

AOI & X-Ray solutions
you can count on.



X3 3D X-Ray

Automated in-line x-ray inspection

Nordson YESTECH's versatile X3 Automated X-Ray Inspection System (AXI) offers complete inspection of solder joints and other critical hidden features found in electronic assemblies, PCB's and packaged semiconductors. Ideal for in-line or off-line operation, the X3's innovative algorithms enable fast and reliable automated inspection and real-time monitoring of critical process information.

Programming is fast and intuitive. Nordson YESTECH's state of the art, patented **Digital Tomosynthesis Technology** acquires multiple images in different slice heights in one inspection cycle. The images can discriminate between components on the top and bottom slices of double sided boards for unimpeded automated inspection.

The utilization of standard package libraries simplify training and ensure program portability across manufacturing lines. Newly available image processing technology integrates several techniques and inspection algorithms, to provide complete inspection coverage with an extremely low false failure rate.

When integrated with Nordson YESTECH AOI inspection, these systems can increase fault coverage to include nearly all process defects. Optional remote programming and SPC software can be utilized to provide a comprehensive yield enhancement solution.

Features:

- Automated 2D & 3D inspection
- Unsurpassed image quality
- High defect detection
- Low false calls
- Fast throughput
- Quick set-up

Automated Inspection for:

- Opens & shorts
- Insufficient / excess solder
- Lifted leads & tombstoned parts
- BGA
- Voids
- Component presence and position

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Specifications

Inspection Capabilities

Modes	2D and 3D operation
Throughput:	4 to .5 sq. in./sec
Maximum Board Size:	Up to 20" x 18" (508mm x 450mm)
Clearance:	Up to 2" (50mm) top and 1" (25mm) bottom
Minimum Component Size:	01005
Defects Detected:	Part: position, missing, wrong, skew, tombstone Lead: bent, lifted, bridging Solder: open, insufficient, short, solder balls BGA: shorts, voids, position, missing ball

Software

Data Requirements:	ASCII Text, NDF pin data
CAD Translation Package:	Excel, Aegis, Unicam, NDF translator, YT translator
Programming Skill Level:	Technician or operator
Operating System:	Windows XP Professional
Off-line Software:	Optional - Rework, Review and Program Creation
SPC Software:	Optional - Real-time local and remote monitoring of first pass yield, defect trends, and machine utilization.

Hardware

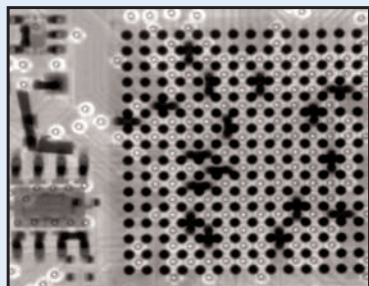
X-Ray Tube:	Maintenance free, sealed reflection target, 5 micron spot size 100 or 130 Kv, 20 to 39-watt max. output
Color Camera:	Barcodes and Fids

Facilities

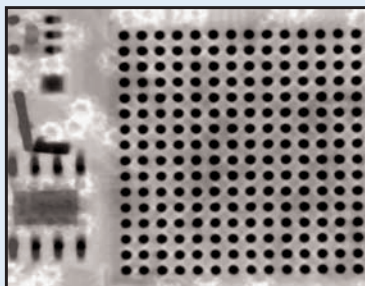
Power:	110 VAC (220 optional) Single Phase 50 / 60 Hz 15amps
Footprint:	59w" x 66d" x 63h" (1,500mm x 1,676mm x 1,600mm)
Weight:	5,500 lbs. (2,495 Kg)
Machine installation:	< 1 hour
Compressed Air:	80 psi, 2 CFM

Safety

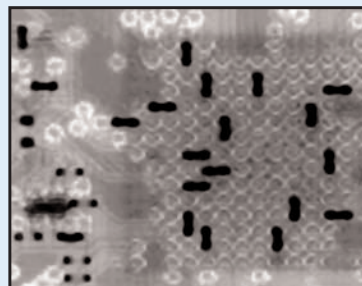
Nordson YESTECH x-ray systems are manufactured to comply with the federal standard for cabinet x-ray equipment as established in Title 21, Subchapter J of the code of federal regulation sections 1020.40. Lead is used to line the cabinet and door, with lead doped glass for the viewing window. Interlock switches ensure that x-ray radiation can not be generated with any part of the cabinet open or removed.



Traditional 2D x-ray image of BGA on a double sided board.



3D x-ray imaging solder joints on top side on a board.



3D x-ray imaging solder joints on bottom side on a board.

Nordson YESTECH

USA Headquarters:
2762 Loker Ave. West
Carlsbad, CA USA 92010
+1.760.918.8471 **Phone**
+1.760.918.8472 **Fax**

Asia:
#137 Guoshoujing Road
Zhangjiang Hi-Tech Park
Pudong,
Shanghai 201203, P.R.China
+86.21.3866.9166 **Phone**
+86.21.3866.9199 **Fax**

Europe:
Bergerstraat 8
6226 BD Maastricht
The Netherlands
+31.352.4466 **Phone**
+31.352.7722 **Fax**

UK
62 Basepoint
1 Winnal Valley Road
Hampshire, SO3 0LD UK
+44 (0) 1962 832654 **Phone**
+44 (0) 1962 832501 **Fax**

Nordson YESTECH
USA Headquarters
2762 Loker Ave. West
Carlsbad, CA USA 92010

+1.760.918.8471 **Phone**
+1.760.918.8472 **Fax**
www.nordsonyestech.com

