

# Prove Your Quality

# PLUS JADE



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## X-ray Inspection

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

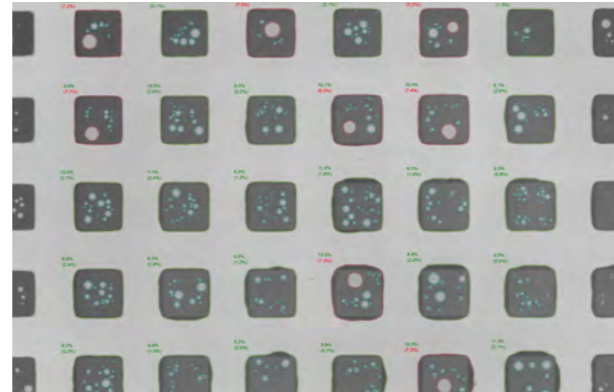
**Nordson**  
DAGE

# Your Quality Jade Plus

## Prove Your Quality

### Measurement

Jade Plus two gives a unique insight into your product quality. Advanced measurement functions, included as standard, turn X-ray images into quantitative data that you can use to spot emerging quality trends early, before it's too late.



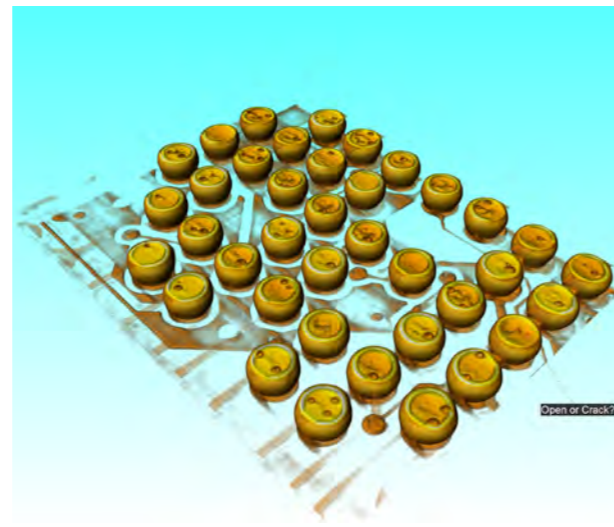
Screen for solder pad defects quickly with automated voiding measurement.

### Compliance

In-built tools for dimension measurement, BGA void analysis, bump diameter and roundness and through hole filling make quick work of finding and characterizing defects, helping you achieve IPC-A-610 and IPC-7095 compliance.

### 0.95 $\mu\text{m}$ Resolution

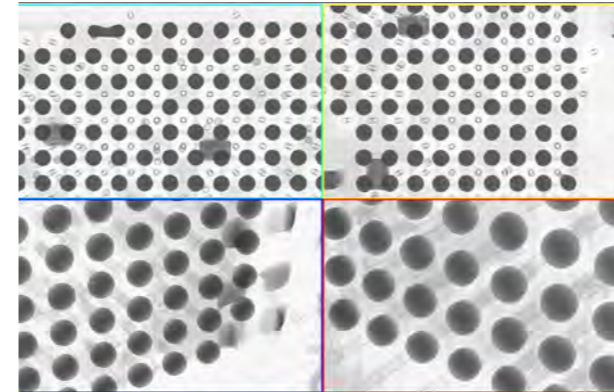
0.95  $\mu\text{m}$  resolution is the difference between seeing a micro-crack in a passive component, and missing it. Jade Plus has the resolution required to perform accurate void analysis inside micro BGA balls.



