

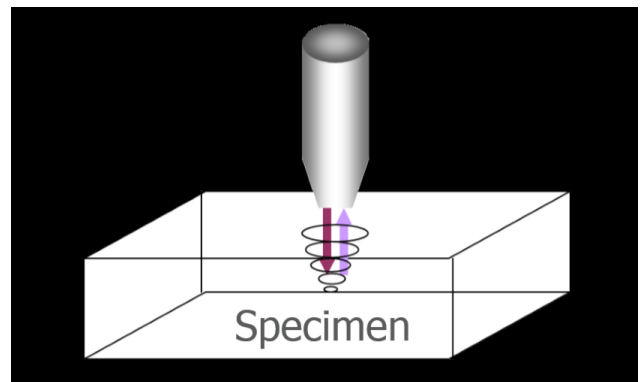
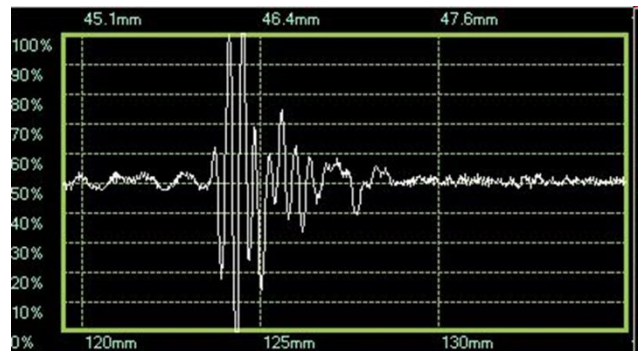
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# SCAN MODES

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With scanning acoustic microscopes the whole volume of a sample can be penetrated and inspected without any change or damage. To get all information needed and a detailed understanding of the inspected sample, different scan modes are used. The following pictures and examples explain the scan modes and their specific advantages.

A-Scan – Amplitude-Scan, one-dimensional. The information is contained in the way the acoustic wave is reflected from the specimen. This time of flight information is depending upon the depths of the sample feature. A digital waveform on the user interface screen displays the arriving echoes. This quantitative time distance measurement (echo-time) display is used to set electronic gates to select the depth range of view. If more than one gate is placed multiple images are displayed on the monitor screen.



For even more scan modes click [here](#).



**KSI Germany**

Scanning Acoustic Microscopy

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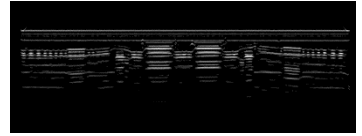
Phone: +49 2772 - 47 66 055  
info@ksisam.com  
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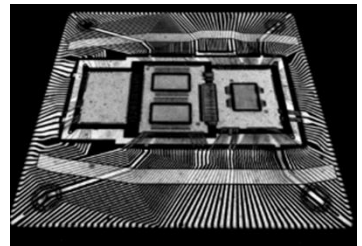
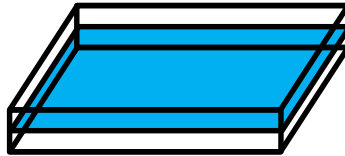
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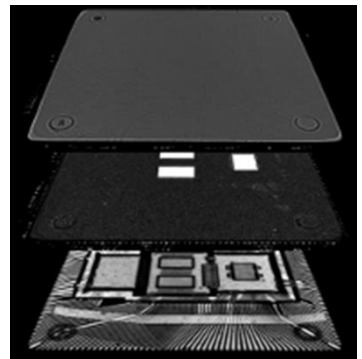
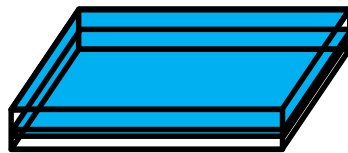
B-Scan (cross section Scan) moves the scanner is moving in x-direction to get a cross section image. The depth of different structures can be measured.



C-Scan (x-, y-Scan) moves the scanner in a meander pattern over the sample, depending on the set of instrument parameters. The image is composed line by line.



G-Scan (Gate-Scan) produces multiple images depending on the „gate memory“. Different settings can be stored for automatic evaluation.



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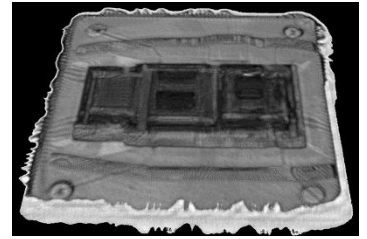
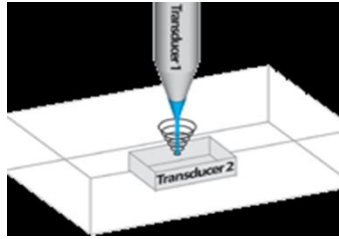
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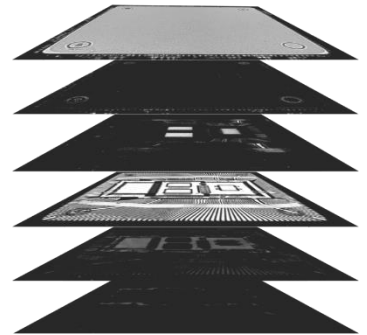
# SCAN MODES

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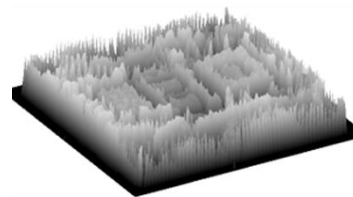
TT-Scan (transmission) stands for Through-Scan. The transducer above the samples emits an ultrasonic signal that is detected by a second transducer placed at the bottom. This image mode provides lower resolution, but a faster information about volume-defects due to the second transducer at the bottom of the sample.



X-Scan - More than 50 pictures of different layers can be created and displayed during a single scan in realtime. The areas and depths of penetration can be selected freely. These pictures can be used for creating a 3D model with the 4D software.



Z-Scan - Automated volume acquisition which enables an offline reconstruction of B-, C-, D-, P-, X-, A-, 3D-Scans and time of flight images with free selectable gate windows



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