



# QUASAR

## Core PCB

### ***AI-powered soldering quality inspection***

A Deep Learning-based tool revolutionizing soldering inspection for Printed Circuit Board by excelling pixel-level detection of solder voids

## Key features



### **Full automation**

Deep Learning unleashing fully automated soldering inspection: no manual operation required



### **High precision**

Pixel-level accuracy for solder voids detection and measurement



### **Real-time**

Instantaneous lot inspection and standard-compliant reports generation to customers



### **Deploy anywhere**

Deployable across machines and edge devices in factories or hosted in the cloud and accessible from anywhere

## Why choose Quasar?



### **Full-service activation**

Full-service activation tailored for your devices, including image labelling for model training



### **Cost-effective**

Drastically reduces non-quality and labor cost



### **AXI Machines agnostic**

Compatible with images from any X-ray machines



### **Root cause diagnosis**

Dramatically accelerates root cause diagnosis thanks to lot-level analysis





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### Soldering quality inspection in 3 clicks

**Step 1**

Select a PCB  
PCB\_01

Reference PCB + solder joint stencil

**Step 2**

Upload your files  
Drag and drop files here  
Limit 200MB per file • JPG, JPEG, PNG

Browse files

run

**PCB-level analysis**

Mean void [%] 8.4  
Max void [%] 27  
PCB status FAIL

**Lot-level analysis**

Heatmap

**Solder-joint analysis**

ID	VOID [%]	STATUS
1	8	PASS
...	...	...
13	11	PASS
14	3	PASS

**Automatic Report for PCB\_01**

Heatmap

Date	2024-09-20	Number of PCBs	4
Quasar version	1.1.0	Rate of defective PCBs [%]	50.0
User	John Smith	Number of solder joints per PCB	14
PCB name	PCB_01	Rate of defective solder joints [%]	3.57
Reference image	default	Maximum solder void [%]	33.0
		Average solder void [%]	6.62

solder joint id	01	02	03	04	05	06	07	08	09	10	11	12	13	14
Solder void threshold [%]	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Average solder void [%]	8.0	4.2	3.2	4.0	9.2	5.2	4.2	8.8	12.5	8.0	4.5	9.8	9.0	2.0
Number of defective solder joints	0	0	0	0	1	0	0	0	1	0	0	0	0	0

## Technical specifications

Characteristics	Specifications
Statistical analysis	<ul style="list-style-type: none"> <li>Maximum and average solder voids percentage calculation at solder joint, PCB, and lot level</li> <li>Pass/fail verification compliant with international standard IPC</li> </ul>
Automated report generation	<ul style="list-style-type: none"> <li>Visualization of solder voids and solder joint for each PCB</li> <li>Heatmap illustrating solder voids distribution for all the PCBs in the lot</li> </ul>
PCB and X-ray machine agnostic	<ul style="list-style-type: none"> <li>Compatible with and can operate seamlessly across various PCBs and X-ray machines</li> </ul>

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