MXI

INTELLIGENCE

Re REVALUTION

AI BGA Voiding for Revalution Software

AI simplifies BGA inspection increasing the accuracy of your results

When Classical BGA inspection routines are used and results are not perfect, the operator is required to adjust results leading to inconsistencies and increased cycle times.

Nordson Intelligence AI BGA Voiding simplifies the inspection increasing the accuracy of your result, by removing operator decision inconsistency and reducing cycle time.

Delivering significant throughput improvements and detection capabilities not possible through traditional approaches. Nordson Intelligence for Revalution provides users the autonomy to enhance their inspection results.

www.nordson.com/TestInspect

Nordson
Test & Inspection

BGA Void Inspection Evoloved

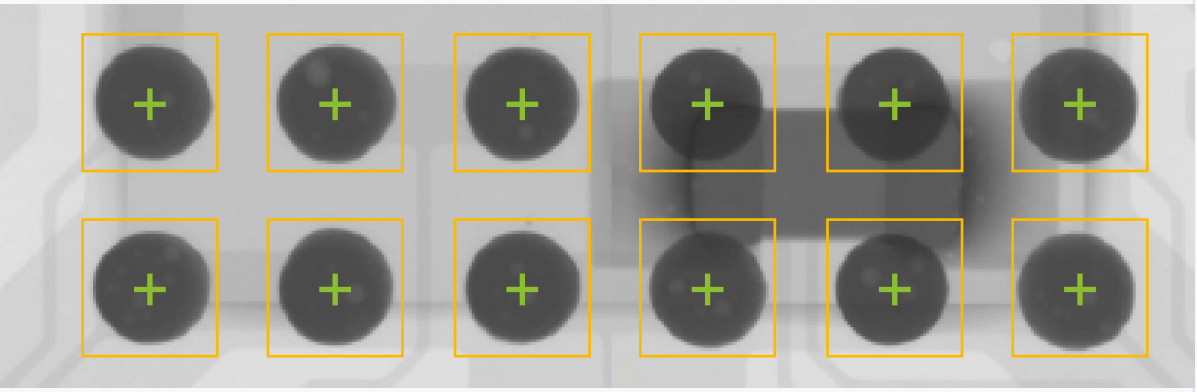
Nordson's Machine Learning (ML) models are trained for BGA voiding inspection applications and then optimized for the user's specific application requirements.

With the continuous flow of data Nordson's AI improves over time as defects and parts evolve, resulting in a faster response to new applications and sample changes. Future proofed solutions that scale to take advantage of the latest processing hardware.

Cloud-based Model Retraining

The analysis of customers performance metrics guarantees quality and stable, continuous improvements of customer's results.

The connection between customers data and Nordson's AI enables continues improvement – putting more power into the hands of the user – ultimately to improve processes, productivity and yields.



Classical BGA Routine

Finds objects matching user defined criteria. User manipulates this using size filter, threshold adjustment and layout type.

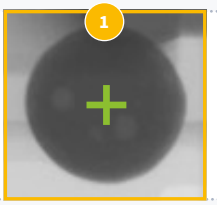
ROI around each object is cut out and inspected for grey level contours and gradients.

Often objects can be obscured leading to mismatch to real BGA and wrong ROI being inspected or ROI being missing from analysis.
Other features can have similar grey levels interfering with contour recognition of the target features.
Voids can be intersected by stronger background features breaking up analysis or misdirecting the contour recognition.

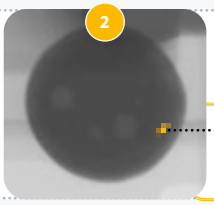
Outline of joint/voids then displayed and coloured appropriately for limits set.

When results are not perfect using classical routine, operator is required to adjust results leading to inconsistencies and increased cycle times.

AI BGA Routine Advantage

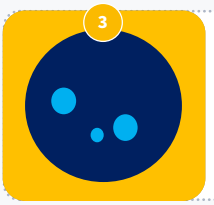


Finds objects defining an ROI around each object.



ROI around each object is cut out and sent to AI server (running localhost).

Each pixel given class in terms of a probability matrix eg: (0.02, 0.01, 0.97) 2% Background, 1% void, 97% solder
In this example the resulting map would class this pixel as solder. This reduces various grey levels down into one uniform class.



The AI model instantly converts ROI image into a classification map

AI sends back to Revalution to Inspect the classification map

Outputs results over original image.

Nordson Intelligence AI simplifies the BGA inspection increasing the accuracy of your result.

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DS-AI-MXI-BGA-201125

SUBSCRIBE NOW!

Speak with your Nordson representative about upgrading your Revalution MXI software with Nordson Intelligence AI or contact your Nordson regional office

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