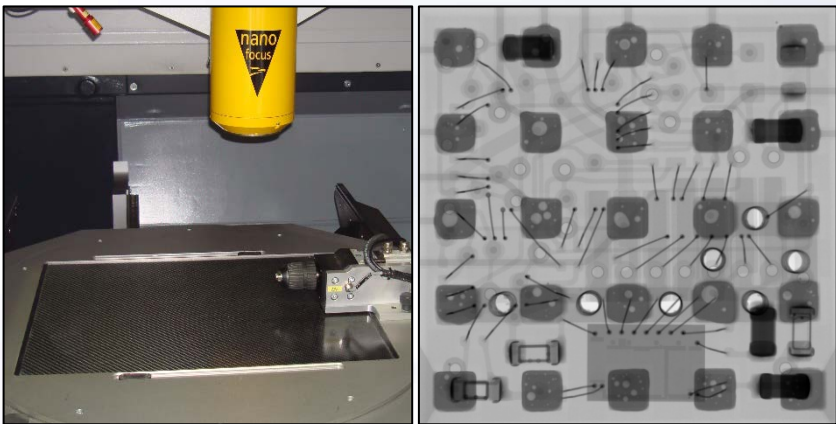


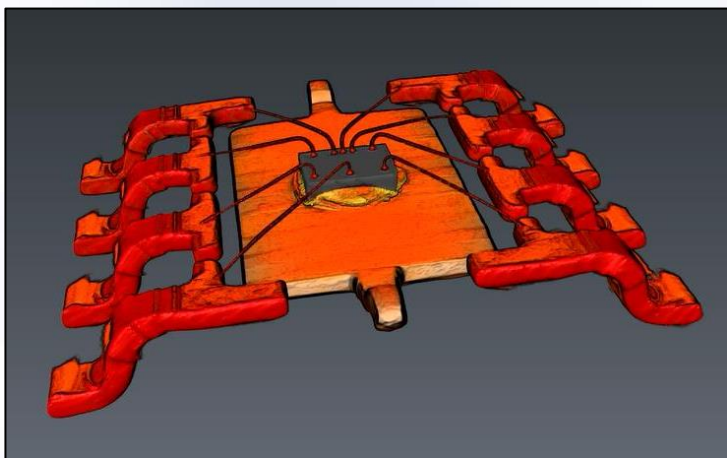
## Non-destructive Analysis

Non-destructive analysis (NDA) is used to get a gross fault localization. Every failure analysis starts using NDA techniques. The failing products are unaffected by the analysis. Using NDA techniques narrows down the chance of destroying the defect with sample preparation.



### HIGH RESOLUTION 2D X-RAY:

- GE Phoenix X-ray Nanomex 180
- 180 kV / 15 W
- Details <math><0,3 \mu\text{m}</math>
- High magnification (25.000x)
- Compucentric 360° stage rotation
- 24" x 22" stage movement
- Up to 70° oblique view
- Solder joint inspection
- Package related failure inspection



### COMPUTED TOMOGRAPHY:

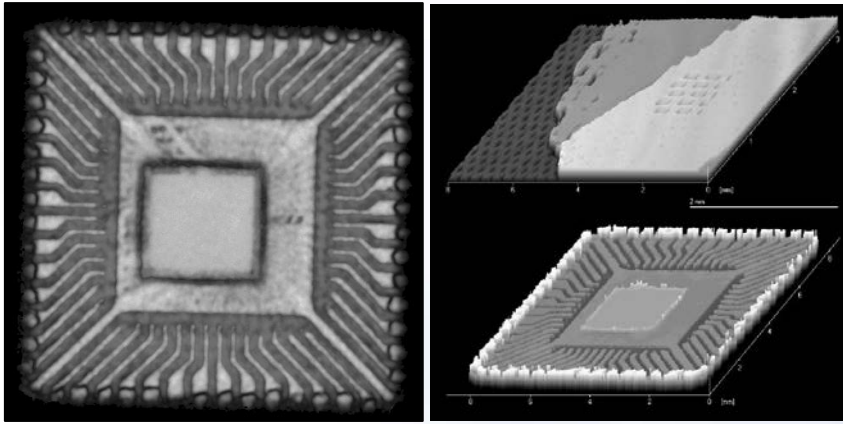
- 360° precision rotation stage
- 3-5  $\mu\text{m}$  voxel size resolution
- FEI Avizo imaging software
- High power 3D rendering
- Virtual cross-sectioning
- 27  $\text{cm}^3$  area of interest
- Non-destructive inspection of a 3D area within the sample



