D24™ C-SAM®

Robustness and Accuracy for Large Samples

Sonoscan®
Sound Technology With Vision

Semi-Automated Acoustic Micro Imaging with Large Coverage

The D24™ delivers the robustness and accuracy of Sonoscan's top lab instrument, combined with a generous 24" x 24" scanning area perfectly suited for large area samples such as component inspection on PC boards and multiple JEDEC trays.
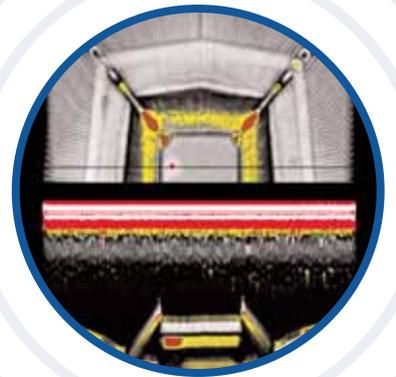
Q-BAM™
Quantitative B-Scan Analysis Mode delivers a "virtual cross-section" of the sample.

Features

- Extra-large Inertially Balanced Linear Scanner with counterweight to minimize vibrations and ensure optimal scanning results

- AutoScan™ allows you to program specific scan parameters and coordinates to quickly and repeatedly analyze specific regions of interest on multiple samples

- Digital Image Analysis (DIA)™ uses advanced algorithms to quantify the acoustic data and allows you to set accurate, automatic, accept/reject criteria

- Multi-Language OS & Visual Acoustics™ interface allows technicians and operators to work in their native language. Includes English, Chinese and Japanese

- Temperature control options to maintain precise water temperature and ensure consistent imaging throughout the day, regardless of changes in ambient air temperature

- Applications Setup Wizard™ and C-SAM Interactive™ help users easily learn and set up new applications for optimal results

- Quantitative B-Scan Analysis Mode (Q-BAM)™ incorporates Sonoscan's proprietary B-scan mode to provide a virtual cross-sectional view with accurate polarity and depth data

Large Area Scanner
capable of scanning multiple JEDEC trays, large PCBs and other samples too big for a standard C-SAM® system.

D24™ C-SAM®

The D24™ is a semiautomated factory floor instrument capable of scanning boards and samples up to 24" or accommodating up to six JEDEC trays of components at one time. The D24 delivers the robustness and accuracy of Sonoscan's top lab instrument, but with very large area coverage capabilities. Plus, the analysis can be programmed to be performed without operator assistance, freeing your personnel for other duties while the inspection is in progress.

The D24 accommodates even the largest boards and permits acoustic micro imaging of components mounted on the board. During the initial scan, each component is inspected while the D24 learns the x-y coordinates of each. It also learns the z coordinate and, equally important, the specific internal depth to be scanned. For a flip chip, for example, the level of interest may be the die-to-underfill interface. For a conventional IC package or a BGA, the level of interest may be the die attach. The D24 software can even store gating information for two or more depths of interest per component.

Because not all components will have the exact same position from board to board, the D24 intelligently detects the x, y and z coordinates and makes minor adjustments as needed, storing a detailed and highly accurate acoustic image of each component. It can also automatically analyze each image. For example, if it detects a void in a die-attach layer, software measures the area of the void as a percentage of the whole die-attach area. This makes it much easier to comply with standards such as Mil-Std-883, Method 2030, and makes it easier to determine the level of significance of any single defect.

At the end of the scan, you'll have a clear "acoustic picture" of the board. If there are a few components that should be replaced, you'll know exactly which components they are and the reason for rework. If the same component is defective on board after board, the problem can be identified and solved. The result is defect-free output with potentially no reduction in total throughput.

Leaders in Nondestructive Internal Inspection

Since its inception, Sonoscan has focused on developing superior Acoustic Micro Imaging (AMI) technology to help our customers build higher quality products. Sonoscan remains the most trusted authority on the application of AMI for nondestructive internal inspection and analysis, and holds more US and foreign patents related to AMI technology than any other manufacturer.

Sonoscan Delivers:

- **Superior Image Quality** by being the only AMI company with our own transducer/lens development lab and fabrication facility
- **Extraordinary Data Accuracy** through our proprietary signal processing algorithms, analysis functions and color maps
- **High Throughput Rates** by developing the most advanced features and instruments
- **Unsurpassed Technical Expertise** with more than 20 dedicated and highly experienced AMI applications engineers on staff

For a complete list of D24™ specifications, please contact Sonoscan at 847.437.6400.