

The Ultrasonic Inspection Workhorse

The IS series of Scanning Acoustic Microscopes integrates the finest state-of-the-art technology for high resolution, high speed, fully digital non-destructive analysis.

The IS-350 is the versatile workhorse within the IS family. Its large sample holder and scan area, high spatial resolution, fast acquisition speed and large bandwidth

make it not only a powerful lab instrument for high resolution R&D applications but also a perfect tool for high volume quality control in production environment.

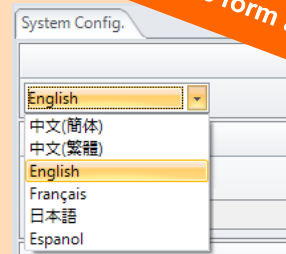


New and Unique
Multilingual - English, Japanese, Chinese, French, Spanish, German, ...
DAC/TCG - Dynamic time corrected gain during wave form acquisition

Easy and secured operation

At Insight we strive to facilitate the operation of our instruments as much as possible.

All our proprietary scanning and analysis software tools are **multilingual**, running in either English, Japanese, Chinese, French, Spanish, German, ... or any other language you might request. This is in particular true for our **Production Mode software** which allows secured scanning and data analysis in the Operator's language based on customized recipes defined by the Supervisor.



Powerful technology

High speed scanning

Up to 1000 mm/sec scan speed, 500 MHz receiver bandwidth, 3 GHz data sampling rate

Large active scanning area

350×350 mm area, for 300 mm wafers or 2 two JEDEC trays

Time Corrected Gain TCG

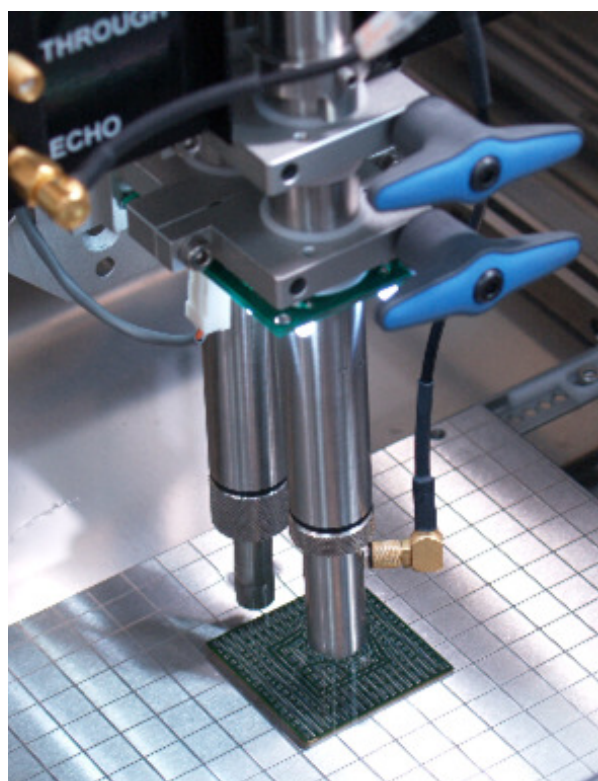
For counterbalancing signal loss due to absorption within large acquisition gates

Dual channel data acquisition

For minimizing the acquisition time on large samples, or for simultaneous acquisition on two different samples

Up to 6 axis control

Linear x,y,z axis, transducer tilt, sample height, sample turntable



Wide application range

Semiconductor and micro-electronics

- Interface evaluation on bonded wafers
- CSP and Flip Chip underfill void and delamination analysis
- Integrity evaluation on power semiconductors

Material analysis

- Inclusion, crack and void detection in metals, plastics, resin
- Void evaluation in brazed interfaces

Interface analysis

- Electrostatic chuck void detection
- Delamination of composite materials
- Interface analysis on heterogeneous assemblies

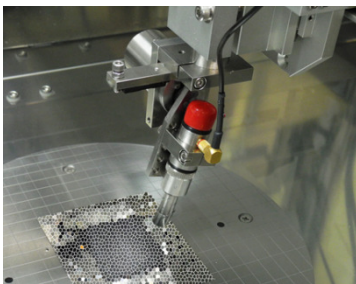
IS-350 Standard Configurations

Model	Ultrasound frequency range	PRF range	DAC/TCG
IS-350-Universal	1 – 165 MHz (up to 300 MHz optional *)	0 – 20 kHz	Included ***
IS-350-HF	Optimum range: 40 – 165 MHz Possible range: 1 – 165 MHz **	0 – 20 kHz	Included ***
IS-350-LF	1 – 50 MHz	0 – 5 kHz	Included ***
IS-350-VLF	1 – 35 MHz	0 – 5 kHz	Included ***
IS-350 customized	500 kHz – 500 MHz	0 – 20 kHz	Included ***

* With optional ultra-high frequency remote pulser

*** Standard DAC/TCG included, fine tuning DAC/TCG optional

** With optional low frequency remote pulser



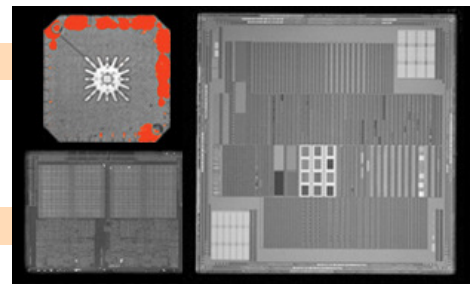
Options

Hardware options

Water pump, filter, temperature control and UV sterilizer; dual scan head; waterfall on transducer; larger tank size; Jog controller; CIM adapter; safety light curtain; laser pointer and CCD camera on sample

Software options

InsightAnalysis for advanced offline data analysis



General Characteristics

(x,y) scan area dimension	350 × 350 mm (in PE mode)
(x,y) scan resolution	0.5 μm
Focus (z) axis stroke	50 mm
Focus (z) axis resolution	0.1 μm
Max. scan speed (in scan direction)	1000 mm/sec
Number of axis	Standard: 3 (x,y,z) linear axis Optional: Transducer tilt, sample height variation, turntable sample holder
Inspection modes	In single channel operation: Pulse echo (PE) or through transmission (TT) With optional double channel capability: 2 × PE or PE + TT
Display mode	Ultrasonic wave form (A-scan), vertical slices (B-scan), plane images (C-scan with amplitude and phase analysis), TOF, FFT
Advanced scan features	3D sample representation, slice scan, segmentation scan, repeat scan, patch scan
Data collection method	Fully digital
Data sampling rate	250 MHz – 3 GHz
Data storage	High speed real time full waveform acquisition and storage on HD, DVD, or USB stick
Software	InsightScan for data acquisition InsightView for defect analysis and visualization
Dimensions (scanner body)	680 × 800 × 1320 mm (w × d × h)
Certification	CE