

X#-Series FATP setup

Flexible Inline AXI platform



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. This platform with FATP setup features up to 3 advanced technologies in one system: Transmission X-ray imaging (2D) with patented Slice-Filter-Technique™ (SFT) and Off-Axis technology (2.5D).

The **X#-series platform** with FATP setup is available in the following configurations:

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



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
- Automatic Tree Classification (ATC) for Auto-Rule-Generation
- Offline programming for AXI program generation & simulation, tuning and defect reference catalogue

Verification & process control

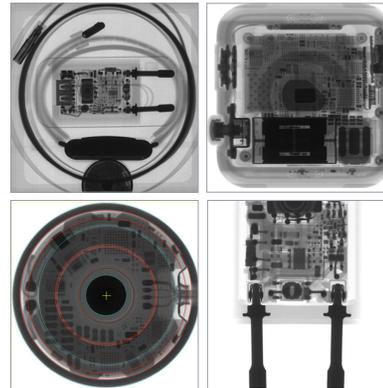
- MIPS Verify link with closed loop repair
- MIPS Proces with real time SPC

Applications

SUB-ASSEMBLIES & FINAL ASSEMBLIES

A unique advanced algorithm library is available for inspection of special defects and features of assemblies:

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



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	
<u>X-ray Source (sealed tube)</u>	
Energy:	FATP-Setup 130 kV/40 W
Focal Spot Size:	5 microns
Grey resolution:	up to 14 Bit
<u>Detector Types:</u>	
CMOS Flatpanel Detector	50 µm pixel size (5 MPix) 75 µm pixel size (3 MPix)
TDI line scan	48 µm pixel size

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
Max. sample height:	145 mm
Max. sample weight:	10 kg
Angle shot capability:	0 – 40 dgr
Resolution	down to 5 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
Line scan	up to 400 mm / s

Motion System	
Multiple axes programmable motion system	
<u>Installed axes</u>	
x,y	sample table
z	magnification
u,v (optional)	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):	45 mm
Min. Edge clearance for clamping:	6 mm

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

For more information, speak with your Nordson MATRIX representative.

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