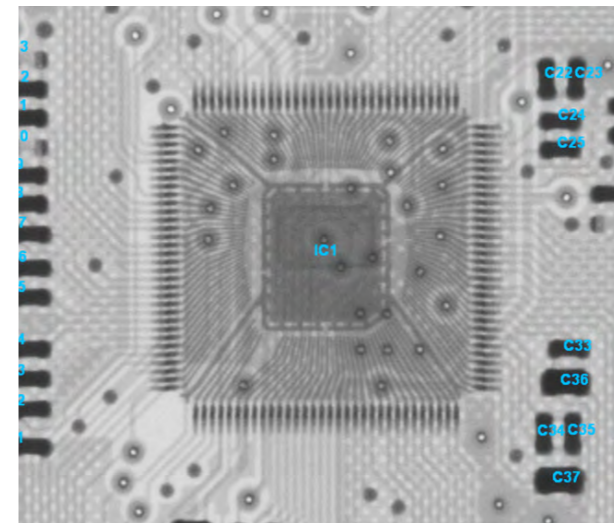
3D visualization of BGA solder balls using optional  $\mu\text{CT}$  accessory.

### Complete Proof

3D visualization gives the clearest proof of product quality. The optional  $\mu\text{CT}$  accessory turns 2D X-ray images of small components into full 3D models.



4-way split screen view makes it easy to compare components and evaluate views from different angles.



See what you are inspecting and move to parts quickly with the Component Location feature.

## Fast Throughput

### Automated Inspection Routines

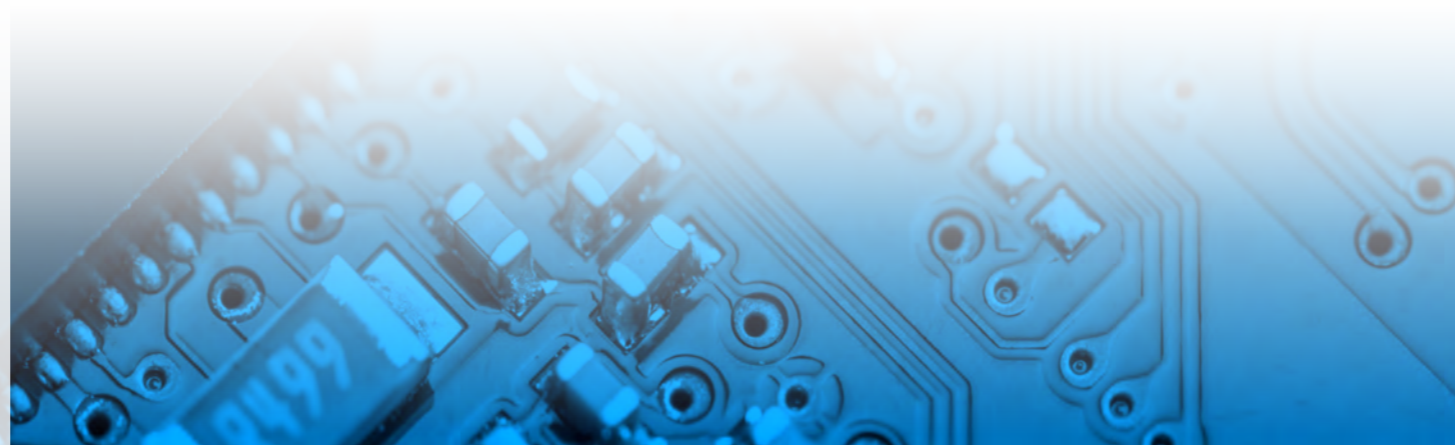
Save time inspecting batches of boards with automatic inspection routines. Program a routine once, then simply insert the board and click to go. Reports, generated in seconds can be saved locally or on a central database.

### 2 x Oblique Angles

Finding quality defects is fast and easy thanks to the unique double oblique axis geometry. See every detail from all sides at high magnification, without having to rotate the sample. You will never lose sample orientation.

### Easy Navigation

Never lose your way with Component Location. Move straight to any device on the board with a single click. Know what you are looking at as you move around with the live part ID viewer overlay.



# Inspect With Confidence

To prove your quality with confidence, you need the highest quality tools.

Based in Aylesbury, UK, Nordson DAGE is the only company that designs and manufactures every major component of the X-ray inspection system in house.

This unique, completely integrated approach is at the heart of Jade Plus. Their purpose is simple: be the most effective X-ray inspection tools for PCB level quality control.



