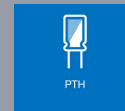




X-Series SMT setup

High Speed Inline AXI platform



With the **X-series platform** Nordson MATRIX presents a dedicated high speed automated X-ray inspection system concept for the inspection of PCB-assembly boards for single/multipanel or samples in trays. All solder joints of SMD and PTH components are covered by a dedicated AXI Algorithm Library.

The Nordson MATRIX system solutions present a modular inspection concept. The platforms feature up to 4 advanced technologies in one system: Transmission X-ray imaging (2D) with patented Slice-Filter-Technique™ (SFT), Off-Axis technology (2.5D) and 3D SART (Simultaneous Algebraic Reconstruction Technique).

The **X-series platform** is available in the following configurations:

- X2** **Transmission (2D) + SFT™**
- X2.5** **Transmission (2D) + SFT™ + Off-Axis (2.5D)**
- X3** **Transmission (2D) + SFT™ + Off-Axis (2.5D) + 3D SART**



Features and Benefits

- High Speed AXI System for In-line and Off-Line setups
- Microfocus X-ray tube (sealed tube / maintenance free)
- Multiple programmable motion system with servo drives
- Digital CMOS flatpanel detector
- Automatic grey-level and geometrical calibration
- Flexible setup for In-line pass through
- Barcode scanner for serial number and product type selection
- Full product traceability via customized MES-Interface

Inspection & Process Software

- PC-Station with multi-core processor setup
 - Windows 10 platform
- MIPS Inspection Platform**
- Advanced algorithm library
 - CAD import for automatic inspection list generation
 - Simultaneous Algebraic Reconstruction Technique (3D SART; X3 only)
 - Automatic Tree Classification (ATC) for Auto-Rule-Generation
 - Off-line programming for AXI program generation & simulation, tuning and defect reference catalogue
- Verification & process control**
- MIPS Verify link with closed loop repair
 - MIPS Proces with real time SPC

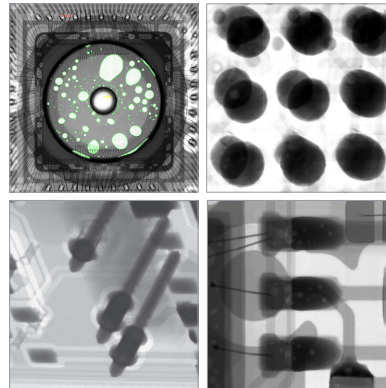
Applications

Electronic components and solder joint

A unique advanced algorithm library is available for electronic applications, specifically for component and solder-joint inspection on PCB, hybrid or chip level assembly processes.

All standard SMD and THT/PTH components

- BGA & dedicated off-axis head-in-pillow (HIP) algorithm
- Comprehensive QFN & gullwing algorithm
- Robust solder surface / heatsink void inspection
- Pin in paste barrel fill measurement
- Discrete down to 1005 pitches



Specifications

Facilities	
Dimensions:	1535 mm (H) x 1800 mm (W) x 1575 mm (D)
Adjustable conveyor height (SMEMA)	950 mm
Weight:	3.000 kg
Safe Operating Temperature:	15° - 28 °C optimal 20° - 25° C
Power Consumption:	max. 6 kW
Line Voltage:	400 VAC, 50/60 Hz 3 phase, 16 A/ 208 VAC, 50/60 Hz 3 phase, 25 A
Air:	5-7 Bar, < 2 l/min, filtered (30µ), dry, oil free

X-ray Image Chain	
<u>X-ray Source (sealed tube)</u>	
Energy:	SMT-Setup 130 kV/40 W
Focal Spot Size:	5 microns
Grey resolution:	14 Bit
<u>Detector Types:</u>	
CMOS Flatpanel Detector	50 µm pixel size (5 MPix) 75 µm pixel size (3 MPix)

Inspection features	
Max. sample size:	460 mm x 360 mm
Max. inspection area:	460 mm x 360 mm
Min. sample size	80 mm x 80 mm
Sample thickness	0,8-10 mm
Max. sample weight:	5kg
Angle shot capability:	0 – 40 dgr
Resolution	down to 5 µm / pix

Inspection speed	
Transmission (X2, X2.5, X3)	up to 6 views /s
Off-Axis (X2.5, X3)	up to 5 views /s
3D SART (X3)	up to 1 s /FoV

Motion System	
Multiple axes programmable motion system	
<u>Installed axes</u>	
x,y (linear drives)	sample table
z (servo)	magnification
u,v (linear drives)	detector movement
<u>Conveyor setup</u>	
pass through	single lane

Assembly clearance	
Topside (incl. sample thickness):	35 mm
Bottom side (excl. sample thickness):	35 mm
Min. edge clearance for clamping:	3 mm

Options	
Barcodereader	
Low-dose radiation filter	

For more information, speak with your Nordson MATRIX representative.

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