



Contact: Rick Gravley
Sonix, Inc.
(714) 966-1301
rick.gravley@sonix.com

NEW SONIX™ SDI™ ENHANCEMENT FOR INSPECTING 3-D ARCHITECTURES

Springfield, VA - Sonix™¹, Inc., a leading designer and manufacturer of Scanning Acoustic Microscopes, introduces its Stacked Die Imaging (SDI™) enhancement (patent pending). Sonix SDI™ enables users to effectively inspect for defects in semiconductor stacked die and wafer level packages (WLP).

When using ultrasonic inspection to identify defects (eg. cracks, voids, delaminations) in 3-D semiconductor architectures (eg. stacked die packages, bonded wafers), the ultrasonic signal is attenuated through each successive layer of the package or wafer, resulting in poor image quality and less accurate defect identification. Current techniques to deal with this limitation include increasing the signal gain to inspect the deeper interfaces, which saturates the images at the shallower interfaces, or changing focal position and performing multiple scans, which requires more time and limits throughput.

Sonix SDI allows users to selectively increase the ultrasonic signal gain for those interfaces of interest deeper in a semiconductor package or wafer, without saturating the shallower interfaces, providing accurate, single scan defect identification. It also allows users to more effectively use the higher frequency transducers required to inspect increasingly thinner die and wafers, which have less starting signal strength. Applications where Sonix SDI has proven effective include stacked die packages, lidded flip chips and bonded wafers.

The Sonix SDI is configured through Sonix WinIC™ software using a simple graphical user interface to easily select both the interface of interest and the amount of signal gain to be applied. The GUI allows customers to precisely configure the gain for the entire signal profile, improving image quality and defect identification.

Sonix SDI is available as an option on our Echo™, Echo VS™, Echo Pro™ and AutoWafer™ tools, and as a field retrofit on all Sonix Fusion™ and Vision™ tools.

Sonix, Inc. is a designer, developer, and manufacturer of scanning acoustic microscopes (SAM), for use in FA/QA laboratories, R&D and as part of the production process. All Sonix systems have the CE Mark and are Semi S2/S8 compliant.

For more information on the Sonix SDI, or Sonix's complete product line, contact Sonix, Inc., 8700 Morrisette Drive, Springfield, VA 22152; call 703-440-0222, fax: 703-440-9512 or e-mail: info@sonix.com.

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