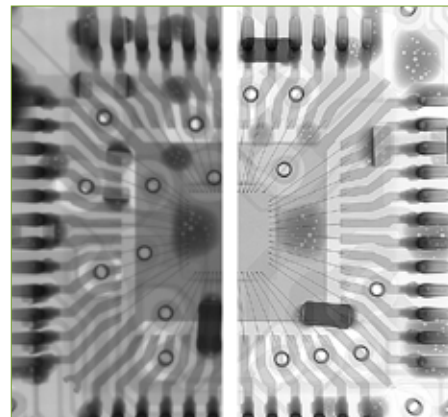# GENSYS™

X-ray Inspection Software

Gensys™ X-ray Inspection Software controls every aspect of the Quadra™ X-ray Inspection System via an intuitive user interface, so you can inspect samples quickly and easily, and with minimal training.

X-ray   Live Filtering

Turn images into solutions

Gensys makes it easy to see the tiniest details and find defects quickly. Building on the high resolution X-ray data acquired by the AspireFP™ flat panel detector, Gensys applies a range of filtering and optimization algorithms to create unbeatable quality inspection imagery.

Live image filters enhance X-ray imagery in real time, making features and defects clearer and easier to measure. Choose from over 30 general purpose and sample specific filters to get the best results for your application, or create your own custom filter chain.

The HDR Imaging feature increases dynamic range so details in both dark and light areas can be seen clearly on one image.

Features and benefits

- Get started quicker, clear point and click user interface is easy to learn.

- Find features faster, live image filters show every detail.

- Inspect similar samples quickly using powerful automated inspection routines.

- Look at individual image layers without cutting the sample with X-Plane®.

Simplicity as standard

GENSYS™

X-ray inspection using Gensys™ is easy and intuitive so both experienced operators and occasional users can inspect samples quickly, and with minimal training.

Ease of use

Whether you are controlling the X-ray power, moving around the sample or performing a measurement, all operations are performed using simple mouse clicks. This makes Gensys the easiest X-ray inspection software to use and quickest to learn, allowing your operators to perform inspections faster.
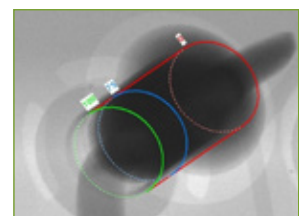
Moving around your sample is effortless thanks to the sample navigation and fault location map. Just click wherever you want to go.
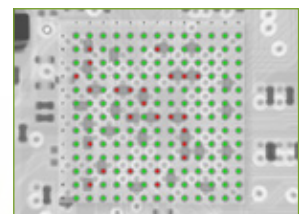

Sample navigation and fault location map. Quickly magnify any component by drawing a rectangle around it.

Measure solder filling in connector through holes. Quadra's oblique angle shows the through hole clearly.

BGA solder ball pass / fail / bridge / missing classification.
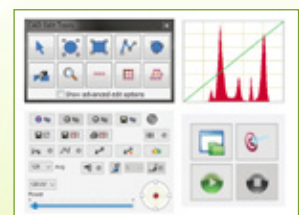
Intuitive user controls makes operation easy and quick to learn.

Quantify

Get the information you really need from your inspection imagery. Gensys includes a range of measurement tools for checking dimensions, finding and analysing voiding in samples, measuring PTH fill levels, pad analysis, and for performing BGA and wire sweep quality control.

Need to measure multiple samples? Simply add these to a Gensys Automated Inspection Routine.

Template based analysis

Take measurements quickly and easily in complex component shapes. The Template Based Analysis add-on module imports CAD design data for use as a template. Perform BGA checks on irregular shaped arrays, analyse voiding and wafer bumps. Template based analysis can also be used in automated inspection routines. Supports AutoCAD DXF, XML, CSV, Text, and Gerber data formats.

Repeatable, automated inspection

Quickly inspect multiple samples to the same quality standards using automated inspection routines. Record an inspection sequence on one sample, then sit back and allow Gensys to inspect your samples automatically.
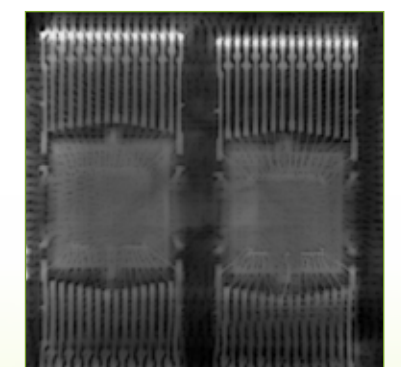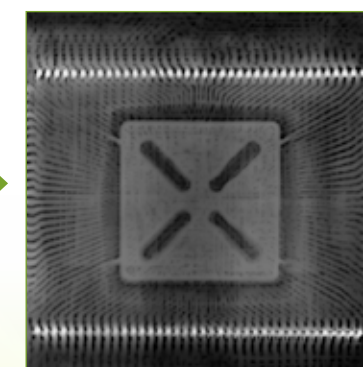
Save your work

Modern quality control protocols frequently require inspection findings to be retained for 10 years or more. Gensys creates informative reports in a variety of formats, ranging from clear annotated X-ray imagery through to comprehensive automated inspection summaries, so you can review past inspection results well into the future.

Slice your samples

Cutting samples for inspection of slices is time consuming, destructive and potentially expensive. The X-Plane® module creates image slices anywhere on the sample tray without additional CT hardware, and without having to manually align the sample.

Protect your sample

Limit your sample's exposure to radiation with built-in X-ray Dose Controls.
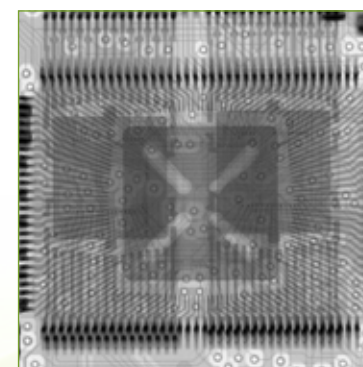
2D X-ray shows both the upper and lower packages in a PoP device.

X-PLANE

X-Plane image slices show the upper and lower devices separately, allowing unambiguous inspection of both separately.

X•PLANE

Specifications at a Glance

Control	Mouse point and click or joystick (optional)
Navigation	Navigation map showing active region, split screen for comparing 4 regions, 360° feature orbit
Detector	Aspire FP™ Flat Panel Detectors
Safety Features	Anti collision X-ray dose monitoring
Filtering	Image averaging, exposure control, contrast filters, 30 live enhancement filters, HDR Imaging mode
Measurement	Dimension measurement, void analysis, plated through hole fill level, pad analysis, ball grid array measurement, wire sweep measurement
Automation	Automated inspection recipes Barcode reader (optional) for sample tracking
Reporting / Archiving	MPEG video and JPG image storage, automated inspection HTML reports and SQL archiving, annotated image reports
Platform	Windows 10

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