Automated X-ray Inspection

TECHVALLEY

EUROPE

POWER

X-RAY

TECHVALLEY

SMART **AXI**

HAWKEYE9020 **AXI**

HAWKEYE *Series*

In-line X-ray Inspection System Optimised for
Single and Double Sided Assemblies

techvalley-europe.com

HAWKEYE *Series*

In-line AXI (Automatic X-ray Inspection)
A new laminography and iTOP technology based on AI platform

HAWKEYE9010 AXI
HAWKEYE9020 AXI
HAWKEYE9030 AXI

Techvalley's flagship product range is the Hawkeye AXI, automated inspection solutions based on a unique AI Platform, fully developed in-house and with patents pending on key technologies.

The Hawkeye Series is a unique, revolutionary inspection solution to automatically determine the quality of PCBA's, combining ultra-high speed, accuracy and repeatability.

Laminography has long been accepted as the best solution for the automated x-ray inspection of PCBA's, but this product takes in-line inspection to a whole new level.
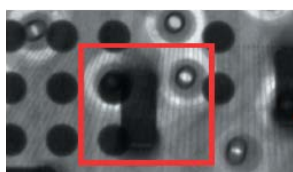
The i-TOP (Inspection Technology for Overlapped Patterns) is a unique algorithm processing technology based on artificial intelligence and uses only one image for the inspection. Traditional laminography techniques require five images or more. i-TOP accurately recognises defects that are challenging due to overlapping devices on double sided boards.

This increased throughput and improved accuracy maximises the efficiency of production lines and dramatically improves first time pass rate.
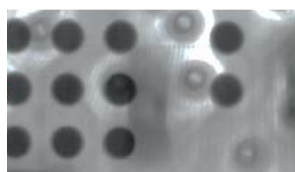The Hawkeye Series is up to 70% faster than other systems, with a false call rate, down to below 3%. These numbers were proved in an evaluation using Samsung 5G products. The Hawkeye AXI is the perfect in-line x-ray inspection solution for complex double-sided assemblies and demanding packages including: SiP, PoP, SoP

The Hawkeye AXI Series functions perfectly as an automated inspection system without any human interaction. All data collected can be stored and exported into management information systems, therefore the Hawkeye AXI is fully ready for integration into Smart Factory and Industry 4.0 concepts.
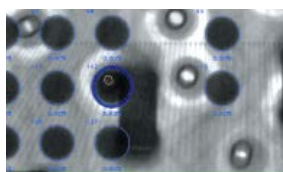
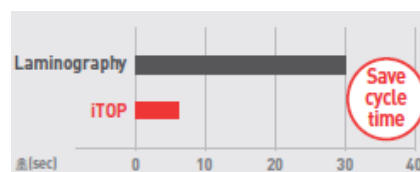## Inspection Images

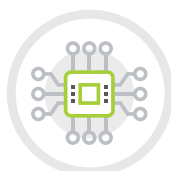2D image

Laminography image

iTOP image

Inspect speed comparison

Applications

Mobile Parts   PCB/FPCB   Camera Module   LED   Intenna/ Antenna   Batteries   ECU Boards

Specification

Contents	HAWKEYE9010 AXI	HAWKEYE9020 AXI	HAWKEYE9030 AXI

X-Ray Tube

Tube Type	Sealed Type	Sealed Type	Sealed Type
Inspection Resolution Max.	2μm	2μm	2μm
Field of View	4x4 ~ 30x30 (mm)	4x4 ~ 30x30 (mm)	4x4 ~ 30x30 (mm)
Max. Tube Voltage	110kV	110kV	130kV
Max. Tube Current	250uA	250uA	320uA
Power	25W	25W	16W

X-Ray Imaging

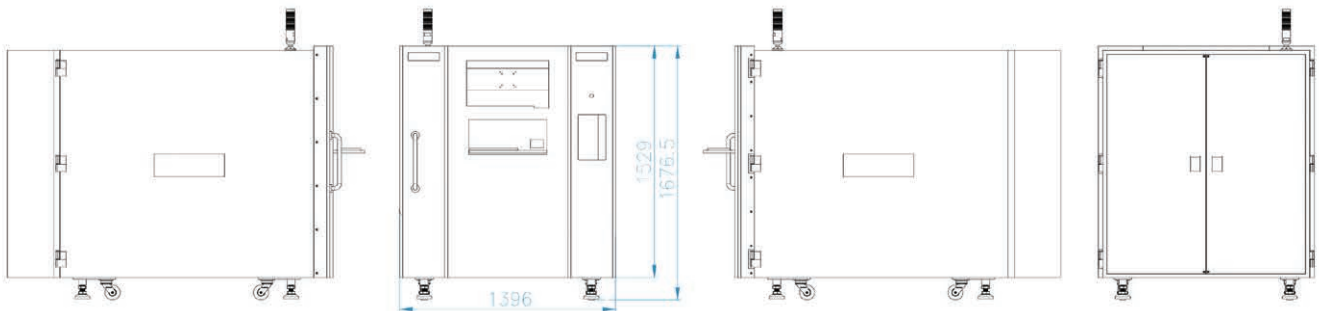|			
Detector	Flat Panel Detector	Flat Panel Detector	Flat Panel Detector
Flat Panel Detector	5 inch	5 inch	5 inch
Resolution	6.9 Megapixels	6.9 Megapixels	6.9 Megapixels

Manipulator

Inspection Area (mm) 2D	380 x 380	380 x 380	380 x 380
Inspection Area(mm) 2.5D (45°)	90 x 90 (30°)	250 x 250 (45°)	250 x 250 (45°)
Axis	8axis	8axis	8axis
Max. Sample Loading	5kg	5kg	5kg

Hardware

Dimension (WxDxH)	112x1638x1550	1400x2107x1680	1524x2122x1503
Weight	1450kg	2500Kg	2700Kg
Power Consumption	Max. 3KW	Max. 5KW	Max. 5KW
Electricity	220V, 1 Phase	220V, 1 Phase	220V, 1 Phase
Air	5kg/cm², 8mm(Ø)	5kg/cm², 8mm(Ø)	5kg/cm², 8mm(Ø)

Dimensions

Please note | Specifications are subject to change without notice.

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