

EA6000VX XRF Analyser



**MICROSPOT XRF FOR QA/QC
AND ELEMENTAL MAPPING**



EA6000VX: Versatile, accurate and fast

Maintaining the high quality of miniaturised components in a high-throughput production environment is a challenge for today's electronics manufacturers.

The EA6000VX is designed to meet this challenge head-on by bringing rapid analysis and accuracy to high volume electronics, PCB and semiconductor production facilities.

Our analyser pairs superior detection technology with pin-point measurement location accuracy for fast composition and thickness measurements. From single point, multilayer micro-spot analysis to large area element mapping across a PCB or semiconductor wafer, the EA6000VX gives you confidence in the quality of your product.

Intuitive software and automated analysis make the EA6000VX easy to use for every step of your production process.

High-precision, high-throughput manufacturing

When you need to verify the thickness of a coating layer, provide evidence of RoHS compliance or check for trace elements across a substrate, the EA6000VX gets the job done quickly. And with high performance and reliability designed-in, the analyser supports your high-volume production round the clock.

The EA6000VX has specific features for inspection and production, including:

- | High speed mapping analysis to identify locations of specific elements
- | Automated continuous multi-point measuring for up to 500 locations across a substrate
- | Analyse several layers at once
- | Measure plating thickness for ENEPIG, immersion Ag, immersion Sn and electroless nickel
- | Halogen, RoHS and ELV analysis
- | Automatically adjusts for sample height

The ideal analyser for today's high-volume manufacturers



ACCURATE RESULTS EVERY TIME

High-performance X-ray detector and high-precision motorised stage give reliable, accurate and repeatable results, even at the nm scale.



HIGH THROUGHPUT AT HIGH QUALITY

High degree of automation for fast multi-point measurements across a substrate. Pattern recognition software and automatic adjustment for sample height speeds up manual analysis.



IMPROVED TESTING EFFICIENCY

Vortex SDD X-ray detector increases count rate, so you get accurate results in a fraction of the time. Optimise measurement time and choose the best measurement area for speed and accuracy.



SIMPLE TO USE

Simply load the sample and choose the right testing programme from the menu to start a scan. The high-resolution CCD camera makes it easy to locate the measurement area.



LOW OPERATING COSTS

Very few consumables are needed, and most mapping can be taken in air path, reducing the need to buy and store costly helium.



EASY TO CHECK COMPLIANCE

The software includes RoHS analysis and the analyser itself measures plating thicknesses according to the IPC guidelines 4556 and 4552A.



Bringing automated accuracy to your XRF analysis

The EA6000VX is the ideal choice for PCB, electronics and semiconductor production facilities, where quality is essential and throughput is high.

All the features of the EA6000XV:

Features	
Elemental range NA to U	Including halogen analysis and RoHS analysis. Detects microscopic elements and those buried beneath the surface.
Helium option for accurate analysis of Na and Mg	Only uses helium where absolutely necessary, helping to keep costs down.
Measures thin films and micro-components	Ideal for modern connectors, PCBs and semiconductors.
Rapid element mapping analysis	Generate a map of elements across the surface, including RoHS elements.
Coating thickness measurement	Measures immersion Ag and Sn, electroless nickel and ENEPIG. Conforms to IPC 4556 and IPC4552A.
High-performance Vortex [®] SDD detector	Clear resolution of elements and fast throughput due to high count rate.
High-precision motorised stage	Repeatable, accurate results every time and supports automated scanning.
Automatically adjusts for sample height	Speeds up measurement time and prevents damage to the analyser.
Continuous multi-point measurement	Ensures high throughput while maintaining accuracy and precision of measurements.
Choose between four collimators	Auto switches to the required collimator for optimum analysis area: 0.2, 0.5, 1.2 and 3.0 mm ² .
Measure a range of sample sizes	Maximum sample dimensions: 250mm x 200mm x 150mm.
Multilayer analysis	Measure through the surface to underlying layers and substrate to verify final composition.
Export results	Automatically records and stores results. Exports analysis reports in an easy to read format.
High-resolution CCD camera	Easy to locate and measure right feature on the sample, speeding up measurement times.

For over 40 years, Hitachi High-Tech has pioneered the use of X-ray fluorescence technology and has developed a full range of analytical instruments.

