

Leadframe MEASUREMENT MODULE

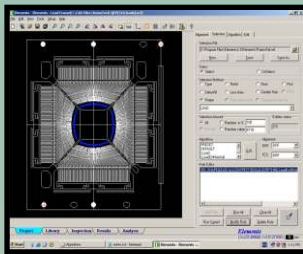
Automated inspection of integrated circuit leadframes without programming



Elements Leadframe Module is simple to set up and operate. No programming is required. Simply load the CAD file, select fiducials for orientation, and press GO.

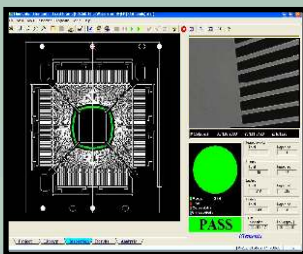
STEP 1: Import the CAD file (.DXF format)

Elements automatically creates lead descriptions from the CAD data.



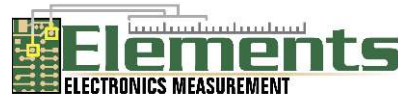
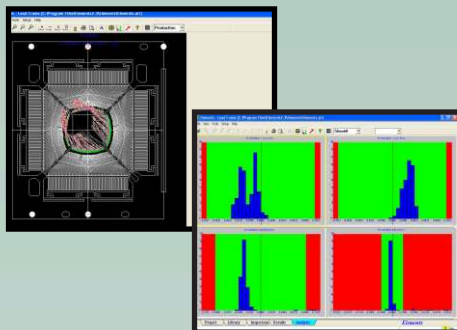
STEP 2: Measure the component

Select all leads, specific leads, or a random selection. Real-time dashboard provides inspection details and cycle-time.



STEP 3: Review the automatic results

Comprehensive data and summary graphical analysis are generated automatically.



Self-Programming, NIST traceable measurement of leadframe features, including lead size, position, angle, tilt, twist and co-planarity. VIEW inspection systems with Elements software provide unparalleled measurement accuracy and speed by comparing leadframes to their original CAD file.

Features:

- CAD based set-up (*no programming needed*)
- Measure lead position, height, angle, tilt, twist, and co-planarity
- 216 leads — full 2D measurement in under 25 seconds
- 216 leads — full 3D measurement in under 10 minutes
- X, Y and Z measurements repeat to less than 1 micron
- Angular measurements repeat to less than 0.5 degrees

Benefits:

- Fast, accurate feedback for material qualification and process control
- One system can audit multiple lines and process steps
- Fast set-up time (*less than five minutes*) ideal for high-mix environments
- Versatile software can handle a wide variety of precision measurement tasks
- Return on investment in as little as three months

The VIEW Elements™ Software Suite is made up of five separate software modules, each targeting a specific measurement need within the electronic assembly process.

VIEW metrology systems combine advanced optics, lighting, image processing, and high speed stage motion to provide feedback for packaging and die attach process control.

The Benchmark and Pinnacle systems with Elements Software provide the ultimate results in automated inspection of leadframe features by comparing them to their original CAD-based data.

Advanced metrology for leading technologies

Elements Software Modules:



Component Placement

- Slugs on glass (IPC-9850)
- Components on glass
- Components on board
- Missing components



Leadframe

- Lead position
- Angle
- Z-height
- Twist and tilt
- Co-planarity



Printed Circuit Board

- Artwork
- Drilled holes and vias
- Layer registration
- Pad location and size
- Profiles



Solder Paste

- Paste and glue dots
- Registration and size
- Height, area and volume



Stencils

- Aperture location and size
- Blockage
- Missing holes
- Stencil thickness
- 3D aperture geometry

System Configurations For Leadframe Measurement



Benchmark 300

VIEW Benchmark 300 — high precision in a benchtop configuration

- 300 x 150 x 150 mm measurement range
- 2.0 + 5L/1000 micron accuracy
- 1.0 + 5L/1000 micron Z-axis accuracy
- Optional thru-the-lens (TTL) laser for 3D profile measurements
- Optional patented multi-color Programmable Ring Light (PRL) for surface feature measurements
- Versatile platform for stencil, board, and paste measurement



Pinnacle 250

VIEW Pinnacle 250 — the ultimate in speed and accuracy

- 250 x 160 x 100 mm measurement range
- 1.0 + 5L/1000 micron accuracy
- 1.0 + 5L/1000 micron Z-axis accuracy
- 400 mm/sec linear motor stage drives for high throughput
- Optional thru-the-lens (TTL) laser for 3D profile measurements
- Optional patented multi-color Programmable Ring Light (PRL) for surface feature measurements
- Versatile platform for stencil, board, and paste measurement

Technical Specifications

System Requirements	Benchmark, Pinnacle or Summit Systems with VMS version 7.01 or higher Additional upgrade packages are available to bring Bazic or Voyager systems up to current hardware and software levels compatible with Elements
Computer	Intel® Pentium® Processor, 1 GB RAM, and Windows® XP operating system
Metrology Software	View Metrology Software™ (VMS) version 7.01 or higher
CAD Import	.DXF file format

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