

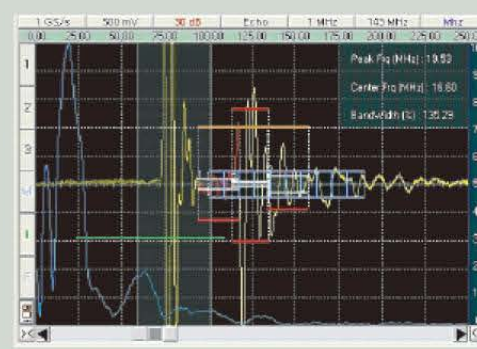
Features

The AcouLab SAM-MINI™ is designed for the compact bench-top Scanning Acoustic Microscope and the valuable price with high performance for the manufacture of integrated circuits (IC's) packages. AcouLab SAM-MINI™ is the smallest size of Acoulab-SAM series, but it's enough size to inspect JEDEC Tray with Pulse/Echo or Thru-Scan mode. The frequency bandwidth is up to 50MHz, it's not enough to inspect all of modern IC's packages. But SAM MINI™ has enough frequency bandwidth to inspect the most of IC's packages with EMC.

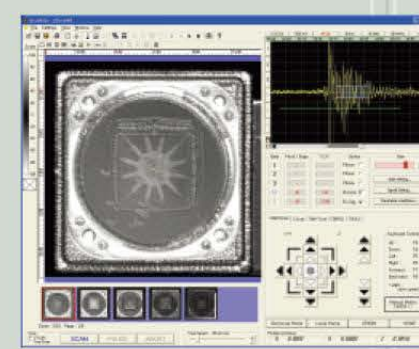
- Low Cost Bench - Top System
- Scanning Area : 350mm X 180mm X 80mm for JEDEC Tray
- High Speed with high resolution system
- Fully SAW control
- Bandwidth : up to 75MHz



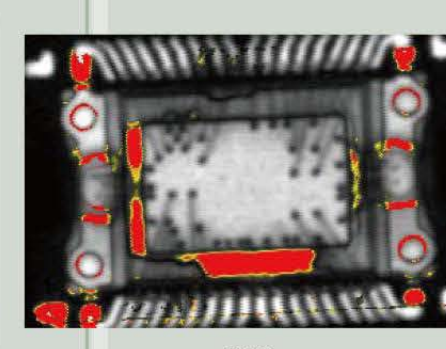
Fully Opened Door with PC



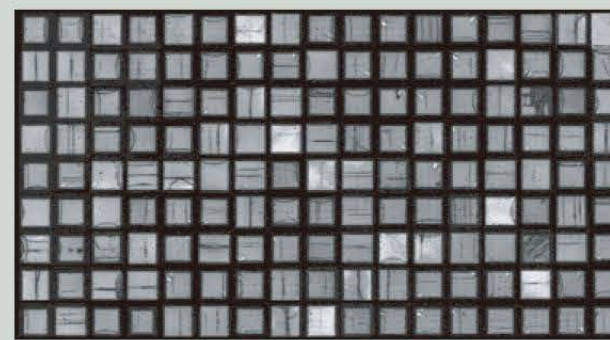
3 data gates with independent phased detector gates, FFT gate, multi-layer gate



