MX3000™ Automated Final Vision Inspection

Automated Optical Inspection

www.nordson.com/TestInspect

Nordson
TEST & INSPECTION

Nordson TEST & INSPECTION

Founded in 1954, Nordson Corporation is a market leading industrial technology company with annual revenues of over $2.1 billion and more than 7,500 employees worldwide.

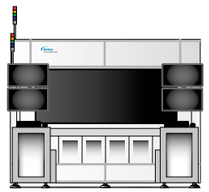
Nordson TEST & INSPECTION offers its SMT & Semiconductor customers a robust product portfolio, including Acoustic, Optical and both Manual and Automated X-ray Inspection systems, X-ray Component Counting systems and Semiconductor measurement sensors. Nordson TEST & INSPECTION is uniquely positioned to serve its customers with best-in-class precision technologies, passionate sales and support teams, global reach, and unmatched consultative applications expertise.

Exceptional support
from Nordson's worldwide network

AOI Products

Proprietary Advanced Technology

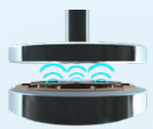
Optical Inspection & Metrology



WS Products

Improve Your Yields

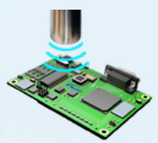
Semiconductor Metrology Sensors



AMI Products

Qualify Your Design

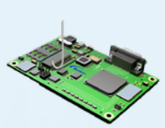
Acoustic Inspection

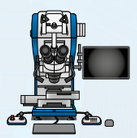


BT Products

Test Your Design

Bondtesters

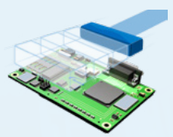


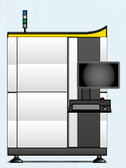


AXI Products

High Speed High Flexibility

Automated X-ray Inspection

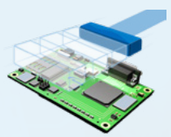




MXI Products

Making the Invisible, Visible

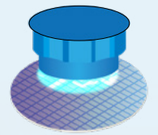
Manual X-ray Inspection

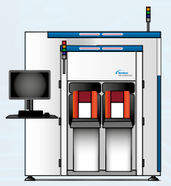


AXM Products

Measuring the Invisible

Automated X-ray Metrology

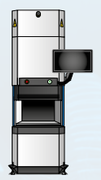




CC Products

Maximize Efficiency

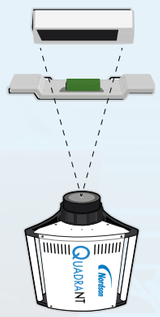
