XT 160 HIGH-QUALITY PCB INSPECTION SYSTEM

Nikon Metrology

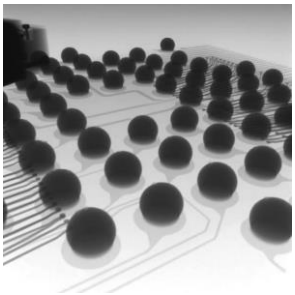
XT V 160 high-quality PCB inspection system

The XT V 160 is specifically designed for use in production lines and failure analysis laboratories. With a precision joystick, system users control the 5-axis sample manipulator. Real-time X-ray allows them to intuitively navigate complex printed circuit boards and electronic components and quickly trace defects. In automated inspection mode, samples can be inspected at highest throughput.

Key benefits

- Leading proprietary micro-focus source technology
- Fast automated component inspection through customizable macros
- Intuitive joystick navigation drives real-time X-ray imaging
- Dual display for combined measurement and real-time analysis
- Low cost of ownership and maintenance with open-tube technology
- Safety as a design criterion
- CT ready

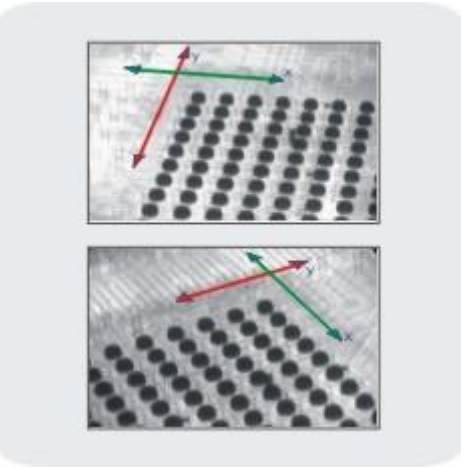
Proprietary NanoTech 160kV source with submicron spot size



A tightly controlled nanofocus X-ray spot and the latest digital imaging technology ensure that the XT V 160 produces sharp images of micron level features even in the most challenging samples. The advanced electromagnetic lens is computer controlled to ensure that the image remains in focus at all kV settings and the target does not burn when using high power.

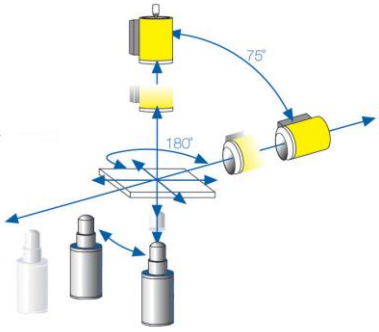
True parallel tracking for best views of BGA analysis

A combination of tilt and rotate is required to give the best unobstructed view of BGA balls. The next step is to scan along the rows to inspect for failures. With standard manipulators, this necessitates the simultaneous operation of 3 axes - requiring considerable skill on behalf of the operator.
X-Tek's true parallel tracking maintains the X and Y axes parallel to the BGA, allowing the rows to be scanned using a single X or Y axis. This feature is enabled as part of the advanced system control concept.



True concentric imaging

The operator chooses a region of interest (ROI) to inspect and positions it in the centre of the screen. Under any combination of rotate, tilt and magnification, the ROI remains completely locked into the center of the field of view.
The true concentric imaging feature operates over the entire scan area of the manipulator. The ROI stays locked in, regardless of the sample's position on the manipulator table, ideal for inspecting around single or multiple BGA balls.



Superior image resolution and magnification reveals all defects

The transmission target design fitted to the XT V160's X-ray source has an ultra thin output window that enables samples to be safely placed within 250 microns of the focal spot providing up to 6000x system magnification. The patented X-Tek Xi "Open Tube" X-ray source is smaller than any other design and allows X-ray images of fine detail in thick and dense samples to be seen with ease. This high energy vacuum de-mountable unit allows views at steep angles through solder joints and heatsinks without ever running out of energy.