

AOI & X-Ray solutions  
you can count on.



## X1 X-Ray

Batch loading / semi-automatic x-ray inspection

The Nordson YESTECH X1 batch x-ray system offers EMS providers and semiconductor packagers a superior yield enhancement solution to reduce costs, improve quality and increase throughput.

The X1 provides users with a high-resolution x-ray capability in a flexible, compact and maintenance free configuration. The X1 is ideal for inspecting mixed BGA/SMT devices, connectors and plated through hole (PTH) assemblies. The high power 130Kv x-ray source provides ample energy to image even the most demanding samples, including those with metal sinks.

The X1 is available with a 4 or 5 axis sample manipulator and a 15" x 20" (380mm x 508mm) x-y travel for samples up to 5 pounds in weight. Full 360 degrees of rotation and 30 degrees of tilt are available. Stepper motor drives provide a wide range of motion from ultra-slow use at high magnifications, to high speed for travel over large distances. All systems come with a unique control module and programmable motion via an easy to use "teach mode."

The X1 comes with Nordson YESTECH's proprietary machine vision technology for fully automated inspection of BGA and flip chip devices. Other automated inspections include die attach, bond wire and correct assembly verification.

### Features:

- High resolution
- 3D off axis viewing
- Automated inspection
- Maintenance free
- Cost effective

### Automated Inspection for:

- BGA / flip chips
- Solder joint quality
- Voids
- Bond wires
- Electronic and sealed assemblies

# X1 X-Ray Batch loading / semi-automatic x-ray inspection

## Specifications

### Hardware

X-Ray Tube: Maintenance free  
Sealed reflection target  
130 Kv, 5 micron spot size  
39-watt max. output

### Sample Manipulator

15"x 20"x 18" (380mm x 508mm x 457mm) x-y-z-theta programmable indexing table with control module.  
Optional tilt available. Variable zoom magnification to 120x.

### Software

Inspection Algorithms: BGA, Void, Wire Sweep, Off-set, 3D rendering  
Programming Skill Level: Technician or operator  
Operating System: Windows XP Professional

### Facilities

Power: 110 VAC (220 optional) Single Phase 50 / 60 Hz 15amps  
Cabinet: 49"x 48" x 80" (1245mm x 1220mm x 2032mm) cabinet w/ 18" x 18" (457mm x 457mm) door and viewing window  
Weight: 2,000 lbs. (907Kg)  
Machine installation: < 1 hour

### 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.

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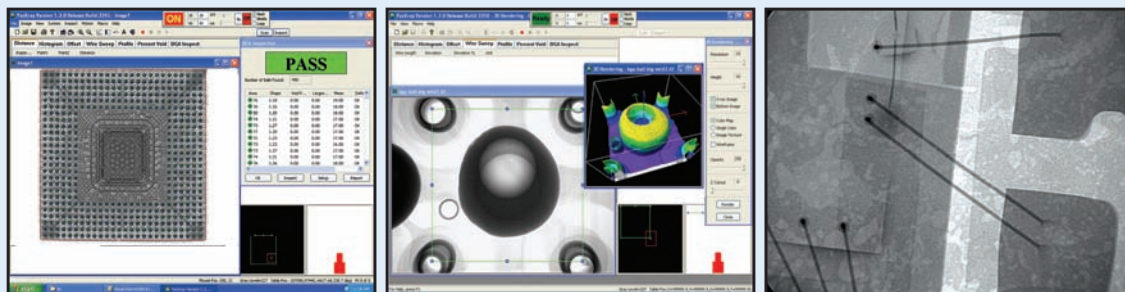
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Automated BGA inspection and SPC software.

3D rendering of BGA ball void.

High magnification image of bond wires.



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