X-ray Component Counting



XRT Products

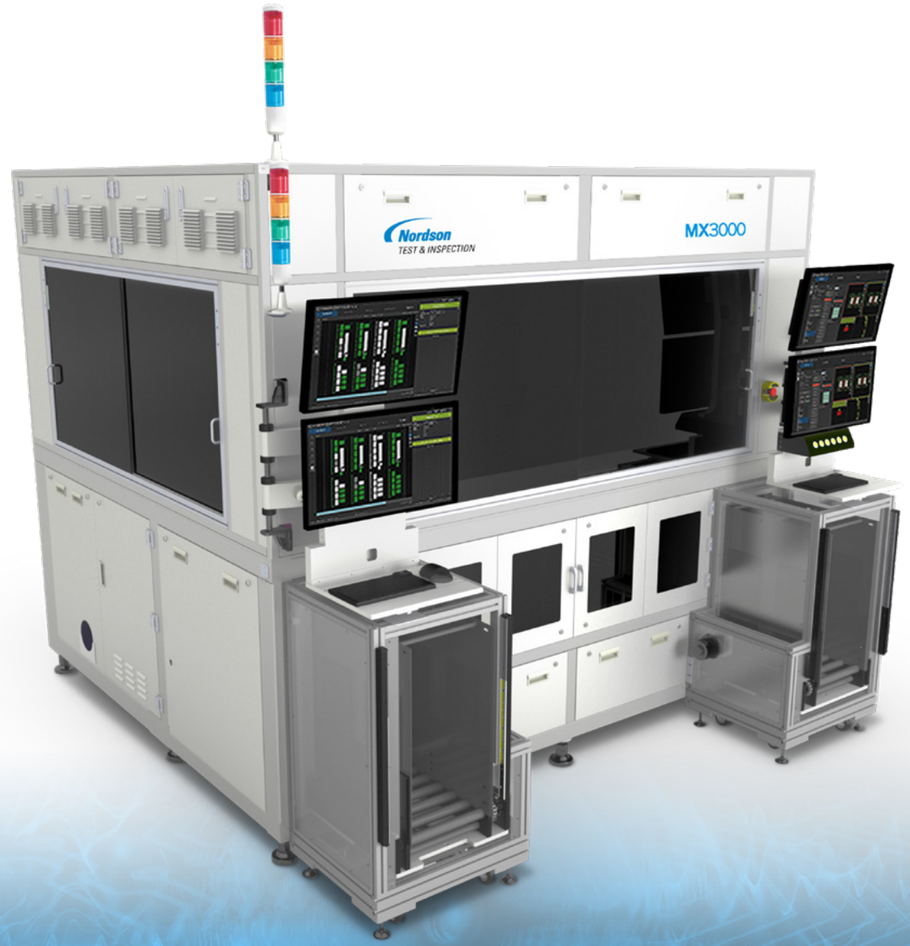
High Speed High Resolution

X-ray Technologies



The Ultimate in Speed and Accuracy

The MX3000™ is powered by Nordson TEST & INSPECTION's breakthrough 3D sensing technology comprising of two MRS Sensors delivering simultaneous dual-sided automated final vision inspection for singulated memory modules - for metrology grade accuracy at production speed.



High Precision Accuracy

Nordsons' unique sensor architecture simultaneously captures and transmits multiple images in parallel while proprietary 3D fusing algorithms merge the images together. The result is ultra-high quality 3D images and high-speed inspection.

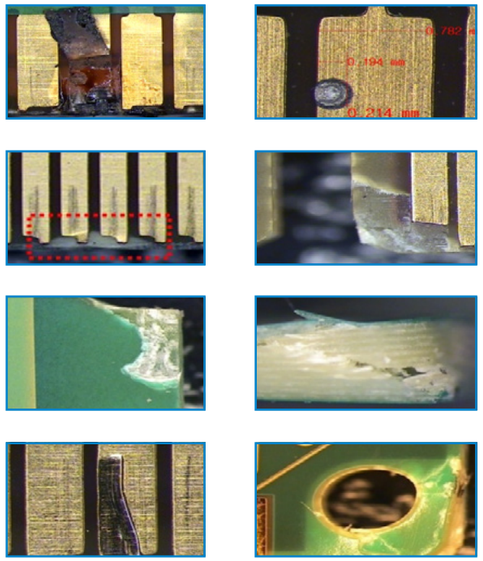
Flexibility At Its Best

The MX3000™ 3D Automated Optical Inspection (AOI) system enables high resolution, dual-sided final vision inspection that doubles productivity. In-line multiple module grippers minimize handing tact time, and autoconversion supports various memory module form factors (RDIMM, SODIMM, VLPDIMM, UDIMM and others.)

The system provides in-line defect review stations and auto sorts false calls into good trays after review, is fully automation-ready, SECS/GEM and S2/S8 compliant.

Post-test defect types and pre-shipping inspection capabilities include:

- Components Edge
- Damaged PCB Corner
- Goldfinger Discolored / Burnt / Badly Scratched
- Gold Tab Inspection - Lifted Tie Bar, Burnt, Contamination
- Physically Damaged Components



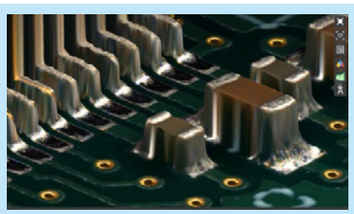
Multi-Reflection Suppression® (MRS®) Sensor Technology

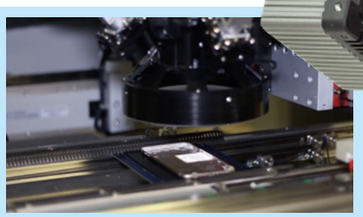
MX3000™ offers unmatched accuracy with the revolutionary MRS technology by meticulously identifying and rejecting reflections caused by shiny components and reflective solder joints.

