

X-series SMT setup



Solder Joint
Inspection



PTH



Power devices
Cooling plates

Flexible Inline AXI Platform

With the X-series platform Nordson Test & Inspection presents a dedicated high speed automatic 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 Test & Inspection 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) + SFTTM
- X2.5 Transmission (2D) + SFTTM + Off-Axis (2.5D)
- X3 Transmission (2D) + SFTTM + Off-Axis (2.5D) + 3D SART

Inspection & Process Software

- PC-Station with multi-core processor setup
- Windows 10 platform
- MIPS 5 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
 - Offline programming for AXI program generation & simulation, tuning and defect reference catalogue
- Verification & Process control
 - MIPS Verify link with closed loop repair
 - MIPS Process with real time SPC

Features and Benefits

- High Speed AXI system for inline setups
- Microfocus X-ray tube (sealed tube / maintenance free)
- Multiple programmable motion system with linear motor axes
- Digital CMOS flatpanel detector
- Automatic grey-level and geometrical calibration
- Barcode scanner for serial number and product type selection
- Full product traceability via various Industry 4.0 MES-Interfaces
- IPC-CFX ready



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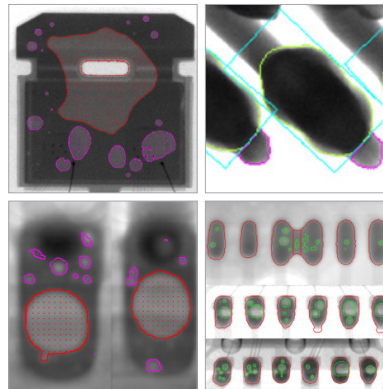
Applications

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:

- Loosen screws
- Missing modules
- Extra parts
- Foreign objects
- Cracks and other mechanical damages



Specifications

Facilities

Dimensions:	1630 mm (H) x 1800 mm (W) x 1575 mm (D)
Adjustable conveyor height (SMEMA)	950 mm
Weight:	2.800 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
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:	5 kg
Angle shot capability:	up to 50 deg
Resolution	3-4 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>	
Inline set-up	automatic width adjustment

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
Auto BCR scanning station (x-y gantry)
Semi Compliance

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

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