How the EA6000VX supports your quality testing

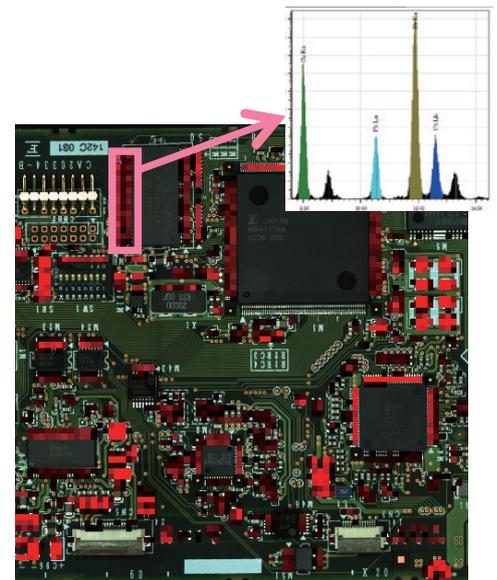
The automated features of the EA6000VX means you can test components fast, with no compromise on measurement accuracy or precision.



HIGH SPEED MAPPING ANALYSIS

In mapping analysis mode, the analyser will scan an area of the surface and generate a map of a chosen element. The rapid and accurate positioning of the sample stage performs the scan quickly: a 10cm² area can be scanned in as little as two minutes. Mapping analysis is also able to detect contaminants too small to be seen by eye, and elements buried beneath the surface.

The resulting image map is superimposed over the high-resolution CCD image for easy analysis. The analyser comes with an exclusive filter for Pb mapping, which is invaluable in detecting Pb across a circuit board.



Elemental distribution superimposed on an image of the part

CONTINUOUS MULTI-POINT MEASURING

Automatically analyse up to 500 positions across 1 or multiple parts, storing results as it goes along. This allows you to measure an entire assembly quickly and accurately supporting your high volume production.

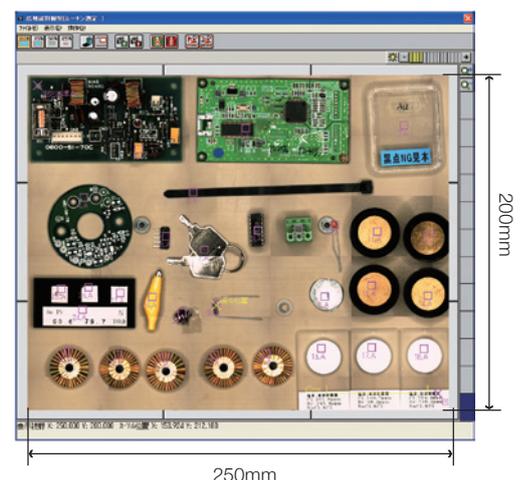


Image of several components on stage



Our Service

Hitachi High-Tech's global network of service hubs offers a full range of technical support to keep you up and running:



TELEPHONE HELP DESKS

Whenever you have a problem, we're ready to help.



ONLINE DIAGNOSTICS

In-depth and rapid support via our website.



TRAINING

To help you get the most out of your analyser and its full range of features.



EXTENDED WARRANTIES

To give you extra peace of mind and avoid unplanned costs.



REPAIR SERVICE

We offer a fast and efficient repair service, recertification and maintenance through our service agreements to ensure your analyser is maintained in excellent condition and avoids any unplanned costs.



Basic safety training in the use of X-ray based devices may be required in your country or territory.



What next?

Contact one of our experts today at contact@hitachi-hightech-as.com to arrange a demo.

MORE INFORMATION

To find out more about the EA6000VX XRF Analyser visit www.hitachi-hightech.com/hha



Other applications

With over 45 years' experience developing XRF analysers, we offer a range of related products:

- | **Forensic** – the analysis of precious metals and Au assay, comparison of glass and metallic fragments, precious stones fakes, gunshot residue GSR on textile from crime scene investigations.
- | **Academia** – a wide range of tasks for microanalysis of geological and metallic samples, investigation of cultural and historical artifacts.
- | **Chemical** – analyses the segregation by mapping and find out defective pellet.
- | **Metals** – metal contaminants in food and for rare metals recycling.

Browse our full range of products online at www.hitachi-hightech.com/hha

Other products

- | **EA1000** – dedicated XRF analysis for RoHS contaminants.
- | **FT110A** – microspot XRF analysis of multilayer coatings, reducing costs from scrap or rework.
- | **X-Strata920** – XRF coating thickness analysis for single and multilayer coatings including alloy layers.

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 Science for a better tomorrow