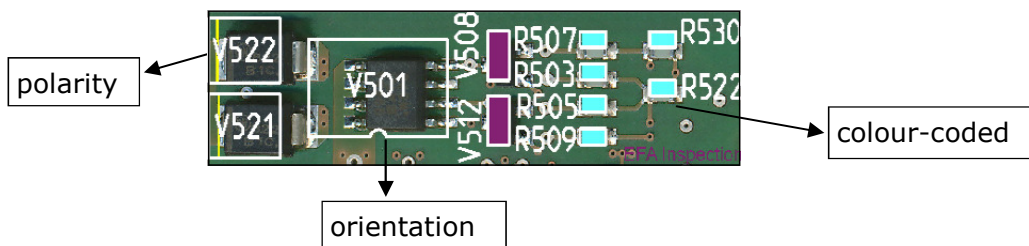


With the schematic drawing ..



.. and the image file of the PCB ..

.. EFA Inspection® creates **one** presentation!



### Traceability of the evaluation by sorting in tables

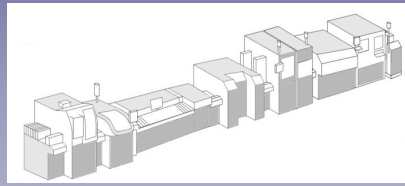
All components are automatically sorted into the reporting tables according to their assessment and association to part number, component type and multiboard reference. The entire inspection process is **logged completely!**

Order 1 "Sample 2"										
	A	B	C	D	E	F	G	H	I	J
0	Component	X-coordinate	Y-coordinate	Angle	Nest	Part number	Description	Component design	Value	Reason
19	C201_1	53.3	30.0	90	001	72375039	68.00 NF/-10 %/10 %/50.0 V	C-0805-08		<SB>
20	C201_2	150.2	30.0	90	002	72375039	68.00 NF/-10 %/10 %/50.0 V	C-0805-08		<SB> Wrong polarity
21	C201_3	247.1	30.0	90	003	72375039	68.00 NF/-10 %/10 %/50.0 V	C-0805-08		<SB> Missing Component

Protocol Good Unsure Failed Unvalued Nest 1 C-0805-08 72375039

# EFA Inspection<sup>®</sup> adapts your inspection process!

EFA Inspection<sup>®</sup>  
Installer

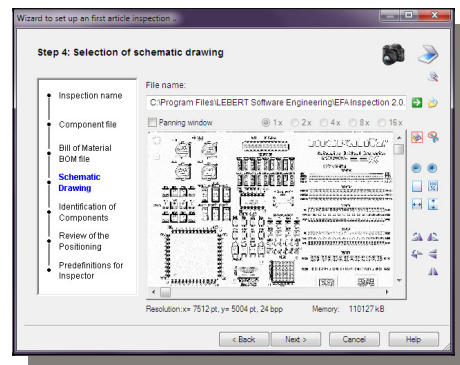
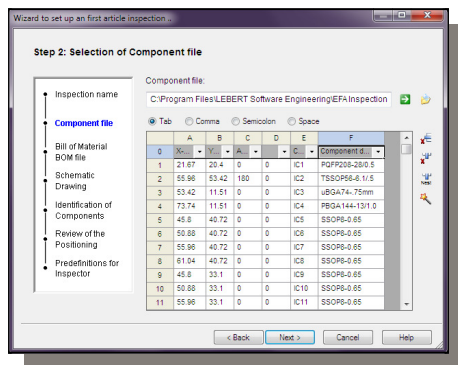


EFA Inspection<sup>®</sup>  
Evaluator

EFA Inspection<sup>®</sup>  
Inspector

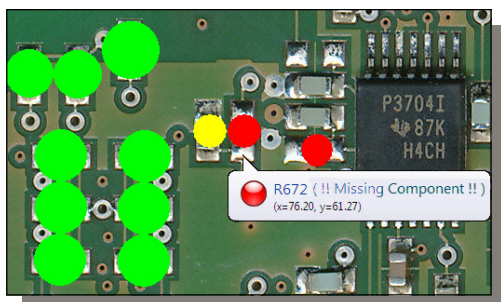
## The installer version

- **Unique project setup** from a central point - regardless of the location of the assembly line - This means consistent implementation of company requirements for the inspection process.
- **Wizard based setup process** - individually customised.
- All **current data and image formats readable** (txt, csv, xml, uncamfx, gerber data, dxf, jpg, bmp, pdf, tif, gif, etc) - Additional viewing options, such as resolution and zoom can be set individually.
- **Extensive presettings and preferences** for the inspector can be set up



## The evaluator version

- Extensive **analysis** of inspection results
- **Traceability** of the entire process of the inspection
- **Visualization** of the inspection results on the image file of the PCB
- Cumulative **presentation of the results** for the inspection type „By Part Number“, „By Design“ or „By Multiboard“ (single circuit)
- **Simplified repair** of the board by using the **editable error description or code**





Get a free trial of EFA Inspection® and test the software with your data under your conditions for 14 days without any limitations!

*Request your 14-day trial now under [www.efai.eu](http://www.efai.eu)!*



**Recommended system requirements:**

- Microsoft Windows 7 (64 Bit) (at least Windows 2000 SP4)
- 2 GB RAM (at least 1 GB)
- USB 2.0 Interface
- 24" TFT Monitor



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Presented by: