

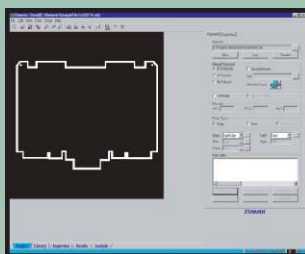
# Printed Circuit Board MEASUREMENT MODULE

Automated inspection of printed circuit boards without programming



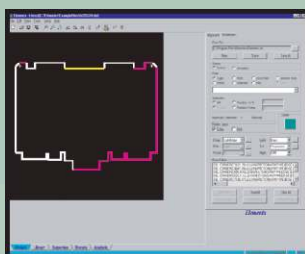
Elements Printed Circuit Board Module is simple to set up and operate. No programming is required. Simply load the CAD file, select two fiducials for orientation, and press GO.

## STEP 1: Import the CAD file (Gerber, .DXF or Excellon format)



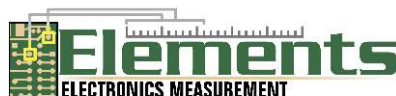
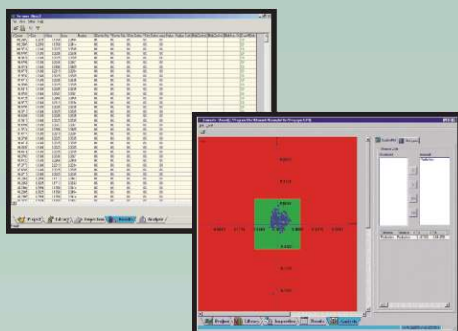
## STEP 2: Measure the board

Select all features, specific areas, 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 bare printed circuit boards. VIEW inspection systems with Elements software allow measurement and qualification of PCB features automatically by comparing them to their original CAD file.*

### Features:

- CAD based set-up (*no programming needed*)
- Measure size and location of tooling holes, through holes, vias, pads and masks
- Measure pad and mask height and offset
- Measure 15,000 features in less than 30 minutes
- Measurement range up to 900 mm x 1500 mm
- Selectable multi-color LED illumination provides high definition for sharp resolution

### Benefits:

- NIST traceable measurements — very high accuracy and repeatability
- Fast set-up time (*less than five minutes*) ideal for high-mix environments
- Graphic analysis tools provide real-time feedback for process control
- 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 process control.

The Benchmark and Summit systems with Elements Software provide the ultimate results in automated inspection of printed circuit board 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 Printed Circuit Board Measurement



Benchmark 450

### VIEW Benchmark 450 — the value leader in automatic dimensional measurement

- 450 x 450 x 150 mm measurement range
- 2.5 + 5L/1000 micron 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, paste and component placement verification



Summit 600

### VIEW Summit Series 450/600/800 — high accuracy, throughput and large measurement area

- Three measurement ranges:
  - 450 x 450 x 150 mm
  - 450 x 600 x 150 mm
  - 760 x 800 x 150 mm
- 1.5 + 5L/1000 micron 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, paste and component placement verification

## Technical Specifications

<b>System Requirements</b>	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
<b>Computer</b>	Intel® Pentium® Processor, 1 GB RAM, and Windows® XP operating system
<b>Metrology Software</b>	View Metrology Software™ (VMS) version 7.01 or higher
<b>CAD Import</b>	Gerber, .DXF or Excellon file format

\* Not available with the Summit 800



**VIEW Engineering, Inc.**

A Quality Vision International Company

1650 N. Voyager Avenue  
Simi Valley, CA 93063

[www.vieweng.com](http://www.vieweng.com)

Email: [info1@vieweng.com](mailto:info1@vieweng.com)

Phone: (805) 578-5000 • Fax: (805) 578-5249  
Sales & Support Toll Free: (877) 767-VIEW (8439)