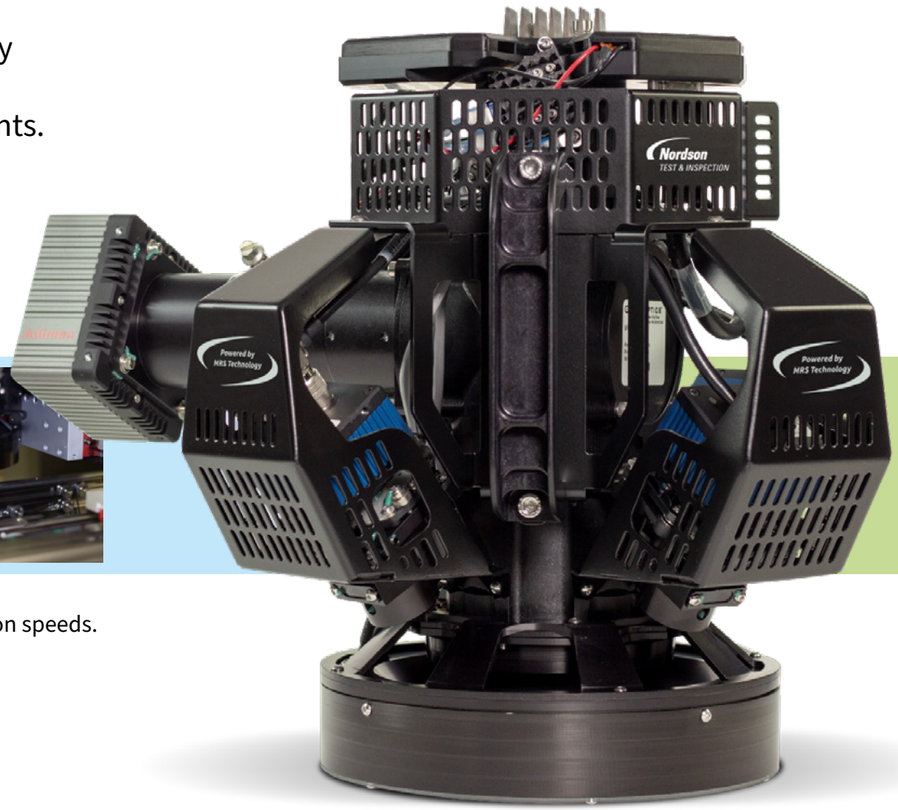
Effective suppression of multiple reflections is critical for highly accurate measurements making MRS an ideal technology solution for a wide range of applications including those with very high quality requirements.

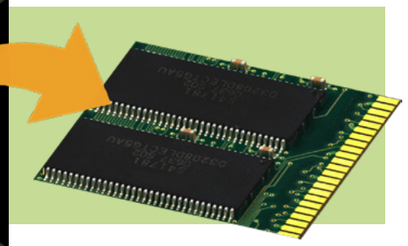
Reflection based distortions

MRS is designed to Inhibit reflection-based distortions from shiny and specular surfaces.

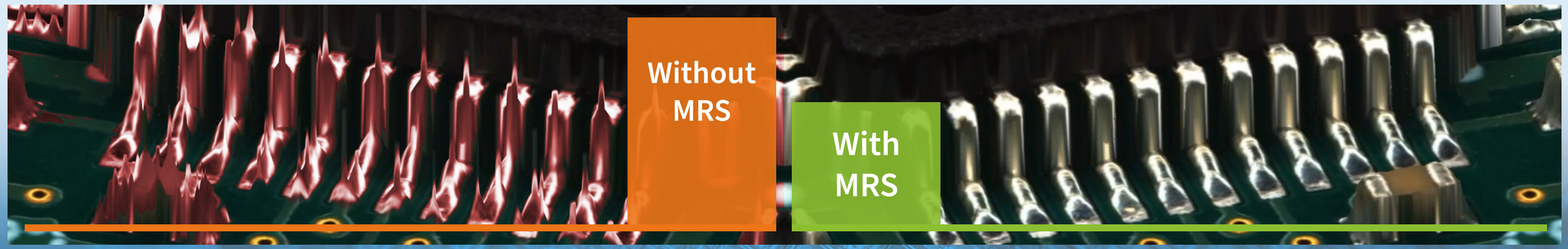








Enabling the highest possible inspection accuracy at production speeds.

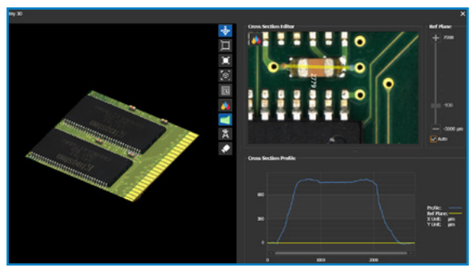


Intuitive, Easy-to-Use Software

The MX3000™ software is a powerful yet extremely simple design with an intuitive interface that reduces training efforts and minimizes operator interaction – saving time and cost. The software includes multi-touch controls and 3D image visualization tools, taking ease-of-use to a whole new level.

