

X#-Series High Power setup

Flexible Inline AXI platform



Power devices
Cooling plates



Solder Joint
Inspection



Batteries

The X#-platform series is an inline automated X-ray system which covers a wide range of AXI applications. It is a flexible platform with very versatile fields of use depending on the application requirements. The inspectable applications range from component level inspection for wire bonds, large SMT boards, high-power electronic modules up to fully assembled modules

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 (**S**imultaneous **A**lgebraic **R**econstruction **T**echnique).

The 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

- Flexible AXI system for inline and island of automation configurations
- 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 inline pass through or same-side in/out configuration
- 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
- Offline programming for AXI program generation & simulation, tuning and defect reference catalogue

Verification & process control

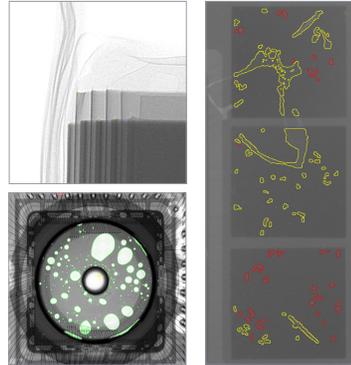
- MIPS Verify link with closed loop repair
- MIPS Process with real time SPC

Applications

POWER HYBRID (VOIDING) & BATTERY INSPECTION

A unique advanced algorithm library is available for electronic applications, specifically for power hybrids and battery components. Special high power setup to penetrate dense material.

- Specific voiding algorithm for hybrid applications
- Advanced cooling plates / heatsink
- Void inspection
- Battery inspection: Measuring of Anode-Cathode overhang and number of layers



Specifications

Facilities	
Dimensions:	1775 mm (H) x 3100 mm (W) x 1760 mm (D)
Adjustable conveyor height (SMEMA)	890 – 980 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	
X-ray tube (sealed):	High Power Setup 150 kV/75 W
Focal Spot Size:	5 microns
Grey resolution:	16 Bit
Flatpanel Detector	100/200 µm

Inspection features	
Max. sample size:	510 mm x 410 mm
Max. inspection area:	480 mm x 410 mm
Min. sample size	100 x 80 mm
Sample thickness	0,8-10 mm
Max. sample weight:	10 kg
Angle shot capability:	0 – 25 dgr
Resolution	down to 6 µm / pix

Inspection speed	
Transmission (X2#, X2.5#, X3#)	up to 3-4 views /s
Off-Axis (X2.5#, X3#)	up to 2-3 views /s
3D SART (X3#)	up to 3 s / FoV

Motion System	
Multiple axes programmable motion system	
<u>Installed axes</u>	
x,y	sample table
z	magnification
u,v	detector movement
<u>Conveyor setup</u>	
pass through	single lane
in-out same side	dual lane

Assembly clearance	
Topside (incl. sample thickness):	100 mm
Bottom side (excl. sample thickness):	40 mm
Min. Edge clearance for clamping:	3 mm

Options	
Barcodereader	
Auto BCR scanning station (x-y gantry)	
Low-dose radiation filter	

For more information,
speak with your
Nordson MATRIX
representative.

Germany/ Western Europe

Feldkirchen (Munich)
+49.89.2000.338.200 **Phone**
info@nordsonmatrix.com **EMail**

Germany/ NDT systems

+49.5121.875.8428 **Phone**
info@nordsonmatrix.com **EMail**

Hungary/ Eastern Europe

+36.30.876.5038 **Phone**
hungary@nordsonmatrix.com **EMail**

USA

+1.760.930.3301 **Phone**
serviceusa@nordsonmatrix.com **EMail**

Brazil

+55.19.99980.0505 **Phone**
brazil@nordsonmatrix.com **EMail**

South East Asia

+65.6552.7533 **Phone**
sea@nordsonmatrix.com **EMail**

China

+86.512.6665.2008 **Phone**
china@nordsonmatrix.com **EMail**

Japan

+81.3.3599.5920 **Phone**
info@nordsonmatrix.com **EMail**

Korea

+82.31.736.8321 **Phone**
info@nordsonmatrix.com **EMail**

Taiwan

+886.963.004.675 **Phone**
cs.taiwan@nordson.com **EMail**

India

+91 44 4353902 **Phone**
sea@nordsonmatrix.com **EMail**