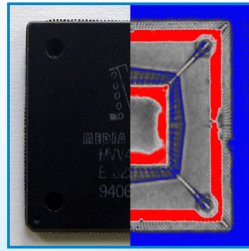
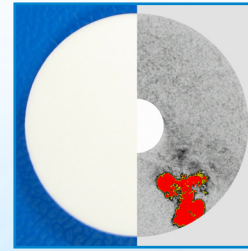


PCBA - Circuit board delamination and cracking.



Semiconductor - Die attach and encapsulation quality control.



Materials - Voids and delamination in composites.



# GEN7™

## Acoustic Inspection

# Our most versatile C-SAM instrument ever!

The Gen7 C-SAM inspection system is the latest generation in Acoustic Micro Imaging.

Built on the advancements made by its predecessors, the Gen7 delivers the most advanced hardware ever available. The advanced hardware allows for new features and analysis that can now be completed faster than ever before.

## Gen7 Features

- The industry's best dual pulsers provide the ultimate in image control and gain.
- Impressive image detail with dual 28" 4k monitors.
- Do more with advanced user interface Sonolytics 2™ for Windows 11®.
- Better results with up to four times the acquisition rate.
- Scan larger parts with a 23% greater scan area.
- Faster acquisition times with five individual motors.

## Advanced Features

Advanced features such as PolyGate, SonoSimulator, Virtual Rescanning Mode (VRM) and Frequency Domain Imaging (FDI) add value and confidence. With its large, easy access illuminated scanning area, the Gen7 has the capability to efficiently

scan everything from a small part up to 350mm sized parts.

## Leading Innovations

In addition to being packed with leading innovations, the Gen7 was designed with the user in mind. Its ergonomic features make it comfortable and convenient to use. The new Sonolytics 2 is an advanced operating software with new, even more intuitive operator interface menus which help maximize results, while saving operator time.

## Unique Patented Technology

The Gen7 is truly the most advanced acoustic microscope, delivering a package of technology, ergonomics, and advanced Nordson TEST & INSPECTION developed features that cannot be found anywhere else.

Inspection Modes	
Image Capture	Easily Capture 100 images simultaneously with Visual PolyGate™
Image	Create informative images with customizable color mapping schemes
Flexible scanning modes	<p><b>A-Scan</b> displays the transducer signal</p> <p><b>B-Scan</b> provides a cross-sectional image</p> <p><b>C-Scan</b> is a two dimensional plane image</p> <p><b>Bulk Scan</b> reveals defects in uniform materials</p> <p><b>Multi-Scan</b> generates multiple images at different levels</p> <p><b>Surface Scan</b> shows defects at the surface</p> <p><b>Loss of Back Echo (LoBE)</b> reveals continuity defects</p> <p><b>Nordson Test &amp; Inspection exclusive Q-BAM™</b> (Quantitative B-Scan Analysis Mode) is a focused cross sectional view of a sample</p> <p><b>THRU-Scan</b> (Through transmission Image) an optional shadowgraph view through the sample</p> <p><b>Simultaneous Thru-Scan and Reflection (STaR)</b> an optional feature that generates both a Thru-Scan image and reflection images in one pass</p> <p><b>Simultaneous ASF and Reflection (SASFaR)</b> option allows two modes in one scan</p>
Accurate waveform analysis modes	<p><b>FDI™ (Frequency Domain Imaging)</b> frequency response of echo reveals detail not seen with other methods. Patent 7,522,780 &amp; 6,890,302</p> <p><b>Amplitude</b> captures peak-to-peak signal and polarity.</p> <p><b>Profile</b> mode tracks the position or depth of an internal interface.</p> <p><b>Time Difference</b> evaluates distance or thickness between two interfaces.</p> <p><b>Integration Mode™</b> easily finds defects in multiple layer samples.</p> <p><b>ASF™ (Acoustic Surface Flatness)</b> an optional feature that measures curvature or warpage of a surface. Patent 8,794,072</p>
Securely capture images with included advanced triggering tools	<p>Trigger at Positive, Negative and ± crossing.</p> <p>Set start at Front Interface Echo (FIE), Main Bang, or Gated Trigger.</p> <p>Accurately locate layers with Dynamic Trigger and lock in positions with dynamic gating.</p>
Save Time for repeat setups	<p><b>AUTOSCAN™</b>. A single button starts a scan of multiple areas and will automatically align, center and focus each area. Complete the automation with integrated analysis through our DIA feature.</p> <p><b>VRM™ (Virtual Rescanning Mode)</b> stores 100% of A-Scan echo data to reproduce an image in any mode without rescanning the actual sample.</p> <p><b>DIA™ (Digital Image Analyzer)</b> advanced algorithm to quantify results for automated accept/reject criteria.</p>

Operating System	
Sonolytics 2™	Easy to use operating environment for Windows® 11.
SONOLINK™ Customization	Direct online support for diagnostic and application assistance.
C-SAM Interactive™	Provides user application support.
System	
Accurate images	With patented balanced scanner. Patent 7,584,664 B2
Repeatable positioning	Utilizing a scan tower connected to the sample's position and X,Y and Z axis precision of ± 0.5 microns.
Capacity	Scan a 350 mm x 350 mm sample with an adjustable Z height of 170 mm vertically.
Scanner motors	Five High Speed Scanner motors for the fastest image acquisition time.
High Resolution	Greater than 1 Gigapixel.
Pulser/Receiver	500 MHz bandwidth for transducers up to 300 MHz.
dB	95 dB Gain selectable in 0.5 dB steps.
Transducers	10MHz to 300MHz.
Digital Gating	Selectable from 1 to 10,000 ns.
TOF	Precise selectable TOF in 10ns steps.
AIPD	Acoustic Impedance Polarity Detector (AIPD) displays simultaneously both polarity and amplitude information. Patent 4,866,986
	Industrial rackmount Intel Core® i7-7700 computer.
Facility Requirements	
Dimensions	L 248 cm x W 158 cm x H 186 cm
Weight	610kg approximately
Power	90VAC to 250VAC Single Phase 50/60Hz
Flow Rate	DI Water Flow Rate 15 lpm.
Optional Features and Equipment	
WaterFall™	Non-Immersion technique.
WaterPlume™	Inverted Non-Immersion technique.
THRU-Scan™	A through transmission image.
Degassification	Extracts trapped gases to reduce bubbles that can cause interference.
Water Heater	For optimum high frequency performance.
QDZ™	Quantitative Dynamic Z mode follows the surface contour to maintain focus across warped surfaces.
Universal wafer fixture	Precisely holds 1" to 300mm wafers.

**For more information, speak with your Nordson representative or contact your Nordson regional office**

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