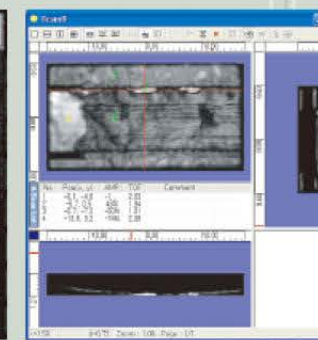
Void in IC Chip



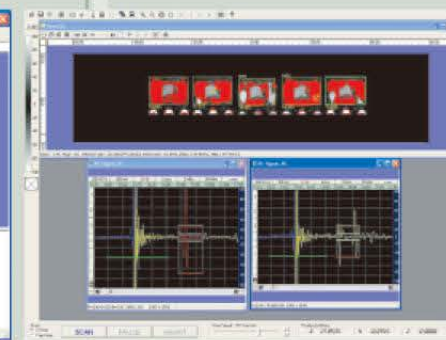
SOP



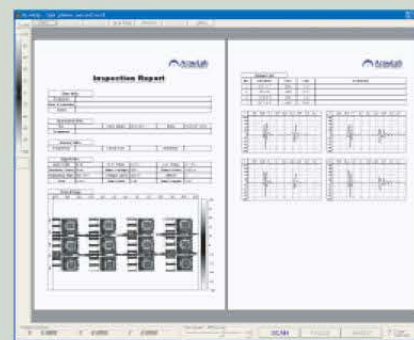
Tray-Scan



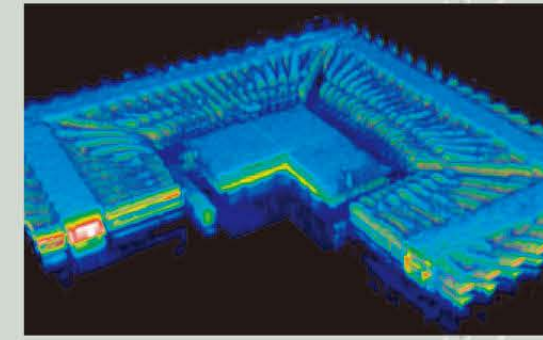
C-Scan and B-Scan Image



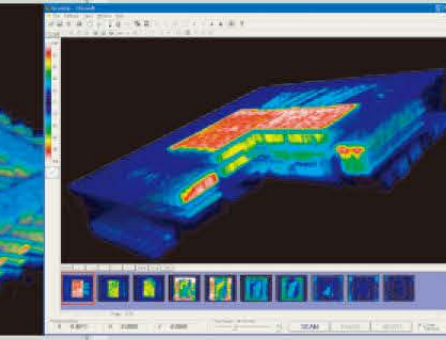
Measurement of Delamination



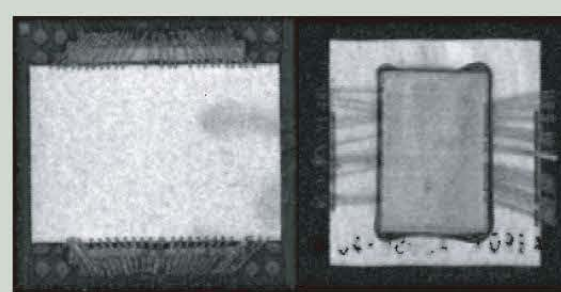
Powerful inspection report



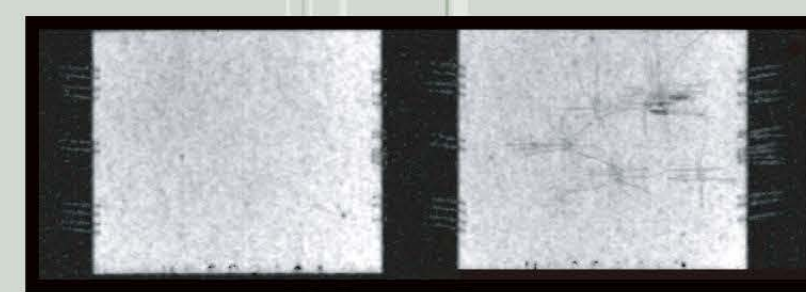
Multi-Layer Scan with Virtual 3D



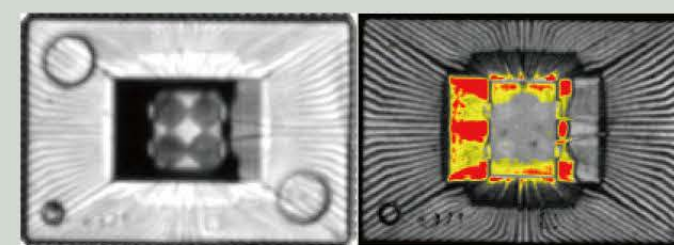
Applications



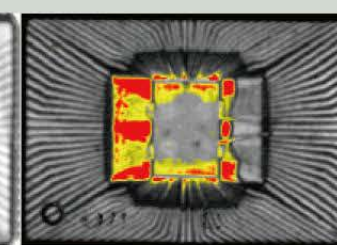
2 Chip Stacks, TBGA



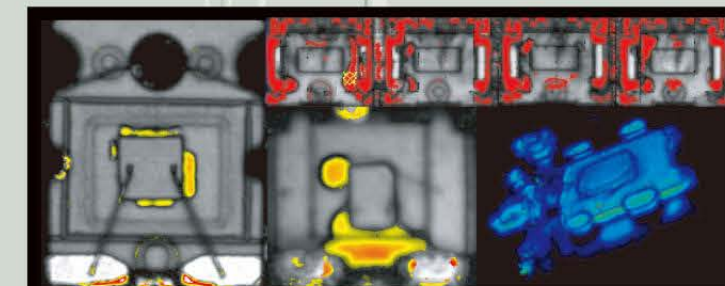
Micro Crack on Stack Die



T-Scan



C-Scan



Power, FET

Specifications

Ultrasonic Pulsar/Receiver

- Frequency Range 1 - 50MHz
- Gain : 0 - 80dB, step : 1dB
- Pulse voltage : 100 - 475V

A/D Converter

- Real time 500MS/s Sampling Rate, 8bits

Scan Axis

- Linear servo motor
- Max. Speed 750mm/s
- Repeatability +/- 1 micron
- Encoder Resolution 1 micron

Index Axis

- Micro-stepping motor with lead screw
- Step Resolution 1 micron

Vertical Axis

- Microstep motor with lead screw
- Max. Stroke 100mm
- Vertical Resolution 1 micron

Scanning Area

- W350 x D180 x H100 mm for Jedec tray

Immersion Tank

- Dimension W430 x D410 x H90mm

General

- Enclosure Dimension W720 x D715 x H425mm
- Weight 35kg
- Power 220ACV, 1Phase, 15A

ScanUp and Scan Analysis Software

- Windows 7 base software for system control and image analysis
- Automatic and manual setup
- Automatic sizing and focusing
- Pulse echo and thru transmission modes of operations
- A, B, C-Scan, FFT-Scan, TOF 3D and Virtual 3D display
- Multi-Layer Scan (Upto 20 Layers), Tray Scan, Strip Scan and Specific Area Scan
- C-Scan image for amplitude, time of flight and phase inversion
- FFT for transducer evaluation
- Size measurement of defects and delamination
- Automatic report generation
- Max. image resolution : upto 10,000 X 10,000 pixels
- 24 bit pseudo color and gray scale display
- Digital oscilloscope.
- Real-time on-screen display
- Parameter file libraries for easy set-up and recall.
- Amplitude cross-sectional display.
- Digital waveform overlay.
- Distance and thickness measurements on-screen.



Scanning Acoustic Microscope



SAM-MINI™