**Guaranteed support from Nordson's worldwide network**

## 2 x Oblique Angles

Nordson DAGE's unique double oblique angle detector geometry is the fastest way to check for defects that may only be visible from specific viewing angles.

## VR4 Open Tube

4th generation open tube technology is perfect for looking inside electronics samples at micron level resolution.



## Gensys® Software

Developed specifically for electronics inspection, Gensys wraps up comprehensive measurement tools and automation into an intuitive point-and-click platform that's quick to learn, so you can be at maximum productivity sooner.

## QuadraGEN®

Created for the Quadra® range of high resolution X-ray inspection systems, QuadraGEN provides the power and stability required for high quality X-ray images.

# Open Tube Technology

Jade Plus features an open X-ray tube with replaceable tungsten filament allowing 0.95 µm features to be resolved at up to 3 W power.

## Easy Maintenance

The operational life of tungsten filaments is short and the individual life is unpredictable. The open tube is designed with maintenance in mind so you can be up and running fast, whenever the filament defocuses or expires.

## “As New” Performance

The filament fade associated with Tungsten filaments means image quality will degrade over time. However, you can experience “as new” performance at any time by simply swapping in a new filament.

## Training Included

The X-ray radiation tube is at the heart of the machine and working on it can be daunting. Nordson DAGE provide full operator training covering how to power down the tool, enter the cabinet safely and best practices to minimize the risks of contaminating or damaging the tube during filament changes.

# Start Your Journey

Nordson DAGE offer a comprehensive range of X-ray inspection tools, whatever your needs. Jade Plus and Quadra 3 make quick work of production PCB inspection, Quadra 5 and 7 feature superior magnification and power for advanced PCB, package and wafer level inspection, and failure analysis.

Quadra and Jade Plus both feature the intuitive, point-and-click Gensys® X-ray Inspection Software. If your operators are trained on Jade Plus, they will already be able to operate Quadra.

## Seeing is Believing™

**Choose Quadra® for a maintenance free alternative.**

The long lifetime QuadraNT® X-Ray tube requires no maintenance or filament exchanges so you can devote all your time to X-ray inspection.

X-ray output and image quality do not degrade over time so you experience “as new” performance for life.

	JADE PLUS	QUADRA
Tube technology	Open transmissive	QuadraNT™ sealed filament free transmissive
Filament technology	Limited life tungsten filament	Long life LaB <sub>6</sub> source
Maintenance free	No: regular filament and pump servicing required	Yes
Maintenance training	Provided during commissioning	No training required
Performance	“As new” image quality following filament change	“As new” image quality for life
Power	Limited to 3W	10 – 20W depending on model

0.95 µm

## JADE PLUS

Regular Maintenance Required

3W

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0.95 µm

## QUADRA 3

Maintenance Free

10W

Heated stage

X-PLANE

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0.35 µm

## QUADRA 5

Maintenance Free

20W

Heated stage

X-PLANE

QUADRAµCT

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0.10 µm

## QUADRA 7

Maintenance Free

20W

Heated stage

X-PLANE

QUADRAµCT

4K UHD

# Specifications at a Glance

PLUS  
JADE

X-ray Tube	Open Transmissive
Feature recognition	0.95 µm
Tube target power	3 W
Voltage	30 - 160 kV

Detector	AspireFP™ Flat Panel Detector
Resolution	1.33 MP
Frame rate	10 fps
Digital image processing	16 bit

Inspection	
Software	Gensys® X-ray Inspection Software for Windows 10
Operation	Mouse point-and-click (joysticks optional)
Oblique angle view	2 × 65° - 360° around point of interest
Inspection area	510 x 445 mm (20 x 17.5")
Magnification	Up to x 7,500
Display	Single 24" WUXGA 1920 x 1200

Installation	
Footprint (W x D x H)	1.45 x 1.70 x 1.97 m
Weight	1,950 kg (4,300 lbs)
Air supply	Not required
X-ray safety	< 1 µSv / hour Meets all international standards

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