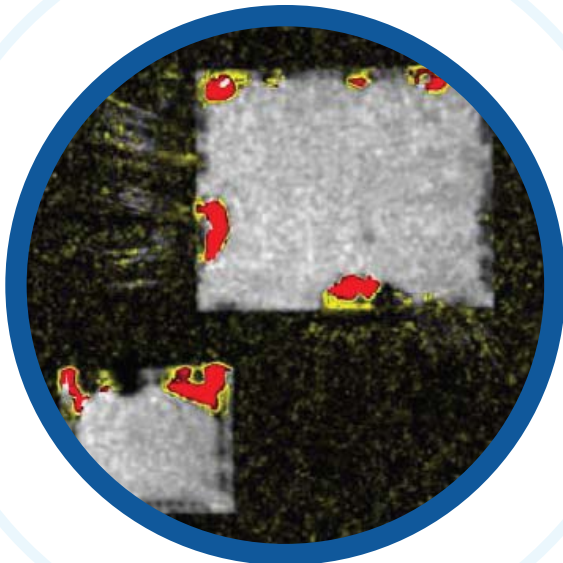


“Looks like the chip I ordered.” But it may be a ticking time bomb.

Protection from counterfeit ICs with Sonoscan’s Acoustic Micro Imaging.



In this example, the delaminations around the edges of the plastic encapsulated microelectronic (PEM), which appear as red areas, are a strong indication that the part is a recycled counterfeit due to its poor quality.



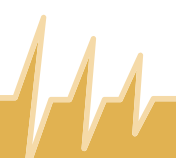
In this example, the orientation of the die within this IC is rotated (arrows) out of its correct position, indicating that the counterfeit part was manufactured by a different vendor or different process than the genuine IC.

More than 360,000 counterfeit integrated circuits (ICs) have been seized by U.S. and European customs. It’s the millions that make it through undetected that are worrisome. When one of these fake, unreliable or faulty ICs fails in a critical application such as an aerospace, military or healthcare application, the consequence can be a matter of life and death. Even in less critical applications, faulty components can wreak havoc.

Protect your products from unknowingly incorporating counterfeit ICs with Sonoscan®’s C-SAM® Acoustic Micro Imaging (AMI) technology. This nondestructive inspection capability can help identify counterfeits in ways that extend beyond visual analysis, electronic testing and x-ray methods commonly used today.

Sonoscan’s advanced C-SAM acoustic microscopes and world leading SonoLab® applications engineers will help to accurately identify internal dimensions, cracks, voids, delaminations and interface quality issues that are characteristic of reused components. A layer-by-layer analysis of material properties as well as material consistency and thickness help separate the real ICs from the imposters. Sonoscan has a battery of 25 specific assessments to help differentiate the fakes from the authentic components to ensure that your rigorous quality standards are met.

Speak with a Sonoscan Acoustic Micro Imaging expert today and protect yourself against costly problems with counterfeits.





Protect yourself from counterfeit ICs with Sonoscan's Acoustic Micro Imaging.

Counterfeit ICs: a growing threat

Some counterfeit integrated circuits are pure "fakes" stamped with a reputable brand identification. In the most egregious cases, fakes can be empty shells without internal circuitry.

More commonly however, counterfeit ICs are previously used and recycled brand name ICs. After usually uncontrolled removal from their PC boards, they are cleaned up, "repainted" (blacktopped) and printed with new serial numbers and date codes. They can even be shipped in authentic carriers and reels (previously used). The counterfeits may be visually indistinguishable from authentic ICs; their fresh exterior masks hidden flaws and defects. Recycled counterfeit ICs cannot always be identified with basic electrical tests or external visual inspection.

The pioneer in counterfeit IC detection

Sonoscan® developed the first-ever commercially available acoustic microscope over 30 years ago and has acquired extensive experience with MIL-SPEC and High-Rel devices. Today, Sonoscan remains the most trusted authority on the application of Acoustic Micro Imaging in the detection of counterfeit components.

Applying its passion for the continuous development of new methods and technologies, and with its years of research and experience, Sonoscan can apply 25 unique tests to help determine the authenticity of a wide variety of integrated circuits and other components. When components are mission-critical, put the world's most advanced equipment and most experienced engineers to work for you to help ensure maximum dependability in your efforts to prevent counterfeit components from becoming your problem.



Sonoscan®
Sound Technology With Vision

Sonoscan Delivers:

- **Superior Image Quality** is ensured by the designs originating from our own transducer/lens development lab and fabrication facility
- **Extraordinary Data Accuracy** through our proprietary signal processing algorithms, analysis functions and digital image/data formats
- **High Throughput Rates** by developing the most advanced integrated features, automation and analysis functions within our instruments
- **Unsurpassed Technical Expertise** with more than 20 dedicated and highly experienced AMI applications engineers on staff

For a complete list of Sonoscan's products, please contact Sonoscan at 847.437.6400 or visit our website (www.sonoscan.com).