### SCANNING ACOUSTIC MICROSCOPY:

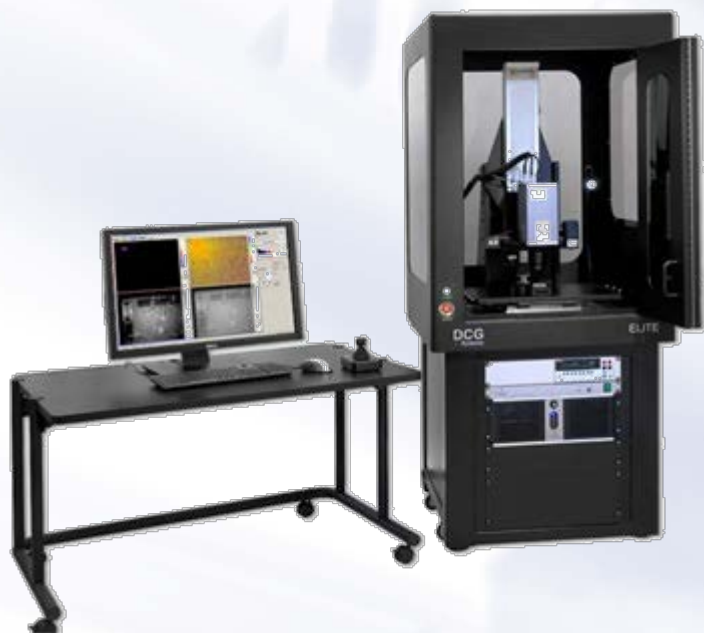
- PVA TePla Evolution II
- 10MHz - 400MHz system
- 10MHz - 175MHz transducers
- 520mm x 380mm scan area
- Linear motor scanner
- Tray-scan stage available

## Non-destructive Analysis



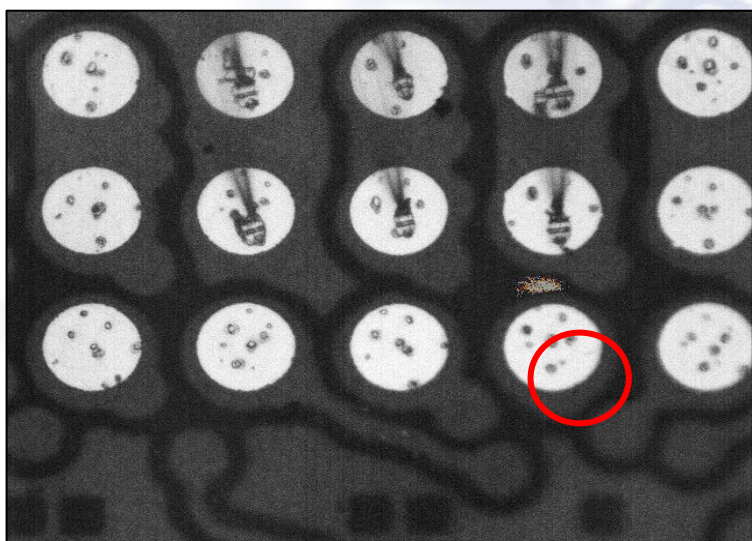
### REFLECTIVE & THROUGH SCAN MODE:

- C-scan XY area reflective
- T-scan 30 Mhz receiver
- Very powerful for void, crack, delamination and flake detection
- Thickness measurement of solid materials
- Non-destructive reliability screening
- Broker part screening



### LOCK-IN THERMOGRAPHY:

- Non destructive failure localization
- Hot spot detection of shorts and current leakage
- Stirling cooled 640x512 pixel camera
- Dedicated MWIR optics: WA/1x/5x/10x
- Motorized X-Y-Z stage
- 200mm thermal chuck and large area prober
- Temperature fluctuation < 1mK



### APPLICATION EXAMPLES:

- 2D and 3D packages
- PCB or BGA substrate short/leakage detection
- Defect depth information (Z-axis)
- XY failure localization of die and substrate
- Bond wire-, whiskers- and contamination shorts detection in packaged samples
- Separation of die and package related defects

For more info please visit [www.maser.nl](http://www.maser.nl)  
For inquiries please contact : [info@maser.nl](mailto:info@maser.nl) or call +31 53 480 26 80