Faster, Smarter Programming

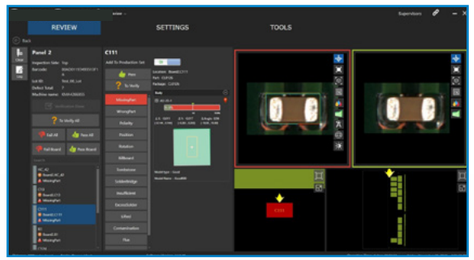
With ultra-fast programming capabilities, auto tuning and other enhancements, Nordsons' AOI software significantly speeds set-up, simplifies the process, reduces training efforts and minimizes operator interaction.



AI²

AI² (Autonomous Image Interpretation) technology is all about keeping it simple - no parameters to adjust or algorithms to tune. And, you don't need to anticipate defects or pre-define variance either - AI² does it all for you.

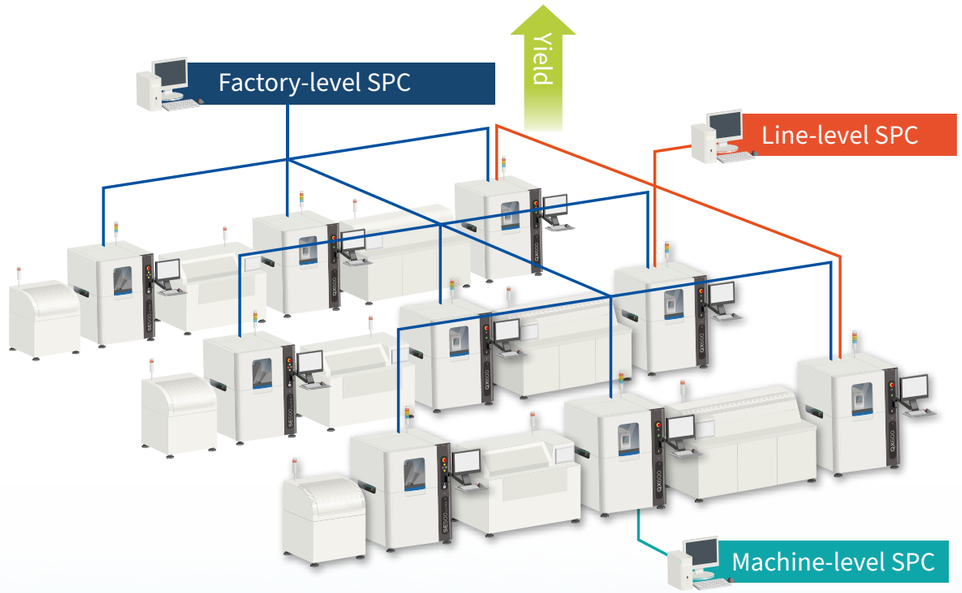
With AI², you have the power to inspect the most comprehensive list of features and identify the widest variety of defects. AI² offers precise discrimination with just one panel inspection making it a perfect solution for high-mix and high-volume applications.



Fast, Scalable SPC Solution

CyberReport™ offers full-fledged machine-level to factory-level SPC capability with powerful historical analysis and reporting tools delivering complete traceability for process verification and yield improvement. CyberReport™ is easy to setup and simple to use while providing fast charting with a compact database size.

CYBERREPORT



Specifications

Inspection Capabilities	
Inspection Speed	50 cm^2/sec (2D+3D)
Minimum Component Size	0402 mm (01005 in.)
Board Length	Min. 25 mm / Max. 140 mm
Board Width	Min. 17 mm / Max. 35 mm
Component Height Clearance (max)	35mm
Component Types Inspected	Standard SMT (chips, J-lead, gull-wing, BGA, etc.), through-hole, odd-form, clips, connectors, header pins, and more
Solder Joint Defects Categories	Solder bridge, opens, lifted leads, wettability, excess and insufficient solder, debris, and more
M3D Measurement inspection	Lifted lead, package coplanarity, polarity dimple and chamfer identification
Other Items Detected	Gold-finger contamination, pin-in-hole, bent pins, debris, OCR/OCV and many others
Component Measurement Categories	Component X, Y position and Rotation

Vision System	
Imagers	Multi-3D sensors
Image Transfer Protocol	PCIe
Resolution	Sub 10 µm
Image Processing	Autonomous Image Interpretation (AI^2) Technology, coplanarity and lead measurement
Programming	Simple inline or offline
CAD Import	Any column separated text file (Standard information required - ref designator, XY, Angle, Part no.,)

System Specifications	
Power Requirements	AC 220V, 3 phase, 60 Hz, 4 wire, Amp: 50A
System Dimensions	2.69m x 2.83m x 2.38 m (W x D x H)
Weight	4.0 tons

Options	
	SPC Software, Alignment Target, Tray Loader/ Unloader Elevated Card, 2nd Review Station

For more information, speak with your Nordson representative or contact your Nordson regional office

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