

The **XT-3** is a high-resolution manual x-ray inspection system designed to address fast intuitive operation, low volume production capacity, and advanced failure analysis for SMT production inspection and quality control protocols. This system addresses more complex SMT solder-joint and semiconductor inspection and analysis. It is easy to learn and easy to use by all production floor operators, technicians, and engineers. The small footprint allows passage through a standard door width. This system offers exceptional image quality and together with the MatriX Image Processing Software (MIPS) provides industry leading analyzing and automated inspection for BGA, QFN, and Pin-in-Paste or Through-Hole Barrel Fill detection.

MIPS_Analyzer is an advanced inspection software package for manual and semi-automated x-ray inspection solutions. Supporting teach-mode with programmable inspection positions. The image capturing is fully programmable via acquisition types and image-filter tool bar. It guarantees repeatable imaging quality and measurements.

An **advanced algorithm library** for solderjoints and material analysing is part of the standard image processing package. Customized algorithms are optionally available upon request.

SYSTEM FEATURES

- Transmission x-ray with optional oblique viewing
- High resolution setup up to > 40 LP/mm and up to 720x magnification
- 3 axes stepper motor drive system with optional tilt & rotate unit for off-axis imaging
- Microfocus x-ray tube (sealed) with 100 kV
- 130 kV tube optional
- 5 micron focalspot size
- Digital high-resolution flatpanel detector
- Up to 50 mm programmable, variable field of view



FEATURES

MATRIX INSPECTION & PROCESS SOFTWARE Hardware

- PC station with multi-core processor setup
- Windows 7 platform
- 24" high resolution monitor

Inspection platform

- XT series MIPS imaging software
- MIPS_Analyzer software
- Traceability option (barcode reader)
- Algorithms for BGA, QFN, PIP, THT, barrel-fill



Intuitive touchpad & space mouse navigation





APPLICATIONS



HIGH QUALITY X-RAY ANALYSIS

With variable geometric magnification and a 5 micron high resolution image quality, the XT-3 is suitable for advanced electronic applications, specifically for component and solder-joint inspection on PCB, hybrid, or chip level assembly processes.

APPLICATIONS

BGA, QFN, SMT solder-joint inspection, voiding, head-in-pillow (HIP), dewetting and lifted leads cable connectors, wire bond, die attach, counterfeit component detection

INSPECTION REPORTING FOR QUALITY CONTROL

Inspect, measure, detect and report to IPC-7095 and IPC-610 standards for BGA, QFN, and SMT devices with MIPS application software



SPECIFICATIONS

Physical Dimension

Dimensions	33" (W) x 50" (D) x 77" (H)
	x 1250 mm (D) x 1950 mm (H)
Weight	
Safe Operating Temperature	60° to 90° F (15° to 32° C)
Power Consumption	max. 2 kW
Line Voltage	110/220 VAC, 50/60 Hz, 20A

Motion System

3 axis stepper motor drive system (X, Y, Z) Programmable, variable field of view

Optional, programmable oblique viewing fixture (tile & rotate)

X-ray source

Energy	100 kV / 20 W
Optional	130 kV / 40 W
Focalspot size	5 micron
Tube orientation	End window tube

Sample inspection parameter

Max.	board size	500 m	nm (20)"))	k 600	mm	(24"))
Max.	inspection area	370 mm ((14.7")	хŝ	390 m	im (15.5")

Image Detector

Digital flatpanel detector 1207	
Active inspection area	65 mm x 65 mm
Pixel count	1 k x 1 k
Grey value resolution	14 bit
Digital flatpanel detector 1512 Active inspection area Pixel count Grey value resolution	115 mm x 115 mm 1.5 k x 1.5 k

Image performance

Max. magnification	~720X
Field of view (FOV)	up to 50 mm
Spatial resolution	.> 40 LP mm at max. magnification

Safety / Regulatory

Full safe, interlocked enclosure. Complies with all U.S. and International standards for cabinet radiography systems. CDRH directives / CE compliant. Meets CSA and REDA requirements for shipments into Canada.

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